ANNUAL REPORT

2022-23

CAU ANNUAL REPORT 2022-23

CENTRAL AGRICULTURAL UNIVERSITY

Lamphel Pat, Imphal 795 004, Manipur, India

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LAMPHEL PAT, IMPHAL 795004, MANIPUR, INDIA

Annual Report 2022-23

(April, 2022 to March, 2023)

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Foreword

AS compared to last year the covid situation was improved during the year 2022-23 and the University could carried out various activities, that resulted in many incredible outcome, which are being reflected in this Annual Report of 2022-23. Our University has been ranked 13th position in the ranking status of Agricultural Universities for the year 2020 by ICAR. Eighteen (18) students have secured Junior Research Fellowship (JRF) examination, seven (7) students ICAR SRF examination, nine (9) GATE and 1 (one) CAT examination. Six (6) students have cleared UGC NET examination during the period. Three (3) students have qualified for ARS examination conducted by the ASRB, New Delhi. A total of 195 students were placed in various capacities viz., Assistant Professor, Agricultural Officer, Agricultural Development Officer, Veterinary Officers, etc., in different organizations during the year 2022-23. The academic activities remained functional through both offline and online platform for cross-campus teaching by the noteworthy efforts made by our faculty, adjunct faculty and staff. Academic activities were compled timely so that none of our students suffered. In addition, National Level Meeting for developing syllabus and curricula on Natural Farming for Under Graduate and Post Graduate Level as per ICAR and NEP- 2020 guidelines was held from 24th to 25th June 2022 at College of Agriculture, Iroisemba, CAU, Imphal, Manipur. We were honored to host the visit of Parliamentary Standing Committee on Education, Women, Children, Youth and Sports on 27th April 2022.

Our scientists and faculties are focusing to evolve new agricultural technologies for the development of North East Hill Region by undertaking contingency research projects and station research and trials, which are of great concern and need immediate attention in the region. A promising line of swamp taro (*Colocasia esculenta* var. *stoloniferum* (L.) Schott) CAUST-2 (IC-IC645898) was recommended for release in Manipur in the 22nd Annual Group Meeting of AICRP-Tuber Crops held at ICAR-RC, NEH Barapani, Meghalaya during 11th -13th May, 2022. The proposal for two promising lines of paddy viz., CAUS 105 (IET27496) and CAUS 107 (IET28210) have been submitted to State Variety Release Committee of Meghalaya to release as high yielding variety of the state.

Our extension centers are working tirelessly to provide latest research and new technologies to the end users. The extension functionaries of the University –Directorate of Extension Education, KVKs, MTTC/VTCs and the thirteen (13) constituent colleges are making their constant efforts through organization of trainings, field demonstrations, TV talks and Radio talks, etc.

Four successful startups incubated under College of Horticulture and Forestry (CHF), Arunachal Pradesh RKVY-RAFTAAR AGRI-BUSINESS INCUBATOR (R-ABI) were nominated to represent North East and to showcase their products at Agri Startup Conclave and Kisan Sammelan 2022 held during 15th -18th Oct, 2022 at IARI Mela Ground, Pusa, New Delhi.

The University web site is updated regularly for disseminating latest agricultural information. The extension activities conducted by the University are also shared in the various social media platforms.

Many achievements set out in this report are testament to the effort of our hardworking students, faculties, scientists, staff and senior officers and together we remain focused on setting our University up, to succeed in 2023 and beyond. I would like to extend our sincere thanks to State and Central Governments, Esteemed Indian Council of Agricultural Research, National and International Funding Agencies and Local communities for their extended support and providing necessary energy in executing our programmes. The cooperation and guidance provided by Hon'ble members of the Board of Management, Finance Committee, Academic Council, Research Council and Extension Education Council is also acknowledged with gratefulness. I thank all the University colleagues, faculties, scientists and staff members of the constituent colleges for their enormous contribution and look forward of the same with confidence in the coming years ahead.

Dated: 18-07-2023
Imphal

(Anupam Mishra)
Vice Chancellor

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Executive Summary

The year 2022-23 was almost a normal year regarding Covid-19 pandemic as compared to the last year. As such regular teaching, research and extension activities of the University could be performed in full swing as compared to the last two years. By effective management, the University was able to perform its academic, research and extension activities mostly by offline mode by following Covid-19 protocols and SOPs of the Central and respective State Governments, wherever it is necessary.

Academic

The Central Agricultural University (CAU), Imphal was established under Department of Agricultural Research and Education (DARE) on 26th January, 1993 by Central Agricultural University Act, 1992 (No.40 of 1992) of Parliament with its headquarters at Imphal, Manipur. It is a fully residential University covering all the North-East Hill (NEH) states under its jurisdiction except Assam. Like other Agricultural Universities of India, the CAU, Imphal also has integrated programmes of teaching, research and extension education. The University is equipped with well-established laboratories, research and demonstration farms, 6 KVKs, 6 Multi-Technology Testing Centres (MTTC) and 6 vocational training centres. The Central Agricultural University offered 9 Undergraduate, 47 Masters and 30 Ph. D. Degree Programmes in different subjects/disciplines through its 13 constituent colleges.

The new academic session started from 2nd July, 2022 for both UG and Master's courses except College of Veterinary Sciences and Animal Husbandry where it started from 4th October, 2022. The Ph. D. Programmes for all the colleges started from 2nd August, 2022. A total of 564, 232 and 55 students were admitted in various Under-graduates, Masters and Ph.D programmes, respectively during the academic year 2022-23. A total of 424 UG and 202 PG students completed their degrees and 28 students were also awarded Ph.D during this period. Out of the total students' strength of 2805 in the University, 459 students belong to the general category, 212 scheduled castes, 1364 scheduled tribes, 724 other backward class and 46 EWS/Physically handicapped/ others. Out of them, 1182 students were male and 1623 were female amounting to Male: Female ratio as 1:1.37.

The students of the University excelled at national level competitive examinations and admissions in national/premier institutes of higher studies. During the period under report, 18 students have secured Junior Research Fellowship (JRF) examination, 7 students ICAR SRF examination, 9 GATE examination and 1 CAT examination. Six (6) students have cleared UGC NET examination during the period. Three (3) students qualified for ARS examination conducted by the ASRB, New Delhi. The University has an exemplary record of placement in a number of private and public sector organizations, government undertakings. A total of 195 of students were placed in various capacities in different organizations

during the year 2022-23.

Students' Welfare

The University offers excellent opportunities to young minds and facilitates the accomplishment of their creative talent with emphasis on character building. The University provides a very healthy and conducive environment for co-curricular and extra-curricular activities for all round development of moral and physical health of students. The University has good play grounds/gymnasium, information centre and placement cell in constituent colleges. Each college has good auditorium with all facilities, health center, canteen, ATM booth and post office. All colleges celebrated the college week where students competed in various sports, games and literary cum cultural activities. All colleges have either N.C.C. or N.S.S. units under which students are engaged in actual social works in and around college campuses to develop a sense of service, team spirit and dignity of labour. The University organizes the annual games, sports and literary cum cultural meet and annual fresher's meet in all the constituent colleges. The University also conducts inter-collegiate Games and Sports cum Youth Festival regularly at one of the constituent colleges though it was withheld during last two years due to the pandemic situation of COVID-19. The 7th CAU Inter collegite Youth Festival cum Games and Sports Meet 2022 was conducted at the College of Agriculture, Imphal from 23rd to 26th January 2023. All the 13 constituent colleges of the CAU, Imphal, Manipur participated in various Games and Literary cum Cultural competition during the meet.

Students of our University received 2nd position in men high jump and 2nd position in football men in XXI All India Inter Agricultural Universities Sports and Games Meet held at CCS HAU, Hisar from 20th to 24th February, 2023. The University also received 3rd position in cultural procession in XXI All India Inter Agricultural Universities Agri-Unifest, 2022-2023 held at UAS, Bangalore from 13th to 17th March, 2023.

The staff and students of the University have also actively participated in implementation of all the major flagship programmes initiated by the Government of India by maintaining the SOPs of the Central government and also respective State governments, where ever it is necessary. "International Day of Yoga" was celebrated with great enthusiasm and vigour. "Hindi Diwas" was celebrated with debates, essay writing, poetry competition for creating awareness and promotion of uses of Raj Bhasa-Hindi in the official/everyday work. Cleanliness drive under the "Swachhata Hi Seva" campaign was also conducted along with planting of saplings in the college campus and its premises, and central farm at Lamphelpat, Imphal, Manipur under the University.

Research and Development

The University research aims to formulate need based research projects through sustainable and eco-friendly scientific and technical approaches for developing agricultural technologies/ practices/agricultural machines and equipments which can bring about a far reaching impact on productivity and profitability of crops, animals and fishes and develop new products for value addition, enhance income generation and in turn the socio-economic upliftment of the people of North Eastern Hill Region. During the year under report, University carried out 25 (twenty five) Intramural Research Projects (IRPs), where 17 (seventeen) IRPs were ongoing, 1(one) newly sanctioned and 7 (seven) completed under University Funded Research

Programmes. Out of the 102 (one hundred and two) Externally Funded Research Projects, 17 (seventeen) were newly sanctioned, 72 (seventytwo) ongoing and 13 (thirteen) were completed.

The University also took up, from time to time, the contingency research projects and station research and trials which are of great concern and need immediate attention in the region. The University was successful in developing location specific recommendations and research findings on agriculture and allied disciplines for the farmers and agripreneurs of the NEH Region. A number of recommendations have been made that helped in the development of agro based crop improvement, plant protection and economically sustainable technologies specific for different agro-climatic conditions of the region. A promising line of swamp taro (*Colocasia esculenta* var. *stoloniferum* (L.) Schott) CAUST-2 (IC-IC645898) was recommended for release in Manipur in the 22nd Annual Group Meeting of AICRP-Tuber Crops held at ICAR-RC, NEH Barapani, Meghalaya during 11th -13th May, 2022. The proposal for two promising lines of paddy viz., CAUS 105 (IET27496) and CAUS 107 (IET28210) have been submitted to State Variety Release Committee of Meghalaya to release as high yielding variety of the state.

The CAU, Imphal signed MOA with State Government of Meghalaya, State Government of Nagaland and JVES, WB for technology dissemination of the CAU-BIOENHANCER (NECTAR-CM-14) and CAU Jhum Bioenhancer (NECTAR-CM-15); which are liquid formulation of microbial biofertilizer consortium consisting of beneficial bacteria.

Out of the 303 rare and endemic fish species of NE water bodies, 182 fish species are bar-coded. A Mini Fish Smoking Kiln of 10ky capacity and low cost pabda hatchery were developed. Promising wound healing potential of few local plants was established and presence of zoonotic diseases was confired. Machines for cherry pepper destemming, large cardamom grading, buck wheat threshing and poultry feed chopping were developed. Value added technology for cherry pepper, chayote, pumpkin and cashew apple were standardized.

Extension Education

The Directorate of Extension Education provides extension services to the farmers of seven North-Eastern states through various programmes and activities. The programmes implemented during the year include trainings, demonstrations, field days, Kisan melas, farmer congress, exhibitions, radio talks, TV telecast, film shows, workshop, etc. Transfer of technology activities were planned and coordinated in different districts of the seven states through its 13 constituent colleges, six Krishi Vigyan Kendras and six Multi Technology Testing and six Vocational Training Centres.

The Directorate organized 2 (two) capacity building training programmes for extension personnel of the line depts., KVKs and ATMAs to keep them updated with latest technical know-how in identified area of agriculture and allied fields sponsored by ICAR-ATARI- Zone VII which benefitted 20 beneficiaries. The Directorate also organized Annual Zonal Workshop of KVKs with 90 participants and an Interface Meet with the awardees of the National/Zonal level award winings KVKs and scientists of KVKs of the NEH Region totalling to 124 participants.

The University also took part in the 'Exhibition in connection with International Conference on SDGs' at DRI, Chitrakkot, MP; 'Global Organic Expo,2022' at IARI, New Delhi; '3rd Gramodya Mela' at DRI, Chitrakoot, MP and 'Regional

Agri-Fair' at ICAR RC for NEH Region, Umiam, Meghalaya.

Supported by the ICAR-NIBSM sponsored project, the six MTTC and six VTC of CAU, Imphal and the Directorate of Extension Education conducted various training programmes for the farmers of the 7(seven) states of the NEH Region, which also include demonstration of established technologies and distribution of inputs.

Financed by the MeitY, GOI, and implemented by DIC, New Delhi and CAU, Imphal, "Mobile Based Agro-Advisory" for farmers of College of Fisheries, Tripura, College of Vety. Sciences and AH, Mizoram; College of Horticulture and Forestry, Arunachal Pradesh, College of Agriculture, Manipur; College of Post Graduate Studies in Agril. Sc., Meghalaya were developed for the welfare of the farmers. All the KVKs under the Extension department along with constituent colleges of the University located in different states of the northeastern region also conducted a number of awareness camps, trainings, FLDs and method/result demonstrations for the farmers, unemployed youths and extension functionaries. Moreover, under the externally funded, capacity building training programmes for extension personnel of the line depts., KVKs and ATMAs to keep them updated with latest technical know-how in identified area of agriculture and allied fields were conducted sponsored by ICAR-ATARI- Zone VII.

Four successful startups incubated under CHF R-ABI were nominated to represent North East and to showcase their products at Agri Startup Conclave and Kisan Sammelan 2022 held during 15th -18th Oct, 2022 at IARI Mela Ground, Pusa, New Delhi.

Human Resource Development

The University has total staff strength of 1083 including 28 administrative, 300 teaching and 755 non-teaching positions. At the headquarters, there are 11 executive officers in the administrative positions supported by 44 technical and 94 non-technical staff. In the constituent colleges of the University, there are 17 administrative staff, 300 teaching and 617 non teaching staff. Six regular Deans were newly appointed and 2 In Charge Deans, 2 MTS were appointed, 29 staff members were transferred and 27 were superannuated/ resigned/demised from the service during the period under report. A total of 465 trainings, workshops, conferences, seminars, summer schools *etc* were organized at different constituent colleges of the University. Among faculty members 41 were deputed for participation in international conference and seminar, 44 national conferences and seminars, 24 workshops and 13 long term training courses and 30 for short term training programs. A total of 230 lectures, keynote address and invited talks were delivered by the faculties at various trainings, workshops and other programs. A total of 33 guest lectures were delivered by reputed scientists from other institutes at different constituent colleges of the University. A total of 44 faculties of the University were also recognized for their excellence in research and developmental works and 8 (Eight) MOU's were signed with reputed institutes during the period for cooperative relationship through mutual assistance in the areas of education, research and extension activities.

Under IDP-NAHEP sanctioned to the University by ICAR, seven (7) campus of the University including HQ, CAU have been converted into Solar Powered Renewable Energy Campus with savings of Rs.12 – 15 lakhs annually in form of reduction in electricity bill. A total of 104 Communication Skills webinars/trainings,

29 Personality Develoment programmes, 10 Technical Trainings, 3 Environmental sustainability, 2 Alumni Talk series, 4 Career counseling cum job fairs, 8 Motivational Talks and 2 Seminars on social cause were also conducted under the project with beneficiaries of 3736 out of which 1750 are female. Since the establishment of 6 incubation centres under IDP NAHEP, entrepreneurship has been one of the keen areas of interest for the final year and fresh graduates of the University. Every year students are taking up entrepreneurship after graduating from the University. This year (2022 – 23) also we have 2 successful entrepreneurs from the University viz., Mr. Y.Nandan Singh [B.Tech (Food Tech.)] and Ms. Amen Kadu [B.Sc. (Community Science)].

A total of 95 students from 10 colleges of the University and 28 faculties of the University have undergone foreign training from 2 weeks to 3 months in reputed institutions across Asian countries including Japan and Israel.

Infrastructure Development

To meet the required infrastructural facilities of the University, various civil construction works were taken up during the year. It included construction works of administrative and academic blocks, hostels, staff quarters, transit houses, etc. The University is giving special emphasis for speeding up of construction activities of the newly established colleges so that academic classes can be started at the permanent campus of the colleges at the earliest.

University Publication

During the reporting year, faculties of constituent colleges of the University have published 425 full length research papers, 37 seminar/symposia/workshop proceedings; 134 abstract papers, 102 popular articles, 40 books, 126 book chapters and 102 technical bulletins. Practical manuals, study manuals, pamphlets, *etc.* were also published.

Visitors

The University witnessed 196 visitors in different college campuses located in seven states of the north east hill region of India during the reporting year. The visitors included honourable Governor, Ministers, M.P.s and MLAs, eminent administrators, scientists, faculties, meritorious students and progressive farmers of varied experiences.

1

THE UNIVERSITY

CENTRAL Agricultural University (CAU), Imphal, Manipur was established in the year 1993 under the Central Agricultural University Act, 1992 of the Parliament (Act No. 40 of 1992). The act authorized CAU to establish need based Educational Institutions in Agriculture and allied sciences in the North-Eastern Hill (NEH) Region of India. The Central Agricultural University, Imphal, Manipur has thirteen constituent colleges viz., the College of Agriculture (Iroisemba, Imphal, Manipur), College of Fisheries (Lembucherra, Agartala, Tripura), College of Community Science (Tura, Meghalaya), College of Horticulture and Forestry (Pasighat, Arunachal Pradesh), College of Veterinary Sciences and Animal Husbandry (Selesih, Aizawl, Mizoram), College of Agricultural Engineering and Post Harvest Technology (Ranipool, Gangtok, Sikkim), College of Post Graduate Studies in Agricultural Sciences (Umiam, Meghalaya), College of Food Technology (Lamphelpat, Manipur), College of Agriculture (Kyrdemkulai, Meghalaya), College of Agriculture (Pasighat, Arunachal Pradesh), College of Horticulture (Bermiok, Sikkim), College of Horticulture (Thenzawl, Mizoram) and College of Veterinary Sciences and Animal Husbandry (Jalukie, Nagaland) to carry out teaching, research and extension education programmes in agriculture and allied sciences in the NEH region. The University is equipped with well-established laboratories, research and demonstration farms, 6 KVKs, 6 Multi-Technology Testing Centres and 6 Vocational Training Centres.

I.I Mandate, Mission, Goal and Objective

1.1.1 Mandate

- The mandates of the University as stipulated in the Act are:
- To impart education in different branches of agriculture and allied sciences as it may deem fit,
- To further the advancement of learning and prosecution of research in agriculture and allied sciences,
- To undertake programmes of extension education in the states under its area of jurisdiction and
- To undertake such other activities as it may determine from time to time.

1.1.2 Mission

Keeping the mandate in view, the mission of the University is to be a Centre of Excellence in Teaching, Research and Extension Education in the field of Agriculture and Allied Sciences.

1.1.3 Goal

To fulfill the mission, the University has set the following goals:

- To produce globally competitive graduates and postgraduates in agriculture and allied sciences.
- To develop sustainable and profitable farming systems for enhancing productivity, production and profitability in agriculture and allied sectors.
- To educate the extension functionaries for effective dissemination of agro-

technologies to the farmers, entrepreneurs and agro-industries.

- To be an important link in the chain for transforming agriculture and allied vocations into profitable enterprises and ensuring food and nutritional security to the people of NEH region.

1.1.4 Objective

- To meet the goals, the University has laid down the following objectives:
- To establish and develop excellent constituent colleges that offer undergraduate and postgraduate education in various states of the NEH Region under the area of jurisdiction of the University in the fields of agriculture, agricultural engineering, food technology, post harvest technology, fisheries, community science, horticulture, forestry and veterinary sciences and animal husbandry.
- To impart quality education so as to produce globally competitive graduates and post-graduates in different areas of agriculture and allied sciences including interdisciplinary areas, who are confident and capable of working as scientists, entrepreneurs, managers, agro-industrial workers and progressive farmers.
- To establish research stations and specialized research laboratories for taking up basic and applied research by the scientists and postgraduate students.
- To develop and demonstrate alternative farming systems which help the farmers to improve their productivity and profitability while preserving and improving the environment.
- To establish transfer of technology centers including Krishi Vigyan Kendras (Farm Science Centers) for developing effective extension methodologies and training the trainers in information dissemination.
- To popularize improved farming systems, technologies and equipment on pilot basis as a model for other extension agencies.
- To offer short-term refresher and vocational courses and training programmes to the officials of state government departments, farmers, entrepreneurs and agro-industrial houses.
- To have collaborations in the field of teaching, research, transfer of technology and developmental activities with the development departments of the state as well as national and international institutions including industrial and business houses.
- To provide consultancy services to progressive farmers, agro-industries and others involved in agriculture and allied sectors.
- To act as documentation and information center on agricultural education, research, extension methodology and rural development.

1.2 Area of Jurisdiction

The Central Agricultural University, Imphal has its area of jurisdiction over North-Eastern Hill (NEH) Region of India. It encompasses the states of Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The states of Arunachal Pradesh and Sikkim are located in the Biodiversity Hotspot of Eastern Himalayan region while the states of Manipur, Meghalaya, Mizoram, Nagaland and Tripura are located in the Indo-Burma Biodiversity Hotspot region. There are 6 (six) camp offices of the Vice Chancellor in six

states of NEH region for stay and monitoring of constituent campuses at regular intervals. It provides students and employees easy access to the competent Authority and can discuss any issues, grievances etc. for amicable solution. To avoid any administrative constraints, all the constituent colleges are well connected digitally and can communicate at any time.

1.2.1 Constituent Colleges of the University

1.2.1.1 College of Agriculture, Iroisemba, Imphal, Manipur

The College of Agriculture, Iroisemba, Imphal, Manipur was established as first

College of Agriculture, Imphal

constituent college of Central Agricultural University, Imphal after taking over the erstwhile Manipur Agricultural College from Manipur University in November, 1993. The College is situated in an extensive area of Iroisemba, at a distance of about 6.0 km from Imphal, the capital city of Manipur. The picturesque campus of college, covering an area of about 44 acres of land is surrounded by Langol Hillocks to its Western and Northern sides.

1.2.1.2 College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram

The College of Veterinary Sciences and Animal Husbandry was established on 30th October; 1998. The College is located at Selesih, North Aizawl, 12 km away from Aizawl, the capital city of Mizoram. The campus is spread over 168.61 acres of land, mostly of hilly terrain at an altitude of 965 meter above the mean sea level.

College of Fisheries, Lembucherra

1.2.1.3 College of Fisheries, Lembucherra, Tripura

The College of Fisheries, Lembucherra, Tripura was established on 3rd October, 1998

College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl

College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

and is located at Lembucherra, at a distance of 12 km north of Agartala, having a total area of 60.32 acres. The College of Fisheries has been working on generating qualified human resources besides imparting research and training needs to the thrust area of fisheries and aquaculture in the entire NE region.

1.2.1.4 College of Horticulture and Forestry, Pasighat, Arunachal Pradesh

The College of Horticulture and Forestry was established on 7th March, 2001 at Pasighat, Arunachal Pradesh, located on the banks of the river 'Siang'. The college campus is spread over an area of 145 acres which includes research farm, instructional cum demonstration farm, KVK farm and experimental farm.

1.2.1.5 College of Community Science, Tura, Meghalaya

College of Community Science was established on 24th September, 2004 at Tura, East Garo Hills, Meghalaya with a goal to

College of Community Science, Tura

refine and promote the skills of rural and tribal women and to improve the quality of life of families in the North-East Region with an objective to cater to women's education, bearing in mind the key role that they play in their homes, and farm and allied activities. Meghalaya, being a state which follows a

College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim

matrilineal system, was perhaps thought of as the most suitable place to start a college that imparts education in Community Science to girl students by refining their visible roles as home makers and income generators. The college campus spreads over 52.1 acres of land.

1.2.1.6 College of Agricultural Engineering and Post Harvest Technology, Ranipool, Gangtok, Sikkim

The College of Agricultural Engineering and Post-Harvest Technology, Gangtok was established by CAU, Imphal in May 2006. The college is situated at Ranipool, at a distance of 10.0 km from Gangtok, the capital city of Sikkim. The College campus is spread over an area of 19.26 acres of land at an altitude of 2438.4 m above the mean sea level, mostly hilly terrain comprising of terraces, hill slopes and valley land.

College of Post Graduate Studies in Agricultural Sciences, Umiam

1.2.1.7 College of Post Graduate Studies in Agricultural Sciences, Umiam, Barapani, Meghalaya

The College of Post Graduate Studies in Agricultural Sciences (CPGSAS), Barapani was established in 2006 at Umiam (Barapani) in Ribhoi District which is at a distance of 20.0 km from Shillong, the capital city of Meghalaya. The main objective of the college is training of post graduate students of agriculture so that these students would eventually become torch bearers for enhancing agricultural growth and livelihood support for the farming and rural community as a whole. The college campus is spread over an area of 36.26 acres of land.

College of Food Technology, Lamphelpat, Imphal

1.2.1.8 College of Food Technology, Lamphelpat, Imphal, Manipur

The College of Food Technology was recently established at Lamphelpat, Imphal and started its first academic session from July, 2015. The college campus is spread over an area of 30 acres. Currently classes are conducted in prefabricated structures of the college and it will continue till the construction of the permanent structures.

College of Agriculture, Pasighat, Arunachal Pradesh

1.2.1.9 College of Agriculture, Pasighat, Arunachal Pradesh

The College of Agriculture was also established recently at Pasighat, Arunachal Pradesh and started its first academic session from July; 2015. The college is now operated in its own campus. The college has acquired 86.20 acres of land and almost all the permanent college buildings are on the urge of completion.

College of Agriculture, Kyrdemkulai, Meghalaya

1.2.1.10 College of Agriculture, Kyrdemkulai, Meghalaya

The College of Agriculture at Kyrdemkulai, Meghalaya was also established recently and started its first academic session from July, 2015. The college has acquired 200 acres of land and permanent college buildings are going to be completed.

College of Horticulture, Bermiok, Sikkim

1.2.1.11 College of Horticulture, Bermiok, Sikkim

The College of Horticulture was recently established at Bermiok, Sikkim which falls under Namchi Block of South Sikkim district in Sikkim. The College has been shifted from the campus of College of Agricultural Engineering and Post Harvest Technology, Ranipool, Gangtok, Sikkim to Bermiok, South Sikkim during the year 2022. The college campus is spread over an area of 38.60 acres and permanent college buildings are going to be completed.

1.2.1.12 College of Horticulture, Thenzawl, Mizoram

The College of Horticulture was recently established at Thenzawl, Mizoram. The site of the college is at TuitamZau, Thenzawl which is 92 km from Aizawl City. The college campus has a land area of 296.52 acres, with undulating hills and beautiful topography. The college started its first academic session from 15th July, 2016. Classes are now held in prefabricated structures.

College of Horticulture, Thenzawl, Mizoram

1.2.1.13 College of Veterinary Sciences and Animal Husbandry, Jalukie, Nagaland

The College of Veterinary Sciences and Animal Husbandry, Jalukie, Peren Dist., Nagaland was inaugurated by the Union

Minister of Agriculture and Farmers Welfare Shri. Radha Mohan Singh on 6th August 2016 and became functional with the admission of first batch of students to BVSc & AH Degree programme on 15th September 2016. The college is located at Jalukie Town under Peren District about 71.1km away from Dimapur, Nagaland at an altitude of 800-2500 meters above the sea level. The campus of the college is spread over 266 acres of land which is mostly semi slope area. The permanent hostels of both girls and boys are completed and classes are conducted in the prefabricated structures.

I.3 Statutory Authorities and Officers of the University

The Board of Management, Academic Council, Research Council, Extension Education Council, Finance Committee, Board of Studies and such other authorities as prescribed by the statute are the statutory authorities of the University. The statutory officers of the University are the Chancellor, Vice-Chancellor, Director of Instruction, Director of Research, Director of Extension Education, Dean of Colleges, Registrar, Comptroller and Estate officer.

I.4 Highlights of Academics and Students' Welfare

1.4.1 Academic Activities

The Central Agricultural University (CAU), Imphal was established under Department of Agricultural Research and Education (DARE) on 26th January, 1993 by Central Agricultural University Act, 1992 (No.40 of 1992) of Parliament with its headquarters at Imphal, Manipur. It is a fully residential University covering all the North-East Hill states under its jurisdiction except Assam. Like other Agricultural Universities of India, the CAU also has integrated programmes of teaching, research and extension education. The University is equipped with well-established laboratories, research and demonstration farms, 6 KVKs, 6 Multi-Technology Testing Centres and 6 Vocational Training Centres. The Central Agricultural University offered 9 Undergraduate, 47 Masters and 30 Ph.D Degree Programmes in different subjects/ disciplines through its 13 constituent colleges.

The University was ranked at 13th position in the ranking status of Agricultural Universities for the year 2020 by ICAR. On the recommendations of the ICAR Peer Review Team, the National Agricultural Education Accreditation Board, ICAR, New Delhi granted accreditation for various academic programmes (UG/PG/Ph.Ds) to the Central Agricultural University, Imphal (Manipur) and its constituent colleges from 28th March, 2021 to 27th March, 2026.

A total of 564, 323 and 55 students were admitted in various Under-graduates, Masters and Ph.D programmes, respectively during the academic year 2022-23. A total of 424 UG and 220 PG students completed their degrees and 28 students were also awarded Ph.Ds during this period. Out of the total students' strength of 2658 in the University, 459 students belong to the general category, 212 scheduled castes, 1364 scheduled tribes, 724 other backward class, 46 EWS/Physically handicapped/others. Out of them, 1182 students were male and 1623 were female amounting to Male: Female ratio as 1:1.37. The students of the University showed excellent performance at national level competitive examinations and admissions in national/ premier institutes of higher studies. During the period under report, 18 students have secured Junior Research Fellowship (JRF) examination, 7 students ICAR SRF examination, 6 UGC-NET, 1 CAT and 9 GATE examination. Three (3) students cleared ARS examination conducted by the ASRB, New Delhi. The University has an exemplary record of placement in a number of private and public sector organizations and government undertakings. A total of 195 of our students were placed in various capacities in different organizations during the year 2022-23.

1.4.2 Students' Welfare

The University offers excellent opportunities to young minds and facilitates the accomplishment of their creative talent with emphasis on character building. The University provides a very healthy and conducive environment for co-curricular and extra-curricular activities for all round development of moral and physical health of students. The University has good play grounds/ gymnasium, information centre and placement cell in constituent colleges. Each college has good auditorium with all facilities, health center, canteen, ATM booth and post office.

All colleges celebrated the college week where students competed in various sports, games and literary cum cultural activities. All colleges have either N.C.C. or N.S.S. units

under which students are engaged in actual social works in and around college campuses to develop a sense of service, team spirit and dignity of labour.

The University also conducted Inter-Collegiate Games and Sports cum Youth Festival at one of the constituent colleges of the University, though it could not be held in last two years due to pandemic. This year the 7th CAU Inter-collegiate Youth Festival cum Games and Sports meet 2022 was conducted at the College of Agriculture, Imphal from 23rd to 26th January 2023. All the 13 constituent colleges of the CAU, Imphal, Manipur participated in various Games and Literary cum Cultural competition during the meet.

Students of our University received 2nd position in men high jump and 2nd position in football men in XXI All India Inter Agricultural Universities Sports and Games Meet held at CCS HAU, Hisar from 20th to 24th February, 2023. The University also received 3rd position in cultural procession in XXI All India Inter Agricultural Universities Agri-Unifest, 2022-2023 held at UAS, Bangalore from 13th to 17th March, 2023.

The staff and students of the University also actively participated in implementation of all the major flagship programmes initiated by the Government of India by maintaining the SOPs of the Central government and also respective State governments. "International Day of Yoga" was celebrated with great enthusiasm and vigour which was held virtual and also physically by social distancing. "Hindi diwas" was celebrated with debates, essay writing, poetry competition for creating awareness and promotion of uses of Rajbhasa-Hindi in the official/everyday work. Cleanliness drives under the "Swachhata Hi Seva" campaign were also conducted along with planting of saplings in the college campus and its premises, and central farm at Lamphelpat, Imphal, Manipur under the University. Important days were also celebrated with great enthusiasm and spirit like the Agricultural Education Day, World Water Day, World Food Day, World Environment Day, World Soil Day, etc.

I.5 Highlights of Research and Developmental Activities

The University research aims to develop need based research projects through sustainable and eco-friendly scientific and technical approaches for developing agricultural technologies/practices/agricultural machines and equipments which can bring about a far reaching impact on productivity and profitability of crops, animals and fishes and develop new products for value addition, enhance income generation and in turn the socioeconomic upliftment of the people of North Eastern Hill Region. During the year under report, University carried out 25 (twentyfive) Intramural Research Projects (IRPs) where 1 IRP was newly sanctioned, 17 ongoing and 7 completed under University Funded Research Programmes. Out of the 102 (one hundred and two) Externally Funded Research Projects, 17 (seventeen) were newly sanctioned, 72 (seventy-two) ongoing and 13 (thirteen) were completed.

For strengthening the research activities, the University is implementing 34 AICRPs in agriculture and allied sciences. The University also took up, from time to time, the contingency research projects and station research and trials which are of great concern and need immediate attention in the region. The University was successful in developing location specific recommendations and research findings on agriculture and allied disciplines for the farmers

and agripreneurs of the N.E.H. Region.

A number of recommendations have been made that helped in the development of agro based crop improvement, plant protection, and economically sustainable technologies specific for different agro-climatic conditions of the region. A promising line of swamp taro (*Colocasia esculenta* var. *stoloniferum* (L.) Schott) CAUST-2 (IC-IC645898) was recommended for release in Manipur in the 22nd Annual Group Meeting of AICRP-Tuber Crops held at ICAR-RC, NEH Barapani, Meghalaya during 11th -13th May, 2022. The proposal for two promising lines of paddy viz., CAUS 105 (IET27496) and CAUS 107(IET28210) have been submitted to State Variety Release Committee of Meghalaya to release as high yielding variety of the state.

The University signed MOA with State Government of Meghalaya, State Government of Nagaland and JVES, WB for technology dissemination of the CAU-BIOENHANCER (NECTAR-CM-14), a liquid formulation of microbial biofertilizer consortium consisting of *Bacillus altitudinis* 41E (MH021876), *Pseudomonas saponiphila* 69E (MH021684), *Bacillus altitudinis* 47E (MH021982) and *Pseudomonas putida* (B1) and also of CAU jhum bioenhancer (NECTAR-CM-15), a liquid formulation of microbial biofertilizer consortium consisting of four beneficial bacteria (*Pseudomonas fluorescens* CCF10T1; *Pantoea anthophila* TMF5T6; *Serratia marcescens* TMF5P7 and *Kosakonia radicincitans* BHF20T4).

Out of the 303 rare and endemic fish species of NE water bodies, 182 fish species are bar-coded. A Mini Fish Smoking Kiln of 10ky capacity and low cost pabda hatchery were developed. Promising wound healing potential of few local plants was established and presence of zoonotic diseases was confired. Machines for cherry pepper destemming, large cardamom grading, buck wheat threshing and poultry feed chopping were developed. Value added technology for cherry pepper, chayote, pumpkin and cashew apple were standardized.

I.6 Highlights of Extension Education

The Directorate of Extension Education provides extension services to the farmers of seven North-Eastern states through various programmes and activities. The programmes implemented during the year include trainings, demonstrations, field days, Kisan melas, farmer congress, exhibitions, radio talks, TV telecast, film shows, workshops, etc. Transfer of technology activities were planned and coordinated in different districts of the seven states through its 13 constituent colleges, six Krishi Vigyan Kendras and six Multi Technology Testing centres and six Vocational Training Centres.

The Directorate organized 2 (two) capacity building training programmes for extension personnel of the line depts., KVKs and ATMAs to keep them updated with latest technical know-how in identified area of agriculture and allied fields sponsored by ICAR-ATARI-Zone VII which benefitted 20 beneficiaries. The Directorate also organized Annual Zonal Workshop of KVKs with 90 participants and an Interface Meet with award winning KVKs of the National/Zonal and the scientists of KVKs of NEH Region (124 participants).

The University also took part in the 'Exhibition in connection with International Conference on SDGs' at DRI, Chitrakkot, MP; 'Global Organic Expo, 2022' at IARI, New Delhi; '3rd Gramodya Mela' at DRI, Chitrakoot, MP and 'Regional Agri-Fair' at ICAR RC for NEH Region, Umiam, Meghalaya.

Supported by the ICAR-NIBSM sponsored project, the six MTTC and six VTC of CAU, Imphal and the Directorate of Extension Education conducted various training programmes for the farmers of the 7 (seven) states of the NEH Region, which also include demonstration of established technologies and distribution of inputs.

Financed by the MeitY, GOI, and implemented by DIC, New Delhi and CAU, Imphal, "Mobile Based Agro-Advisory" for farmers of College of Fisheries, Tripura; College of Vety. Sciences and AH, Mizoram; College of Horticulture and Forestry, Arunachal Pradesh; College of Agriculture, Manipur and College of Post Graduate Studies in Agril. Sc., Meghalaya were developed for the welfare of the farmers. All the KVKs under the extension department along with constituent colleges of the University located in different states of the northeastern region also conducted a number of awareness camps, trainings, FLDs and method/result demonstrations for the farmers, unemployed youths and extension functionaries. Moreover, under the externally funded capacity building training programme for extension personnel of the line depts., KVKs and ATMAs were conducted to keep them updated with latest technical know-how in identified area of agriculture and allied fields sponsored by ICAR-ATARI- Zone VII.

Four successful startups incubated under College of Horticulture and Forestry(CHF), Arunachal Pradesh RKVY-RAFTAAR AGRI-BUSINESS INCUBATOR (R-ABI) were nominated to represent North East and to showcase their products at Agri Startup Conclave and Kisan Sammelan 2022 held on 15th -18th Oct, 2022 at IARI Mela Ground, Pusa, New Delhi.

I.7 Highlights of Human Resource Development

The overall performance of the staff and officers of the University have been improved through updating and upgrading their knowledge by allowing them to participate in advanced trainings, workshops, and conferences, symposia of national and international levels. The University encourages and supports all the colleges by deputing the staff and faculty members for higher studies.

The University has total staff strength of 1083 including 28 administrative, 300 teaching and 755 non-teaching positions. At the headquarters, there are 11 executive officers in the administrative positions supported by 44 technical and 94 non-technical staff. In the constituent colleges of the University, there are 17 administrative staff, 300 teaching and 617 non teaching staff. During the year, 6 regular Deans were newly appointed and 2 In Charge Deans, 2 MTS were appointed, 29 staff members were transferred and 27 were superannuated/resigned/demised from the service A total of 465 trainings, workshops, conferences, seminars, summer schools *etc* were organized at different constituent colleges of the University.

Each college arranges distinct on-campus and off-campus trainings of common interests by inviting the experts from outside the institution. Among faculty members 41 were deputed for participation in international conference and seminar, 44 national conferences and seminars, 24 workshops and 13 long term training courses and 30 for short term training programs. A total of 230 lectures, keynote address and invited talks were delivered by the faculties at various trainings,

workshops and other programmes. A total of 33 guest lectures were delivered by reputed scientists from other institutes at different constituent colleges of the University. A total of 44 faculties of the University were also recognized for their excellence in research and developmental works and 8 (Eight) MOUs were signed with reputed institutes during the period for cooperative relationship through mutual assistance in the areas of education, research and extension activities.

Under IDP-NAHEP sanctioned to the University by ICAR, seven (7) campus of the University including HQ, CAU have been converted into Solar Powered Renewable Energy Campus with savings of Rs.12 – 15 lakhs annually in form of reduction in electricity bill. A total of 104 Communication Skills webinars/trainings, 29 Personality Development programme, 10 Technical Trainings, 3 Environmental sustainability, 2 Alumni Talk series, 4 Career counseling cum job fair, 8 Motivational Talk and 2 SeminarS on social cause were also conducted under the project with beneficiaries of 3736 out of which 1750 are female. Since the establishment of 6 incubation centres under IDP NAHEP, entrepreneurship has been one of the keen areas of interest for the final year and fresh graduates of the university. Every year students are taking up entrepreneurship after graduating from the University. This year (2022 – 23) also we have 2 successful entrepreneurs from the University viz., Mr. Y.Nandan Singh [B.Tech (Food Tech.)] and Ms. Amen Kadu [B.Sc. (Community Science)].

A total of 95 students from 10 colleges of the University and 28 faculties of the University have undergone foreign training from 2 weeks to 3 months in reputed institutions across Asian countries including Japan and Israel.

I.8 Highlights of Works and Infrastructure Development

Best possible efforts have been made to improve the infrastructural facilities in all the constituent colleges of the University.

Nevertheless, significant achievements were made on various infrastructure development works in all the constituent colleges including the administrative and academic blocks, hostels, staff quarters, transit houses, etc. The University is giving special emphasis for speeding up of construction activities of the newly established colleges so that academic classes can be started at the permanent campus of the colleges at the earliest.

I.9 Highlights of University Publication

During the reporting year, faculties of constituent colleges of the University have published 425 full length research papers, 37 seminar/symposia/workshop proceedings; 134 abstract papers, 102 popular articles, 40 books, 126 book chapters and 102 technical bulletins, Practical manuals,study manuals, pamphlets, *etc.* were also published.

2

ACADEMIC & STUDENT WELFARE ACTIVITIES

THE Central Agricultural University offered 9 Undergraduate, 47 Masters and 30 Ph. D. degree programmes in different subjects/disciplines through its 13 constituent colleges. The University was ranked at 13th position in the ranking status of Agricultural Universities for the year 2020 by ICAR. The University maintains common Academic Calendar for all courses except B.V.Sc. and AH, which is governed by the Minimum Standards for Veterinary Education (MSVE Regulations of 2008, Veterinary Council of India). Admission in all the courses is made on the basis of rules framed by the admission committee of the University and Constituent Colleges. The selection/ nomination of candidates are made through Competitive Entrance Test conducted by the concerned member state located within the jurisdiction of CAU, Imphal for undergraduate programme. Common entrance test was conducted by University for PG and Ph.D programme and AIEEA conducted by Indian Council of Agricultural Research (ICAR), Krishi Anusandhan Bhawan, Pusa, New Delhi. Candidates seeking admission for UG programme should be a permanent resident or domicile of any of the seven states of the NE Region covered under the jurisdiction of the University. However, this condition is not applicable to the nominees of ICAR/VCI or any special category of nominees as decided by the University and Department of Agricultural Research and Education, Government of India. The University also has reserved some seats of open higher fee category for some of the undergraduate degree and post graduate degree programmes of the University. These seats are against payment of higher fee and are admissible to Indian Nationals from different states of the country.

2.1. Academic Activities of the University

On the recommendations of the ICAR Peer Review Team, the National Agricultural Education Accreditation Board, ICAR, New Delhi granted accreditation for various academic programmes (UG/PG/Ph.Ds) to the Central Agricultural University, Imphal (Manipur) and its constituent colleges from 28th March, 2021 to 27th March, 2026. All the colleges have well qualified experienced faculty members catering to the academic needs of the students. The comfortable staff to student ratio creates an engaged and interactive teaching environment. The University follows student advisory system where each faculty is allotted student to help him/her with academic or other personal problems during their degree programme. Classrooms are well secured, adequately furnished and equipped with the latest state of art technology including smart class room facilities and close circuit camera, etc. Sanitary lavatories for both the boys and girls and teaching and non teaching staffs are also attached with the classrooms. All the laboratories are well furnished and equipped with high tech equipments for classroom, research and extension activities. Every college has computer laboratory which is connected with high speed internet facilities which can be accessed 24 x 7 hours.

2.1.1 Teaching

The details of seats allocated to different UG programmes in constituent colleges during 2022-23 are given in Table 2.1.1.

Table 2.1.1: Students Allocation during 2022-23 for UG programme

S. No.	Name of College	Degree Programme	States										
			Arunachal Pradesh	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura	ICAR/ VCI	0thers (please Specify)	Higher Fee Category	Total
1.	College of Agriculture, Iroisemba, Manipur	B.Sc. (Hons.) Agriculture	12	16	14	9	9	9	16	17	-	15	117
2.	College of Veterinary Sciences and A.H., Selesih, Aizawl, Mizoram	B.V.Sc. & A.H.	12	9	9	12	4	6	11	15	2- (J&k Migrant)	5	85
3.	College of Fisheries, Lembucherra, Tripura	B.F.Sc	4	9	3	3	5	3	9	7	-	7	50
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Hort.	7	7	6	6	6	6	7	9	-	6	60
		B.Sc. (Hons.) Forestry	4	5	3	4	3	3	4	5	-	5	36
5.	College of Community Science, Tura, Meghalaya	B. Sc. (Hons.) Community Science	5	6	7	3	3	3	5	10	18 Open Seat)	-	60
		B.Sc. (Hons.) Food Nutrition & Dietetics	1	1	2	1	1	1	1	3	11 (Open Seat)	-	22
6.	College of Agril. Engg. and PHT, Ranipool, Sikkim	B.Tech. (Agril. Engg)	6	8	6	5	5	5	8	8	-	5	56
		B.Tech. (Food Technology)	2	4	2	2	2	3	4	3	-	-	22
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons) Agriculture	7	5	3	3	3	3	5	6	-	2	37
8.	College of Agriculture, Kyrdemkulai, Meghalaya	B.Sc. (Hons.) Agriculture	3	6	6	3	3	2	6	6	-	5	40
9.	College of Food Technology, Lamphelpat, Manipur	B.Tech. (Food Technology)	2	8	4	3	2	1	4	3	-	5	32

S. No.	Name of College	Degree Programme	States										
			Arunachal Pradesh	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura	ICAR/ VCI	0thers (please Specify)	Higher Fee Category	Total
10.	College of Horticulture, Bermiok, Sikkim	B. Sc. (Hons.) Horticulture	2	5	3	2	3	5	4	3	-	3	30
11.	College of Horticulture, Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	3	6	3	6	3	2	6	6	-	-	35
12.	College of Veterinary Sciences & A.H., Jalukie, Nagaland	B.V.Sc. & A.H	3	4	3	3	8	2	4	5	-	-	32
	Total		**73**	**99**	**74**	**65**	**60**	**54**	**94**	**106**	**31**	**58**	**714**

2.1.2. Intake capacity and number of students admitted in 2022-23

The new academic session started from 4th October, 2022 for both UG and Master's courses except College of Veterinary Sciences and Animal Husbandry where it started from 4th October, 2022. Ph.D. Programmes for all the colleges started from the 2nd August 2022. A total of 564, 184 and 55 students were admitted in various Under-graduates, Masters and PH.D programmes, respectively. The college wise break-up of intake capacity, number of students admitted and number of students graduated are given in Table 2.1.2.

Table 2.1.2: Intake capacity, admitted and passed out students during the academic session, 2022-23

A. Undergraduate programme

S. No.	Name of College	Degree Programme	Intake Capacity	No. of Students Admitted	No. of Students Graduated
1.	College of Agriculture, Iroisemba, Manipur	B.Sc. (Hons.) Agriculture	117	113	84
2.	College of Veterinary Sciences and A.H., Selesih, Aizawl, Mizoram	B.V.Sc. and A.H.	85	90	45
3.	College of Fisheries, Lembucherra, Tripura	B.F.Sc	50	43	39
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Horticulture	60	52	49
		B.Sc. (Hons.) Forestry	36	16	23

S. No.	Name of College	Degree Programme	Intake Capacity	No. of Students Admitted	No. of Students Graduated
5.	College of Community Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	60	30	33
		B.Sc. (Hons.) Food Nutrition and Dietetics	22	15	16
6.	College of Agril. Engg. and PHT, Ranipool, Sikkim	B.Tech. (Agril. Engg)	56	36	30
		B.Tech. (Food Technology)	22	10	07
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Agriculture	37	31	18
8.	College of Agriculture, Kyrdemkulai, Meghalaya	B.Sc. (Hons.) Agriculture	40	34	19
9.	College of Food Technology, Lamphelpat, Manipur	B.Tech (Food Technology)	32	19	07
10.	College of Horticulture, Bermiok, Sikkim	BSc. (Hons.) Horticulture	30	22	14
11.	College of Horticulture, Thenzawl, Mizoram	B.Sc (Hons.) Horticulture	35	27	14
12.	College of Veterinary Sciences & A.H., Jalukie, Nagaland	B.V.Sc. and A.H	32	26	26
		Total	**714**	**564**	**424**

B. Master's programmes

S. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
1.	College of Agriculture, Iroisemba, Manipur	M.Sc. (Agri.)	Agronomy	8	8	6
			Agril. Economics	7	6	8
			Entomology	7	6	6
			Agril. Extension	7	7	4
			Genetics and Plant Breeding	7	7	7
			Plant Pathology	7	5	5
			Soil Science and Agril. Chemistry	7	7	2
			Sub Total	**50**	**46**	**38**
		M.Sc. (Hort.)	Fruit Science	3	2	4
			Vegetable Science	3	3	4
			Floriculture and Landscape Architecture	3	3	4
			Sub total	9	8	12
			Total	**59**	**54**	**50**

S. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
2.	College of Veterinary Sciences and Animal Husbandry, Selesih, Aizawl, Mizoram	M.V.Sc.	Veterinary Biochemistry	5	4	3
			Veterinary Anatomy	4	3	-
			Animal Reproduction, Gynaecology and Obstetrics	6	6	3
			Veterinary Medicine	5	4	3
			Veterinary Parasitology	3	-	1
			Veterinary Pathology	5	4	2
			Veterinary Microbiology	5	4	2
			Veterinary Surgery and Radiology	5	5	-
			Veterinary Public Health and Epidemiology	5	4	4
			Animal Genetics and Breeding	5	2	1
			Animal Nutrition	5	5	2
			Veterinary Physiology	4	2	-
			Livestock Production and Management	6	6	4
			Livestock Products Technology	5	4	2
			Veterinary and Animal Husbandry Extension	4	2	3
			Veterinary Pharmacology and Toxicology	5	-	-
			Total	**77**	**55**	**30**
3.	College of Fisheries, Lembucherra, Tripura	M.F.Sc.	Aquaculture	5	5	4
			Fish Biotechnology	5	4	4
			Fish Genetics and Breeding	5	5	5
			Fisheries Resource Management	5	5	5
			Fisheries Extension	5	4	3
			Aquatic Animal Health Management	5	5	5
			Fish Processing Technology	5	5	3
			Total	**35**	**33**	**29**
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	M.Sc. (Hort.)	Vegetable Science	5	5	4
			Fruit Science	6	6	6
			Floriculture and Landscape Architecture	4	4	1
			Total	**15**	**15**	**11**

S. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
		M.Sc. (Forestry)	Forest Products Utilization	3	2	1
			Forest Biology and Tree Improvement	3	1	2
			Silviculture and Agroforestry	3	2	1
			Total	**9**	**5**	**4**
5.	College of Community Science, Tura, Meghalaya	M.Sc. (Community Science)	Home Science in Extension and Communication Management	3	-	-
			Food Science and Nutrition	3	2	-
			Total	**6**	**2**	**-**
6.	College of Agricultural Engg. and Post Harvest Technology, Gangtok, Sikkim	M. Tech.	Soil and Water Cons. Engg.	4	-	8
			Processing and Food Engg.	4	4	4
			Farm Machinery and Power Engg.	4	2	2
			Irrigation and Drainage Engg.	4	-	2
			Renewable Energy Engg.	4	1	2
			Total	**20**	**7**	**18**
7.	College of Post Graduate Studies in Agril. Sciences, Barapani, Meghalaya	M.Sc. (Agri.)	Agronomy	7	6	9
			Soil Science and Agril. Chemistry	8	8	8
			Genetics and Plant Breeding	7	7	8
			Plant Molecular Biology and Biotechnology	7	6	3
			Entomology	7	6	7
			Plant Pathology	7	7	8
			Nematology	3	2	2
			Agril. Economics	7	6	4
			Agril. Extension	7	7	7
			Total	**60**	**55**	**56**
		MBA	Agri. Business Management	5	4	4
			Total	**5**	**4**	**4**
8.	College of Agriculture, Pasighat, Arunachal Pradesh	M.Sc. (Agri.)	Agril. Economics	2	2	-
			Grand Total	**288**	**232**	**202**

C. Ph. D. Programmes

S. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
1.	College of Agriculture, Iroisemba, Manipur	Ph.D. (Agri.)	Agronomy	2	1	-
			Entomology	2	2	1
			Plant Pathology	2	1	1
			Genetics and Plant Breeding	3	3	3
			Soil Science and Agril. Chemistry	3	2	1
			Total	**12**	**9**	**6**
2.	College of Veterinary Sciences and Animal Husbandry, Selesih, Aizawl, Mizoram	Ph.D	Animal Nutrition	3	-	-
			Livestock Production and Management	3	-	-
			Veterinary Biochemistry	2	-	-
			Veterinary Microbiology	3	1	1
			Veterinary Pathology	2	-	1
			Veterinary Medicine	3	1	-
			Animal Reproduction, Gynaecology and Obstetrics	3	-	-
			Veterinary Anatomy and Histology	2	-	1
			Veterinary Parasitology	2	-	-
			Vetrinary Surgery and Radiology	2	-	-
			Total	**25**	**2**	**3**
3.	College of Fisheries, Lembucherra, Tripura	Ph.D.	Fish Processing Technology	3	3	1
			Aquaculture	3	2	-
			Aquatic Animal Health Management	4	4	1
			Fisheries Extension	2	2	-
			Total	**12**	**11**	**2**
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	Ph.D. (Hort.)	Vegetable Science	3	3	3
			Fruit Science	3	3	1
		Ph.D. (Forestry)	Forest products and utilization	1	-	-
			Total	**7**	**6**	**4**
5.	College of Agril. Engg. and PHT, Ranipool, Sikkim	Ph. D (Agril. Engg.)	Farm Machinery and Power Engg.	3	1	1
			Soil and Water Cons. Engg.	2	1	-
			Processing and Food Engg.	2	1	-
			Renewable Energy Engineering	2	2	-

S. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
			Irrigation and Drainage Engineering	1	-	-
			Total	**10**	**5**	**1**
6.	College of Post Graduate Studies in Agril. Sciences, Barapani, Meghalaya	Ph.D. Programme	Agronomy	4	4	2
			Soil Science and Agril. Chemistry	3	-	-
			Genetics and Plant Breeding	3	3	4
			Plant Molecular Biology and Biotechnology	3	-	-
			Entomology	2	2	-
			Plant Pathology	4	4	1
			Agril. Economics	3	3	3
			Agril. Extension	3	2	1
			Total	**26**	**22**	**12**
			Grand Total	**92**	**55**	**28**

2.1.3. Student's strength in 2022-23

Total student strength of the University in the year was 2805 comprising of 2117 students at the Under-graduates [Table 2.1.3. (A)], 499 students at Masters [Table 2.1.3. (B)] and 191 students at Ph.D [Table 2.1.3. (C)] degree programmes

Table 2.1.3: Students Strength in 2022-23

A. Under Graduate Programmes

S. No.	Name of College	Degree Programme	Year wise students strength						No. of Students Graduated in 2022-23
			1st	2nd	3rd	4th	5th	Total	
1.	College of Agriculture, Iroisemba, Manipur	B.Sc. (Hons.) Agriculture	113	96	93	84	-	386	84
2.	College of Veterinary Sciences and A.H., Selesih, Aizawl, Mizoram	BVSc. and A.H.	90	69	61	82	68	370	45
3.	College of Fisheries, Lembucherra, Tripura	B.F.Sc.	43	45	39	43	-	170	39
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Horticulture	52	52	39	43	-	186	49
		B.Sc. (Hons.) Forestry	16	29	24	26	-	95	23

S. No.	Name of College	Degree Programme	Year wise students strength						No. of Students Graduated in 2022-23
			1st	2nd	3rd	4th	5th	Total	
5.	College of Community Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	30	33	18	23	-	104	33
		B.Sc. (Hons) Food Nutrition and Dietetics	15	19	13	9		56	16
6.	College of Agril. Engg. and PHT, Ranipool, Sikkim	B. Tech. (Agril. Engg.)	36	41	29	40	-	146	30
		B. Tech (Food Tech.)	10	13	8	10	-	41	7
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Agriculture	31	32	28	22	-	113	18
8.	College of Agriculture, Kyrdemkulai, Meghalaya	B.Sc. (Hons.) Agriculture	34	27	22	16	-	99	19
9.	College of Food Technology, Lamphel, Manipur	B.Tech (Food Tech.)	19	20	16	11	-	66	7
10.	College of Horticulture, Bermiok, Sikkim	BSc. (Hons.) Horticulture	22	20	13	18	-	73	14
11.	College of Horticulture, Thenzawl, Mizoram	BSc. (Hons.) Horticulture	27	21	22	13	-	83	14
12.	College of Vety. Sc. and AH, Jalukie, Nagaland	B.V.Sc. and A.H	26	28	24	26	25	129	26
		Total	**564**	**545**	**449**	**466**	**93**	**2117**	**424**

B. Master's programmes

S. No.	Name of College	Degree Progra-mme	Departments/ Disciplines	Intake Capacity	Students Strength (M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)				No. of Students awarded in 2022-23
					Prev	Final	Exte-nded	Total	
1.	College of Agriculture, Iroisemba, Manipur	M. Sc. (Agri)	Agronomy	8	8	7	-	15	3
			Ag. Economics	7	6	6	1	13	8
			Entomology	7	6	8	-	14	6
			Extn. Education	7	7	8	-	15	4
			Genetics and Plant Breeding	7	7	7	-	14	7
			Plant Pathology	7	5	7	-	12	5
			Soil Science and Agril. Chem.	7	7	7	-	14	2
			Sub Total	**50**	**46**	**50**	**1**	**97**	**38**

S. No.	Name of College	Degree Progra-mme	Departments/ Disciplines	Intake Capacity	Students Strength (M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)				No. of Students awarded in 2022-23
					Prev	Final	Exte-nded	Total	
		M.Sc. (Hort.)	Fruit Science	3	2	5	-	7	4
			Vegetable Science	3	3	2	-	5	4
			Floriculture and Landscape Architecture	3	3	3	-	6	4
			Sub-Total	**9**	**8**	**10**	**-**	**18**	**12**
			Grand Total	**59**	**54**	**60**	**1**	**115**	**50**
2.	College of Veterinary Sciences and A.H., Selesih, Aizawl, Mizoram	M.V.Sc.	Veterinary Biochemistry	5	4	1	-	5	3
			Veterinary Anatomy	4	3	-	2	5	-
			Animal Reproduction, Gynaecology and Obstetrics	6	6	4	-	10	3
			Veterinary Medicine	5	4	4	1	9	3
			Veterinary Parasitology	3	-	-	1	1	1
			Veterinary Pathology	5	4	1	3	8	2
			Veterinary Microbiology	5	4	2	2	8	2
			Veterinary Surgery and Radiology	5	5	5	2	12	-
			Veterinary Public Health and Epidemiology	5	4	2	1	7	1
			Animal Genetics and Breeding	5	2	2	3	7	1
			Animal Nutrition	5	5	3	-	8	2
			Veterinary Physiology	4	2	-	2	4	-
			Livestock Production and Management	6	6	5	-	11	4
			Livestock Products Technology	5	4	2	2	8	2
			Veterinary and Animal Husbandry Extension	4	2	3	-	5	3
			Total	**77**	**55**	**34**	**19**	**108**	**30**

S. No.	Name of College	Degree Progra-mme	Departments/ Disciplines	Intake Capacity	Students Strength (M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)				No. of Students awarded in 2022-23
					Prev	Final	Exte-nded	Total	
3.	College of Fisheries, Lembucherra, Tripura	M.F.Sc.	Aquaculture	5	5	7	-	12	4
			Fish Biotechnology	5	4	3	-	7	4
			Fish Genetics and Breeding	5	5	5	-	10	5
			Fisheries Resource Management	5	5	5	-	10	5
			Fisheries Extension	5	45	4	1	9	3
			Aquatic Animal Health	5	5	4	-	9	5
			Fish Processing Technology	5	5	3		8	4
			Total	**35**	**33**	**33**	**1**	**67**	**29**
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	M.Sc. (Hort.)	Vegetable Science	5	5	5	1	11	4
			Fruit Science	6	6	5	-	11	6
			Floriculture and Landscape Architecture	4	4	4	2	10	1
			Total	**15**	**15**	**14**	**3**	**32**	**11**
		M.Sc. Forestry	Forest Products Utilization	3	2	1	-	3	1
			Forest Biology and Tree Improvement	3	1	-	-	1	2
			Silviculture and Agroforestry	3	2	2	1	5	1
			Total	**9**	**5**	**3**	**1**	**8**	**4**
5.	College of Community Science, Tura, Meghalaya	M.Sc. (Comm-unity Science)	Home Science Extension and Communication Management	3	-	2	1	3	-
			Food Science and Nutrition	3	2	2	1	5	-
			Total	**6**	**2**	**4**	**2**	**8**	**-**

S. No.	Name of College	Degree Progra-mme	Departments/ Disciplines	Intake Capacity	Students Strength (M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)				No. of Students awarded in 2022-23
					Prev	Final	Exte-nded	Total	
6.	College of Agricultural Engg. & Post Harvest Technology, Gangtok, Sikkim	M. Tech.	Soil and Water Cons. Engg.	4	-	4	1	5	8
			Farm Machinery and Power Engg.	4	2	4	3	9	2
			Processing and Food Engg.	4	4	3	4	11	4
			Irrigation and Drainage Engg.	4	-	2	1	3	2
			Renewal Energy Engg.	4	1	2	-	3	2
			Total	**20**	**7**	**15**	**9**	**31**	**18**
7.	College of Post Graduate Studies in Agril. Sciences, Barapani, Meghalaya	M.Sc. (Ag.)	Agronomy	7	6	7	-	13	9
			Soil Science and Agril. Chem.	8	8	7	1	16	8
			Genetics and Plant Breeding	7	7	5	-	12	8
			Pl.Mol.Biology and Biotechnology	7	6	6	2	14	3
			Entomology	7	6	9	-	15	7
			Plant Pathology	7	7	8	-	15	8
			Nematology	3	2	3	-	5	2
			Agril. Economics	7	6	7	-	13	4
			Agril. Extension	7	7	8	1	16	7
			Total	**60**	**55**	**60**	**4**	**119**	**56**
		MBA	Agri. Business Management	5	4	2	-	6	4
			Total	**5**	**4**	**2**	**-**	**6**	**4**
8.	College of Agriculture Pasighat, Arunachal Pradesh	M.Sc. (Agri.)	Agril. Economics)	2	2	-	-	2	-
			Total	**2**	**2**	**-**	**-**	**2**	**-**
			Grand Total	**288**	**232**	**227**	**40**	**499**	**202**

C. Ph.D. Programmes

S. No.	Name of College	Departments/ Disciplines	Intake Capacity	Students Strength (Ph. D.)					No. of Students awarded in 2022-23
				1st year	2nd year	3rd year	Exten-ded	Total	
1.	College of Agriculture, Iroisemba, Manipur	Agronomy	2	1	2	2	5	10	-
		Entomology	2	2	2	1	1	6	1
		Plant Pathology	2	1	2	1	3	7	1
		Genetics and Plant Breeding	3	3	2	1	4	10	3
		Soil Science and Agril. Chem.	3	2	3	1	3	9	1
		Total	**12**	**9**	**11**	**6**	**16**	**42**	**6**
2.	College of Veterinary Sciences and Animal Husbandry, Selesih, Mizoram	Animal Nutrition	3	-	-	-	-	-	-
		Livestock Production and Management	3	-	-	-	-	-	-
		Veterinary Biochemistry	2	-	-	-	-	-	-
		Veterinary Microbiology	3	1	-	-	1	2	1
		Veterinary Pathology	2	-	-	1	1	2	1
		Veterinary Medicine	3	1	-	2	1	4	-
		Animal Reproduction, Gynaecology and Obstetrics	3	-	-	1	1	2	-
		Veterinary Anatomy and Histology	2	-	1	-	-	1	1
		Veterinary Parasitology	2	-	-	-	-	-	-
		Vetrinary Surgery and Radiology	2	-	-	-	-	-	-
		Total	**25**	**2**	**1**	**4**	**4**	**11**	**3**
3.	College of Fisheries, Lembucherra, Tripura	Fish Processing Technology	3	3	4	1	-	8	1
		Aquaculture	3	2	3	2	-	7	-
		Aquatic Animal Health Management	4	4	3	3	1	11	1
		Fisheries Extension	2	2	-	-	-	2	-
		Total	**12**	**11**	**10**	**6**	**1**	**28**	**2**
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	Vegetable Science	3	3	2	3	2	10	3
		Fruit Science	3	3	3	3	3	12	1
		Forest products utilization	1	-	-	-	-	-	-
		Total	**7**	**6**	**5**	**6**	**5**	**22**	**4**

S. No.	Name of College	Departments/ Disciplines	Intake Capacity	Students Strength (Ph. D.)					No. of Students awarded in 2022-23
				1st year	2nd year	3rd year	Exten-ded	Total	
5.	College of Agricultural Engg. and Post Harvest Technology, Gangtok, Sikkim	Processing and Food Engg.	2	1	2	1	3	7	-
		Farm Machinery and Power Engg.	3	1	2	2	2	7	1
		Soil and Water Conservation Engg.	2	1	2	-	-	3	-
		Renewable Energy Engg.	2	2	-	-	-	2	-
		Irrigation and Drainage Engg.	1	-	-	-	-	-	-
		Total	**10**	**5**	**6**	**3**	**5**	**19**	**1**
6.	College of Post Graduate Studies in Agril. Sciences, Barapani, Meghalaya	Agronomy	4	4	2	1	3	10	2
		Soil Science and Agril. Chem.	4	4	2	1	2	9	1
		Genetics and Plant Breeding	3	3	1	2	5	11	4
		Pl. Mol.Biology and Biotechnology	3	-	2	2	2	6	-
		Entomology	2	2	-	-	-	2	-
		Pl. Pathology	4	4	3	3	2	12	1
		Agril. Economics	3	3	2	3	1	9	3
		Agril. Extension	3	2	3	3	2	10	1
		Total	**26**	**22**	**15**	**15**	**17**	**69**	**12**
		Grand Total	**92**	**55**	**48**	**40**	**48**	**191**	**28**

2.1.4: Category wise Student's Strength during 2022-23

The details of category wise break-up of students' strength in various UG, PG and Ph.D. programmes of the university are given in Table 2.1.4. Out of the 2805 students, 459 students belonged to the general category, 212 scheduled castes, 1364 scheduled tribes, 724 other backward class and 46 students from EWS/PC/others.

Table 2.1.4: Category wise student's strength

S. No.	Name of College	Degree programme	Students Strength					
			Gen.	SC	ST	OBC	EWS	Total
1.	College of Agriculture, Iroisemba, Imphal, Manipur	B. Sc. (Hons) Agriculture	50	34	192	99	11	386
		M. Sc. (Agri)	22	16	8	47	4	97
		M.Sc. (Hort.)	4	1	4	7	2	18
		Ph.D. (Agri)	12	2	8	19	1	42
		Total	**88**	**53**	**212**	**172**	**18**	**543**

S. No.	Name of College	Degree programme	Students Strength					
			Gen.	SC	ST	OBC	EWS	Total
2.	College of Veterinary Sciences and A.H., Selesih, Aizawl, Mizoram	B.V.Sc. and A.H.	58	24	222	66	-	370
		Master of Veterinary Sciences	20	7	50	29	2	108
		Ph.D. (Vety. Science)	4	1	4	2	-	11
		Total	**82**	**32**	**276**	**97**	**2**	**489**
3.	College of Fisheries, Lembucherra, Tripura	Bachelor of Fisheries Science	33	18	84	35	-	170
		Master of Fisheries Science	20	6	10	28	3	67
		Ph.D. (Fisheries)	9	3	5	11	-	28
		Total	**62**	**27**	**99**	**74**	**3**	**265**
4.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons) Horticulture	15	13	125	33	-	186
		B.Sc. (Hons) Forestry	14	7	60	13	1	95
		M.Sc. (Horticulture)	8	3	10	9	2	32
		M.Sc. (Forestry)	3	2	4	-	-	9
		Ph.D. Programme.	3	-	6	12	1	22
		Total	**43**	**25**	**205**	**67**	**4**	**344**
5.	College of Community Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	12	7	47	38	-	104
		B.Sc. (Hons) Food Nutrition and Dietetics	10	1	27	18	-	56
		Sc. (Community Sciences)	-	-	2	6	-	8
		Total	**22**	**8**	**76**	**62**	**-**	**168**
6.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	B. Tech. (Agril. Engg.)	25	10	69	37	5	146
		B. Tech. (Food Tech.)	1	2	24	14	-	41
		M. Tech.	12	3	1	13	2	31
		Ph. D (Agril. Engg.)	8	1	2	8	-	19
		Total	**46**	**16**	**96**	**72**	**7**	**237**
7.	College of Post Graduate Studies in Agril. Sciences, Barapani, Meghalaya	M.Sc. (Ag.)	32	11	19	50	7	119
		MBA (Agri. Business Management)	3	1	1	1	-	6
		Ph.D. (Agri.)	21	7	13	25	3	69
		Total	**56**	**19**	**33**	**76**	**10**	**194**
8.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons) Agriculture	14	4	69	24	2	113
		M.Sc. (Agri.)	-	1	-	1	-	2
		Total	**14**	**5**	**69**	**25**	**2**	**115**
9.	College of Agriculture, Kyrdemkulai, Meghalaya	B.Sc.(Hons) Agriculture	12	4	59	24	-	99
10.	College of Food Technology, Imphal, Manipur	B.Tech (Food Tech.)	17	7	23	19	-	66

S. No.	Name of College	Degree programme	Students Strength					
			Gen.	SC	ST	OBC	EWS	Total
11.	College of Horticulture, Bermiok, Sikkim	B.Sc. (Hons.) Horticulture	5	6	49	13	-	73
12.	College of Horticulture, Thenzawl, Mizoram	B.Sc (Hons.) Horticulture	6	3	64	10	-	83
13.	College of Veterinary Sciences, Jalukie, Nagaland	B.V.Sc. & A.H	6	7	103	13	-	129
		Grand Total	**459**	**212**	**1364**	**724**	**46**	**2805**

Table 2.1.5: Male to Female students' ratio during 2022-23

S. No.	Name of College	Degree Programme	Total students	Male students		Female Students		M:F Ratio
				No.	%	No.	%	
1.	College of Agriculture, Imphal, Manipur	B.Sc. (Hons) Agri	386	177	46%	209	54%	1:1.18
		M. Sc. (Agri)	97	47	48%	50	52%	1:1.06
		M.Sc. (Hort.)	18	7	39%	11	61%	1:1.57
		Ph.D. (Agri)	42	11	26%	31	74%	1:2.82
		Total	**543**	**242**	**45%**	**301**	**55%**	**1:1.24**
2.	College of Veterinary Sciences & A.H., Selesih, Aizawl, Mizoram	B.V.Sc. & A.H.	370	149	40%	221	60%	1:1.48
		MVSc	108	48	44%	60	56%	1:1.25
		Ph.D. (Vety. Sc.)	11	4	36%	7	64%	1:1.75
		Total	**489**	**201**	**41%**	**288**	**59%**	**1:1.43**
3.	College of Fisheries, Lembucherra, Tripura	B.F.Sc	170	77	45%	93	55%	1:1.29
		M.F.Sc.	67	27	40%	40	60%	1:1.48
		Ph.D. (Fisheries)	28	16	57%	12	43%	1:0.75
		Total	**265**	**120**	**45%**	**145**	**55%**	**1:1.21**
4.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	B.Sc.(Hons) Horti	186	67	36%	119	64%	1:1.78
		B.Sc.(Hons) Forestry	95	53	56%	42	44%	1:0.79
		M.Sc.(Horticulture)	32	14	44%	18	56%	1:1.29
		M.Sc.(Forestry)	9	3	33%	6	67%	1:2
		Ph.D. (Hort.)	22	10	45%	12	55%	1:1.20
		Total	**344**	**147**	**43%**	**197**	**57%**	**1:1.34**
5.	College of Community Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	104		0%	104	100%	0:104
		B.Sc. (Hons) Food Nutrition and Dietetics	56		0%	56	100%	0:56
		M.Sc. (Community Science)	8		0%	8	100%	0:8
		Total	**168**	**-**	**0%**	**168**	**100%**	**0:168**

S. No.	Name of College	Degree Programme	Total students	Male students		Female Students		M:F Ratio
				No.	%	No.	%	
6.	College of Agril. Engg. & PHT, Ranipool, Sikkim	B.Tech. (Agril. Engg.)	146	91	62%	55	38%	1:0.61
		B.Tech. (FT)	41	24	59%	17	41%	1:0.71
		M.Tech.	31	20	65%	11	35%	1:0.55
		Ph.D. (Agril. Engg.)	19	9	47%	10	53%	1:1.11
		Total	**237**	**144**	**61%**	**93**	**39%**	**1:0.65**
7.	College of Post Graduate Studies in Agril. Sciences, Barapani, Meghalaya	M.Sc. (Agri.)	119	58	49%	61	51%	1:1.05
		MBA (Agri. Business Management)	6	6	100%	-	0%	6:0
		Ph.D. (Agri.)	69	39	57%	30	43%	1:0.72
		Total	**194**	**103**	**53%**	**91**	**47%**	**1:0.88**
8.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Agriculture	113	59	52%	54	48%	1:0.92
		M.Sc. (Agri.)	2	1	50%	1	50%	1:1
		Total	**115**	**60**	**52%**	**55**	**48%**	**1:0.98**
9.	College of Agriculture, Kyrdemkulai, Meghalaya	B.Sc. (Hons.) Agriculture	99	51	52%	48	48%	1:0.94
10.	College of Food Technology, Imphal, Manipur	B.Tech (Food Technology)	66	22	33%	44	67%	1:2
11.	College of Horticulture, Bermiok, Sikkim	BSc. (Hons.) Horticulture	73	21	29%	52	71%	1:2.48
12.	College of Horticulture, Thenzawl, Mizoram	B.Sc (Hons.) Horticulture	83	34	41%	49	59%	1:1.44
13.	College of Veterinary Sciences, Jalukie, Nagaland	B.V.Sc. and A.H	129	37	29%	92	71%	1:2.49
		Grand Total	**2805**	**1182**	**42%**	**1623**	**58%**	**1:1.37**

2.1.6. Rank Holders of U.G. and P.G. programmes, 2022-23

Table 2.1.6: [A]: First Rank Holders under UG Programme in different Colleges during the year, 2022-23

S. No.	Name of College	Degree Offered	Name of Student	OGPA
1.	College of Agriculture, Iroisemba, Imphal, Manipur	B. Sc. Agri 4th Year	Aina Perme	8.54
2.	College of Horticulture and Forestry, Pasighat	B.Sc. Hort. 4th Year	Ms. Unti Miiri Ezing	8.46
3.	College of Fisheries, Lembucherra, Tripura	B.F.Sc	Ms. Niharika Nama	8.97
4.	College of Vety Science & AH, Selesih, Aizawl, Mizoram.	BVSc. & A.H.	Shravaniya Pradhan	8.44

S. No.	Name of College	Degree Offered	Name of Student	OGPA
5.	College of Community Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	Tracy Thokchom	8.79
		B.Sc. (Hons.) Food Nutrition and Dietetics	Kaelcedoni G. Momin	8.99
6.	CoVSc and AH, Jalukie, Nagaland	B.V.Sc. and A.H.	Miss Purba Sen	8.64
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B. Sc. Agri. 4thYr	Ms. Shalu Sharma	8.75
8.	College of Agriculture, Kyrdemkulai, Meghalaya	B. Sc. (Hons.) Agriculture	Ms. Ria Bhattacharjee	8.60
9.	College of Horticulture, Thenzawl, Mizoram	B.Sc (Hons.) Horticulture	Mr. Banio Haobam	8.90
10.	College of Horticulture, Bermiok, Sikkim	B.Sc. (Hons.) Horticulture	Ms. Aanamika Rai	8.96
11.	College of Food Technology, Lamphelpat, CAU, Imphal, Manipur	B. Tech. 2nd Year	Tini Thangjam	8.52
12.	College of Agricultural Engineering and Post Harvest Technology, Ranipool, Sikkim	B.Tech (Agril.Engg.)	Mr. Sangram.3	8.90
		B.Tech (Food Technology)	Ms. Anubhuti Singh	9.03

Table 2.1.6: [B]: Subject wise first rank holders in Master's Programme in different colleges during the year, 2022-23

S. No.	Name of Colleges	Degree Offered	Name of Students	OGPA
1.	College of Agriculture, Iroisemba, CAU, Imphal	Agronomy	Devarasetti Venkata Sai	8.91
		Agril. Economics	Netinti Tanuja	8.52
		Entomology	Venna Surekha	8.72
		Agril. Extension	Yalem Tamuk & R Amulya	8.70
		Floriculture and Landscape Architecture	Sonia Thiyam	8.80
		Fruit Science	Kalpana Nambam	8.56
		Vegetable Science	Heisnam Henarita	8.48
		Genetics and Plant Breeding	Majji Sai Likitha & Arundhuti Chakrabarty	8.57
		Plant Pathology	Koppula Nithya Sree	8.60
		Soil Sc. &Agril. Chem.	Gurumayum Prameshchandra Sharma	8.53
2.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	Fruit Science	Ms. Dhanlakshmi S.	8.94
		Vegetable Science	Mr. Yogesh M	8.84
		Floriculture	Mr. Duggireddy Mahesh Reddy	8.20
		M.Sc. Forestry	Ms. Juhi Jha	8.50
		M.Sc. Forestry	Mr. Keithellakpam Gullamani Singh	7.90

S. No.	Name of Colleges	Degree Offered	Name of Students	OGPA
3.	College of Post Graduate Studies in Agricultural Sciences, Barapani, Meghalaya	Agronomy	Ms. Indrani Debasmita Borah	8.81
		Soil Sc. &Agril. Chem.	Ms. Sakshi Sinha	8.92
		Genetics & Pl. Breeding	Ms. Afeefa C H	8.83
		Plant Mol. Biology & Biotechnology	Ms. V. Preeti Kumari	8.67
		Entomology	Mr. Bimal Kumar Sahoo	9.12
		Pl. Pathology	Ms. Anwesha Sharma	9.06
		Nematology	Mr. Jeevan H	8.91
		Agril. Economics	Mr. Harigovind P	8.82
		Agril. Extension	Ms. Th. Sarjubala Devi	8.94
		Agri.-Business Management	Mr. Abhishek Prakash	8.64
4.	College of Fisheries, Lembucherra, Tripura	M.F.Sc. (Aquaculture)	Mr. Vishwajeet Anand	9.00
		M.F.Sc (Aquatic Animal Health)	Mr. Supratim Malla	8.66
		M.F.Sc. (Fish Genetics and Breeding)	Ms.Tadasa Priyadarshi	8.93
		M.F.Sc. (Fisheries Biotechnology)	Ms. Swana Yadav	8.74
		M.F.Sc. (Fisheries Extension)	Ms. Annastacya Sangma	7.68
		M.F.Sc. (Fish Processing Technology)	Ms. Pritha Kumar	8.82
		M.F.Sc. (Fisheries Resource Management)	Ms. Anisha Pradhan	8.83
5.	College of Veterinary Sciences and Animal Husbandry, Selesih, Mizoram	Veterinary Biochemistry	R Zapaw Azyu	8.66
		Veterinary Anatomy	-	-
		Animal Reproduction, Gynaecology and Obstetrics	Atokali Sumi	8.88
		Veterinary Medicine	Manisha Datta	8.75
		Veterinary Parasitology	Sulanki Sarkar	8.72
		Veterinary Pathology	Sona R	8.90
		Veterinary Microbiology	Surakaram Abhilash Goud	8.88
		Veterinary Surgery and Radiology	-	-
		Veterinary Public Health and Epidemiology	Elisetty Naga Pavana Sneha	8.89
		Animal Genetics and Breeding	Merion Debbarma	8.08
		Animal Nutrition	Akash Paul	8.42
		Veterinary Physiology	-	-
		Livestock Production and Management	Satyabrata Roy	8.63
		Livestock Products Technology	Aryabhatta Ghosh	8.62

S. No.	Name of Colleges	Degree Offered	Name of Students	OGPA
		Veterinary and Animal Husbandry Extension	Salam Prabex Kumar Singh	8.49
6.	College of Agricultural Engg. & Post Harvest Technology, Ranipool, Sikkim	M. Tech. (Processing & Food Engg.)	Mr. Loukrakpam Yaiphaba Meetei	7.97
		M. Tech. (Farm Machinery & Power Engg.)	Mr. Komatineni Bharath Kumar	8.40
		M.Tech. (Soil and Water Conservation Engg.)	Mr. Abhaya Kumar Pradhan	8.93
		M.Tech. (Irrigation and Drainage Engineering)	Ms. Rikuthakani Phawa	8.64
		M.Tech. (Renewable Energy Engineering)	Mr. Devi Charan Sharma	8.89

Table 2.1.6: [C]: Students Awarded Ph.D. Degree in different Colleges during the year, 2022-23

S.No.	Name of College	Subject	Name of Student	OGPA
1.	College of Agriculture, Iroisemba, Imphal, Manipur	Soil Science and Agricultural Chemistry	Ms. Kasinam Doruk	8.05
		Entomology	Ms. Sheileja Thounaojam	8.80
		Genetics and Plant Breeding	Ms. Takhellambam Julia	8.70
			Ms Ningthoukhongjam Reetisana	8.68
			Ms Artibashisha Hijam Pyngrope	8.37
		Plant Pathology	Ms Huirem Chandrajini Devi	8.60
2.	College of Horticulture & Forestry, Pasighat	Vegetable Science	Mr. Md. Ramjan	8.72
		Fruit Science	Ms. Megha Raghavan	9.03
			Ms. Oyinti Megy	8.14
3.	College of Post-Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	Agronomy	Mr. Chandrabhan Bharti	6.98
			Mr. Ganesh Narayan Gurjar	7.81
		Soil Sc. And Agril. Chem.	Mr. Alok Maurya	7.97
		Genetics and Plant Breeding	Ms. Reginah Pheirim	7.78
			Ms. Magudeeswari P.	7.95
			Mr. Duddukur Rajasekhar	7.84
			Ms. Mayurakshee Mahanta	8.68
		Plant Pathology	Ms. Manashi Debbarma	8.05
		Agril. Economics	Mr. Hehlangki Tyngkan	8.43
			Ms. Jeemoni Gogoi	8.85
			Ms. Dipriya R. Lyngkhoi	8.85
		Agril. Extension	Mr. Ereneus K. Marbaniang	8.51
4.	College of Fisheries, Lembucherra, Tripura	Aquatic Animal Health Management	Ms. Rajashree Devi	9.32
		Aquaculture	Ms. Reshmi Debbarma	9.73
		Fish Processing Technology	Ms. Saumya Priyadarshi Panda	8.98

S.No.	Name of College	Subject	Name of Student	OGPA
5.	College of Veterinary Sciences and Animal Husbandry	Veterinary Microbiology	Sanjeev Kumar	8.79
		Veterinary Pathology	Amitava Paul	8.17
		Veterinary Anatomy and Histology	Swarup Debroy	8.51
6.	College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim	Farm Machinery and Power Engineering	Mr. Solanke Krishna Rustumrao	8.26

2.1.7. Scholarships Awarded to Students during, 2022-23

Table 2.1.7: Scholarship awarded to students, 2022-23 (NTS/ University Merit Scholarship/Others)

S. No	Name of Students	Degree Programme	Year	No. of Stud-ents	No of Students receiving Univ Merit Scholarship/ Univ Institutional Fellowship	Any other scholarship
1.	College of Agriculture, Iroisemba, Imphal, Manipur	B.Sc. (Hons) Agri.	1st yr	15	1 (Merit Scholarship)	
			2nd yr	6	1 (-do-)	
			3rd yr	7	1 (-do-)	
			4th yr	6	1 (-do-)	
		M.Sc. Agri.	1st yr	9	42 (UIF)	
			2nd yr	12	39 (UIF)	
		Ph.D. Agri.	1st yr	2	6 (UIF)	
			2nd yr		11 (UIF)	
			3rd yr		6 (UIF)	
2.	College of Horticulture & Forestry, Pasighat Arunachal Pradesh	B.Sc. (Hons.) Horticulture	1st yr	7	1 (UMS)	
			2nd yr	3	1 (UMS)	
			3rd yr	2	1 (UMS)	
			4th yr	3	1 (UMS)	
		B.Sc. (Hons.) Forestry	1st yr	3	1 (UMS)	
			2nd yr	2	1 (UMS)	
			3rd yr	1	1 (UMS)	
			4th yr	2	1 (UMS)	
		M.Sc. Horticulture	1st yr	1	14 (UIF)	
			2nd yr	2	12 (UIF)	
		M.Sc. Forestry	1st yr	-	5 (UIF)	
			2nd yr	-	3 (UIF)	

S. No	Name of Students	Degree Programme	Year	No. of Stud-ents	No of Students receiving Univ Merit Scholarship/ Univ Institutional Fellowship	Any other scholarship
		Ph.D. Horticulture	1st yr	-	6 (UIF)	
			2nd yr	-	4 (UIF)	
			3rd yr	-	5 (UIF)	
3.	College of Post-Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	M.Sc. (Ag.)	1st yr	-	31 (CAU) 11 (ICAR)	1 (PG Indira Gandhi Scholarship for Single Girl Child)
			2nd yr	12	40	1 (PG Matric Scholarship Scheme for ST Students-Sikkim
		Ph.D. Agri.	1st yr	-	17	-
			2nd yr	-	11	1 (NF&SHE for ST), 1(NET/JRF)
			3rd yr	-	6	2 (NF&SHE for ST), 1 (NET/JRF), 1 (ICSSR)
			4th yr	-	-	1 (DST INSPIRE), 1 (NF&SHE for ST), 2 (ICAR SRF), 1 (NET/JRF), 2 (JNMF)
			5th yr	-	-	1 (DST INSPIRE, 3 (NF&SHE for ST), 1(NF&SHE for OBC)
4.	College of Fisheries, Lembucherra, Tripura	B.F.Sc	1st yr			
			2nd yr	--	--	15
			3rd yr	1	--	23
			4th yr	3	1	13
		M. F. Sc	1st yr	5	28	
			2nd yr	7	26	1 (Single girl child), 4 (NSP)
		Ph.D	1st yr		7	
			2nd yr		8	2 (NST)
			3rd yr		4	

S. No	Name of Students	Degree Programme	Year	No. of Stud-ents	No of Students receiving Univ Merit Scholarship/ Univ Institutional Fellowship	Any other scholarship
5.	College of Veterinary Sciences & A.H. Selesih, Aizawl, Mizoram	B. V. Sc. & A.H.	1st yr	9	1	-
			2nd yr	3	1	-
			3rd yr	3	1	-
			4th yr	-	1	-
			5th yr	-	1	-
		M. V. Sc.	1st yr	8	30	-
			2nd yr	6	28	-
		Ph.D	1st yr	-	3	-
			2nd yr	-	2	-
			3rd yr	-	1	-
6.	College of Community Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	1st yr		1	
			2nd yr		1	
			3rd yr		1	
			4th yr		1	
		B.Sc. (Hons.) Food Nutrition and Dietetics	1st yr		1	
			2nd yr		1	
			3rd yr		1	
			4th yr		1	
		M.Sc. (Community Science) Extension Education and Communication Management	1st yr		2	
			2nd yr		1	
		M.Sc. (Community Science) Food and Nutrition	1st yr		02	
			2nd yr		01	
7.	CoVSc & AH, Jalukie, Nagaland	B.V.Sc. & A.H	1st yr	-	1 (Merit)	
			2nd yr	-	1 (Merit)	
			3rd yr	-	1 (Merit)	
			4th yr	-	1 (Merit)	
			5th yr	-	-	

S. No	Name of Students	Degree Programme	Year	No. of Stud-ents	No of Students receiving Univ Merit Scholarship/ Univ Institutional Fellowship	Any other scholarship
8.	College of Agriculture, Pasighat, Arunachal Pradesh	B. Sc. (Hons) Agriculture	1st yr	-	1 (UMS)	
			2nd yr	-	1 (UMS)	
			3rd yr	-	1 (UMS)	
			4th yr	-	1 (UMS)	
9.	College of Agriculture, Kyrdemkulai, Meghalaya	B. Sc. (Hons) Agriculture	1st yr	4 (Applied)	1	Ishan Uday Scholarship – (Applied) National Scholarship Portal – 10 (Applied)
			2nd yr	-	1	Ishan Uday Scholarship – (Applied) National Scholarship Portal – 19 (Applied)
			3rd yr	-	1	National Scholarship Portal – 17 (Applied) State stipend – 3 (Applied)
			4th yr	-	1	Ishan Uday Scholarship (Applied) National Scholarship Portal – 6 (Applied)
10.	College of Horticulture, Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	1st yr	-	1	14
			2nd yr	-	1	14
			3rd yr	-	1	14
			4th yr	-	1	08
11.	College of Horiculture, Bermiok, Sikkim	B.Sc. (Hons.) Horticulture	1st yr	-	1	05 Post matric Scholarship (applied)
			2nd yr	-	1	05 Post Matric Scholarship
			3rd yr	-	1	02 Ishan Udai Scholarship 03 Post Matric Scholarship
			4th yr	-	1	01 Post Matric Scholarship

S. No	Name of Students	Degree Programme	Year	No. of Stud-ents	No of Students receiving Univ Merit Scholarship/ Univ Institutional Fellowship	Any other scholarship
12.	College of Food Technology, CAU, Lamphelpat, Imphal, Manipur	B. Tech. (Food Technology)	1st	-	0	
			2nd	-	1	OBC/SC (5) ST (3)
			3rd	-	1	OBC/SC (5) ST (3)
			4th	-	1	OBC/SC (6) ST (1)
13.	College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim	B.Tech. (Agricultural Engineering)	1st yr	7	1	Ishan Udhay-03 Post Matric-21
			2nd yr	9	1	Post Matric-13
			3rd yr	6	-	Ishan Udhay-04 Post Matric-12
			4th yr	9	-	Ishan Udhay-01 Post Matric-13
		B.Tech. (Food Technology)	1st yr	-	1	Ishan Udhay-00 Post Matric-12
			2ndyr	3	-	Ishan Udhay-00 Post Matric-03
			3rd yr	-	-	Ishan Udhay-01 Post Matric-07
			4th yr	1	-	Ishan Udhay-00 Post Matric-02

2.1.8. National Level Examinations passed by students during, 2022-23

Table 2.1.8: National level examinations qualified during the year 2022-23: (JRF/SRF/NET/ARS/GATE/ CAT/others)

S. No.	Name of College	Name of exam	No of Students appeared	No. of students qualified
1.	College of Agriculture, Iroisemba, Imphal, Manipur	JRF	86	Qualified: Nil
		SRF	60	Qualified: 1
2.	College of Horticulture And Forestry, Pasighat, Arunachal Pradesh	JRF	48	Qualified: 06
			-	Secured: 04
		SRF	8	Qualified: 08
			-	Secured: 03
		SRF		Qualified: 7
				Secured: 1
		UGC NET	31	6
		CSIR NET	10	-
		GATE	1	1

S. No.	Name of College	Name of exam	No of Students appeared	No. of students qualified
3.	College of Fisheries, Lembucherra,Tripura	JRF		Qualified: 5
		SRF		Qualified: 3
				Secured: 3
		ARS		2
4.	College of Veterinary Sciences & A.H., Selesih, Aizawl	JRF	25	Qualified: 7
		SRF	35	Qualified: 9
		ARS		01
5.	College of Agricultural Engineering and Post-Harvest, Technology, Gangtok	JRF	15	Qualified: 12
				Taken admission through ICAR: 05
		GATE	12	06
		CAT	01	01
		Other(please specify)	01	01 (IIIT, Hyderabad) All together 20 students (AE & FT) including GATE qualified, have taken admission for M. Tech. degree programme in various universities
6.	College of Community Science, Tura, Meghalaya	ICAR AIEEA-PG JRF	29	Qualified: 20
				Secured: 13
7.	College of Agriculture, Kyrdemkulai, Meghalaya	JRF	19	Qualified: 6
		Others (please specify)	SASRD entrance exam CAU entrance exam	Qualified: 1 Qualified: 2
8.	College of Food Technology, CAU, Lamphelpat, Imphal, Manipur	JRF	-	Qualified:
		GATE	02	Qualified: 02
		CAT	-	Qualified:
9.	College of Horticulture, Thenzawl	JRF		Qualified: 2
10.	College of Veterinary Science and Animal Husbandry, Jalukie	JRF (ICAR-JRF)	25	Qualified: 25
				Secured: 1
11.	College of Horticulture, Bermiok	JRF	12	Qualified: all
				Secured: 12,174, 240, 246

2.1.9. Placement of passed out students in different organizations during, 2022-23

Table. 2.1.9: Placement of passed out students in different positions/organizations during 2022-23

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
1.	College of Agriculture, Iroisemba, Manipur	Takhe Tayang	2020	Arunachal Police	Sub Inspector
		Dr. Indira Moirangthem	2020	Nagaland University	Asst. Prof.
		Dr. Deepa Thangjam	2020	Nagaland University	Asst. Prof.
		Dr. K. Dinesh	2020	Dr. Y.S.R. Horticulture University, Andhra Pradesh	Asst. Prof.
		Subrata Debnath	2020	Dept. of Agri. & Farmer Welfare Tripura	Agriculture Officer, TAFS Grade-I
		Amlam Nath	2019	-Do-	-Do-
		Rakesh Sil Sharma	2014	-Do-	-Do-
		Saurav Saha	2020	-Do-	-Do-
		Samir Tripura	2014	-Do-	-Do-
		Apswari Murasing	2015	-Do-	-Do-
		Dibyendu Debbarma	2014	-Do-	-Do-
		Khumbar Debbarma	2015	-Do-	-Do-
		Pulak Debbarma	2017	-Do-	-Do-
		Tanusree Das	2014	-Do-	-Do-
		Rahul Debbarma	2017	-Do-	-Do-
		Shantanu Das	2014	-Do-	-Do-
		Aslangti Riang	2019	-Do-	-Do-
		Mukta Das	2017	-Do-	-Do-
		Satkulal Debbarma	2016	-Do-	-Do-
		Dinki Jamatia	2019	-Do-	-Do-
		Gabriel Darlong	2019	-Do-	-Do-
		Kabir Debbarma	2010	-Do-	-Do-
		Tokmen Siram	2020	Dept. of Agri.	ADO
		Christina Borang	2019	-Do-	-Do-
		Tashi Pandem	2021	-Do-	-Do-
		Biny Lollen	2015	-Do-	-Do-
		Kipa Anna	2016	-Do-	-Do-

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
2.	College of Post-Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	Nathaniel Leong Nonghuloo	2013	State Agriculture Deptt., Meghalaya	ADO
		Mr. Emdor Shylla	2013	State Agriculture Deptt., Meghalaya	ADO
		Mr. Adelbert Kharlyngdoh	2013	State Agriculture Deptt., Meghalaya	ADO
		Mr. David Nonglait	2011	State Agriculture Deptt., Meghalaya	ADO
		Dr. Markynti Shangpliang Lyngdoh	2011	State Agriculture Deptt., Meghalaya	ADO
		Ms. Rebekka Syiem	2014	State Agriculture Deptt., Meghalaya	ADO
		Mr. Heipormi Papang	2018	State Agriculture Deptt., Meghalaya	ADO
		Mr. Wadbok Rani	2018	State Agriculture Deptt., Meghalaya	ADO
		Labuhty Giri Mawlong	2016	State Agriculture Deptt., Meghalaya	ADO
		Ms. Rimikini Laloo	2016	State Agriculture Deptt., Meghalaya	ADO
		Mr. Achin Kharmudai	2017	State Agriculture Deptt., Meghalaya	ADO
		Ms. Saphina Mary Kurkalang	2015	State Agriculture Deptt., Meghalaya	ADO
		Ms. Amenisha Lyngdoh	2014	State Agriculture Deptt., Meghalaya	ADO
		Mr. Rupaia Siangshai	2013	State Agriculture Deptt., Meghalaya	ADO
		Ms. Baiamon Sutnga	2018	State Agriculture Deptt., Meghalaya	ADO
		Dr. Euwanrida Adleen Lyngdoh	2019	State Agriculture Deptt., Meghalaya	ADO
		Dr. Sao Evalwell Dkhar	2019	State Agriculture Deptt., Meghalaya	ADO
		Ms. Flamia Chimachi R. Marak	2018	State Agriculture Deptt., Meghalaya	ADO
		Ms. Sengmitchi D. Sangma	2019	State Agriculture Deptt., Meghalaya	ADO
		Mr. Along B. M. Sangma	2017	State Agriculture Deptt., Meghalaya	ADO
		Ms. Itirekha R. Marak	2010	State Agriculture Deptt., Meghalaya	ADO

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
		Baltachina G. Momin	2016	State Agriculture Deptt., Meghalaya	ADO
		Mr. Romeo M. Marak	2014	State Agriculture Deptt., Meghalaya	ADO
		Mr. MSV Satyanarayana	2021	SKV College of Agri. SSR Puram, Murapaka, Srikakulam-532403, Andhra Pradesh	Asst. Prof.
		Mr. Pranab Malakar	2018	State Agriculture Deptt., Tripura	ADO
		Mr. Nowang Wangnou	2018	State Agriculture Deptt., Arunachal Pradesh	ADO
		Mr. Tage Lampung	2018	State Agriculture Deptt., Arunachal Pradesh	ADO
		Mr. Bai koyu	2021	RGU, Arunachal Pradesh	Asst. prof.
		Deepa Thangjam	2020	SASRD, Nagaland	Asst. Prof.
		Menaka Sharma	2017	Feeds, Senapati, Manipur	Asst. Prof.
		Ms. Dipriya Lynkhoi	2022	Community and Rural Development, East Khasi Hills.	Jr. Rural Development Officer
		Mr. Hehlangki Tyngkang	2022	CPGSAS	SRF
		Mr. Biaobor Nongbri	2020	Community and Rural Development, East Khasi Hills.	Jr. Rural Development Officer
		Ms. Jeemoni Gogoi	2022	Assam	Social Scientist
		Mr. Pavam Kumar	2022	Eagon Agro India Pvt. Ltd, Kolkata	Marketing Manager
		Mr. Abhishek Prakash	2022	Biostadt India Ltd. Bihar	Territory Manager
		Mr. Alok Maurya	2022	Gr-A(Chemistry), Dist. Soil Testing Laboratory, Amethi, UP	Sr. Technical Assistant
		Mr. Rajasekhar D.	2022	VNR Seeds Pvt. Ltd	Assistant Breeder
		Ms. Lipa Deb	2021	Plant Pathology, Birsa Agricultural University, Jharkhand	Asst.Prof.
		Ms. Regina Pheirim	2021	LPU	Asst.Prof.

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
3.	College of Fisheries, Lembucherra, Tripura	Mr. Da U Ruhi Pde	2010-14	ICAR	Scientist
		Ms. Ananya Khatei	2018-20	ICAR	Scientist
		Ms. Jenifer Debbarma	2020-22	Govt. of Tripura	Food safety officer
		Ms. Rajashree Devi	2019-21	Department of Fishery, Govt. of Assam	Fishery Development officer
		Ms. Prastuti Saikia	2020-22	Department of Fishery, Govt. of Assam	Fishery Development officer
		Ms. Bonani Laskar	2014-16	Department of Fishery, Govt. of Assam	Fishery Development officer
		Mr. Rupan Pegu	2015-17	Department of Fishery, Govt. of Assam	Fishery Development officer
		Mr. Kusang Sherpa	2015-19	Directorate of Fisheries, Govt. of Sikkim	Fisheries Block Officer
		Mr. Yogesh Dangal	2011-15	Directorate of Fisheries, Govt. of Sikkim	Fisheries Block Officer
		Mr. Punama Gurung	2016-20	Directorate of Fisheries, Govt. of Sikkim	Fisheries Block Officer
		Ms. Nirmala Thapa	2016-20	Directorate of Fisheries, Govt. of Sikkim	Fisheries Block Officer
		Ms. Deepa Chetri	2015-19	Directorate of Fisheries, Govt. of Sikkim	Fisheries Block Officer
		Ms. Tadasa Priyadarshini	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Mr. Asish Satapathy	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Anuradha Patra	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Aditi Anindita Tripathy	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Tanushree Behera	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Pankajinee Kishan	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Anisha Pradhan	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Seema Padhan	2021-23	Department of Fishery, Govt. of Odisha	AFO

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
		Ms. Suman Prusti	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Mr. Subhajit Mohanty	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. Monalisa Panda	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Ms. A Jyoti	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Mr. Sandip Sovan Behera	2021-23	Department of Fishery, Govt. of Odisha	AFO
		Mr. Sarada Prasad Mishra	2020-21	Department of Fishery, Govt. of Odisha	AFO
		Mr. G. Deepak Reddy	2020-21	Department of Fishery, Govt. of Odisha	AFO
		Ms. Saumya Priyadarshini Panda	2019-21	Department of Fishery, Govt. of Odisha	AFO
		Mr. Bhabani Shankar Rout	2019-21	Department of Fishery, Govt. of Odisha	AFO
		Ms. Snigdha Sucharita Majhi	2019-21	Department of Fishery, Govt. of Odisha	AFO
		Ms. Kalpita Tripathy	2019-21	Department of Fishery, Govt. of Odisha	AFO
		Mr. Subham Kumar Pradhan	2019-21	Department of Fishery, Govt. of Odisha	AFO
		Ms. Banalata Rout	2018-20	Department of Fishery, Govt. of Odisha	AFO
		Ms. Suchismita Maharana	2018-20	Department of Fishery, Govt. of Odisha	AFO
		Ms. Swapnarani Samantaray	2016-18	Department of Fishery, Govt. of Odisha	AFO
		Mr. Ansuman Panda	2015-17	Department of Fishery, Govt. of Odisha	AFO
		Ms. Snehalata Mohanty	2015-27	Department of Fishery, Govt. of Odisha	AFO
		Mr. Joydeep Majumder	2017-21	Gramin Bank, Tripura	Clerk

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
4.	College of Veterinary Sciences & A.H., Selesih, Aizawl	Dr. Vanlalngilneii Ralte		ICAR	ARS
		Dr. John Beizalaisa Khithie		State Veterinary Officer Mizoram	VO
		Dr. Michael V. Lalrinzuala			-Do-
		Dr. Zothanpuii			-Do-
		Dr. A. Lalramliana			-Do-
		Dr. C.Lalawmpuia			-Do-
		Dr. K. Lalchhanhima		Mizoram	Mobile Veterinary Unit
		Dr. Vanlalhriatpuia			-Do-
		Dr. Lalrintluanga			-Do-
		Dr. Rebecca Lalkhawngaihsangi			-Do-
		Dr. Timothy Lalmalsawma			-Do-
		Dr. Laltlanmawia Hnamte			-Do-
		Dr. Laltluangkima Sailo			-Do-
		Dr. Lalhruaitluanga			-Do-
		Dr. Zomuanpuia Fanai			-Do-
		Dr. Lalnundanga			-Do-
		Dr. R. Lalhruaitluanga			-Do-
		Dr. S.T. Vanzampuii			-Do-
		Dr. K.C. Lallianzuali			-Do-
		Dr. Lalnunfela			-Do-
		Dr. Elena Vanzarpuii			-Do-
		Dr. Joseph L Stevenson			-Do-
		Dr. Lalhmunmawia			-Do-
		Dr. L.H.Lalrosanga			-Do-
		Dr. Amos Vanlalengkima			-Do-
		Dr. Andrew Lalruatkima			-Do-
		Dr. Benson Chhakchhuak			-Do-
		Dr. J.Vanthanga			-Do-
		Dr. John Rozarliana			-Do-

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
		Dr. Eneth Lalhuthangi			-Do-
		Dr. Lalchamliani		Mizoram	MCS
		Dr. Vanlalnunpuii			-Do-
		Dr. Lalhruaitluangi		NIT, Mizoram	Assistant Registrar
		Dr. C. Vanlalpianpuia		Apex Bank	Asst. Manager
		Dr. Keyolenu Yore		Nagaland	Veterinary Officer
		Dr. Pangdun Konyak			-Do-
		Dr. Velilu Epao			-Do-
		Dr. KekiepeuNza			-Do-
		Dr. Kaushik Majumder		Tripura	Mobile Veterinary Unit
		Dr. Sulanki Sarkar			-Do-
		Dr. Sumit Kumar Debnath			-Do-
		Dr. Saurav Debnath			-Do-
		Dr. Hamari Debbarma			-Do-
		Dr. Suraj Paul			-Do-
		Dr. Value Debbarma			-Do-
		Dr. Kallol Das			-Do-
		Dr. Suraj Das			-Do-
		Dr. Kinkar Debbarma		Tripura	Food Safety Officer
		Dr. Hirani Jamatia			-Do-
		Dr. Sumit Debnath			-Do-
		Dr. Jayanta Banik			-Do-
		Dr. Merion Debbarma			-Do-
		Dr. Ruthi Lalneihkimi		Mizoram	Assistant Grade
		Dr. Malsawmdawngkimi Colney		Mizoram	UDC
		Dr. Lalremruata		Mizoram	Scientist B, ZMC

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
		Tsheten Doma Tamang		Sikkim	VO Ad Hoc
		Tshering Yangchen Bhutia			-Do-
		Bishwa Dev Basnett			-Do-
		Kamal Rai			-Do-
		Julina Subba			-Do-
		Diki Ongmu Lepcha			-Do-
		Sharin Gurung			-Do-
		Kuldeep Kalita		Assam	VO
		Sopon Jyoti Bhyuan			-Do-
		Sikdar Jabudur Rehman			-Do-
		Dhubajyoti Das			-Do-
		Nirmali Sharma			-Do-
		Pranab Boro			-Do-
		Chow Mang Seng Chowpu			-Do-
5.	College of Community Science, Tura, Meghalaya	Mrs Brighty A. Sangma	2010	State Government	Junior Rural Development Officer
		Ms Salnamchi J Sangma	2016	CCS, CAU, Tura	AICRP
		Ms Cardience Marak	2013	CCS, CAU, Tura	AICRP
		Ms Tage Ani	2015	Central Government	Food Safety Officer, FSSAI
		Ms Raveena Leivon	2016	Nutri Ahaar Nutrition Clinic, New Delhi	Nutritionist
		Ms Quisa Terokchi D Shira	2013	Nulife Multispecialty Hospital, New Delhi	Dietician
6.	College of Agriculture, Pasighat, Arunachal Pradesh	Mr. Bijoy Debnath	2018	Department of Agriculture and Farmers Welfare, Tripura	Agricultural Officer, TAFS, Grade-I (Group Gazetted),
		Mr. Shaibal Biswas	2020		
		Ms. Naihar Jamatia	2020		
		Mr. Shuvam Jamatia	2021		

S. No.	Name of the College	Name of Student	Year of Passing from College	Organization	Position Joined as
		Ms. Maman takuk	2018	Department of Agriculture, Govt. of Arunachal Pradesh	Agriculture Development Officer (ADO),
		Ms. Osinam Tapak	2018		
		Mr. Babu taloh	2018		
		Ms. Buru Yalung	2018		
		Ms. Bharoty Tayeng	2020		
7.	College of Food Technology, Lamphelpat, Manipur	Bhavesh Datla	2020	Price Water House and Cooper Bangalore	Associate Technology Consultant
		Arrowal C. Syngkon	2021	Meghalaya State government job	Food Safety Officer
		Tyngshainmi Kharsanoh	2021	-do-	-do-

2.2 Library Services

All the constituent colleges of the University have well equipped libraries which provide services to scholars, teachers and staff of the college. Library has e-resources including KOHA Online Library, IP-based academic e-journals, e-books and other e-literature, *etc.* In addition, library is receiving newsletters, annual reports, bulletins *etc.* from different organizations. The Library provides circulation and reference services. All the in-house operations of the Library are fully computerized using the networked version of the software LibSys – 4 with OPAC facilities. The Library also has access to CeRA and India Agri Stat Consortium. Photocopying facility is also available in the Library. A total of 714 number (425 Indian; 289 foreign) of e-books were purchased at the cost of Rs 88,00,000. The detail of books, theses, journals, magazines and other reading materials along with its expenditure is furnished as under:

2.2.1 College of Agriculture, Iroisemba, Manipur

S. No	Library Collection	Nos.
i.	Books (Total holdings)	21314
ii.	Theses (Reference Section)	1685
iii.	Journals	
	Indian Journals	112
	International Journals	19
	Total Bound Volume Journals	1193

S. No	Library Collection	Nos.
iv.	Popular Magazines	6
	Total amount spent on newspapers and magazines	3500
vi.	Miscellaneous	
	Books/Journals sent for binding during 2022-23	Nil

Number of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1	66	116	423256

2.2.2 College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

S. No.	Library collection	Nos.
i.	Books (Total holdings) Text Books Bank (Text Book)	16298
ii.	Theses (Reference Section)	
iii.	Journals	
	Indian Journals	14
	International journals	48
	Total bound Volume Journals	
iv.	Popular Magazines	
v.	Newspapers	
	National Newspapers	
	Local Newspapers	1

Number of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure
1.	13	92	46,354.00

2.2.3 College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya

S. No	Library Collection	Nos.	Amount (Rs)
i.	Books (Total holdings)	5800	215709.00
ii.	Theses (Reference Section)	MSc = 461, PhD = 59	
iii.	Journals		
	Indian Journals	16	62330.00
	International Journals	Nil	
	Total Bound Volume Journals	Nil	
iv.	Popular Magazines	7	11669.00
v.	Newspapers	9	25098.00
	National Newspapers	2	
	Local Newspapers	7	

Number of Academic books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure
Total Expenditure for FY 2022-23 under Library Head			278039.00

2.2.4 College of Fisheries, Lembucherra, Tripura

S. No	Library Collections	Nos.
i.	Books (Total holdings)	8989
ii.	Theses (Reference Section)	189
iii.	Journals	
	Indian Journals	4
	International Journals	-
	Total Bound Volume Journals	-
iv.	Popular Magazines	15
v.	Newspapers	5
	National Newspapers	3
	Local Newspapers	2
	Total amount spent on newspapers and magazines	36,962.00

Number of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	74	166	Rs. 2,35,128.00

2.2.5 College of Veterinary Sciences & A.H., Selesih, Aizawl, Mizoram

S. No.	Library Collections (2022-2023)	Nos.
i.	Books (Total holdings)	10547
ii.	Theses (Reference Section)	279
iii.	Journals	
	a. Indian Journals	3
	b. International Journals	Nil
	Total Bound Volume Journals	354 (Nos.)
iv.	Popular Magazines (2022-2023)	5
v.	Newspapers (Subscribed during 2022-2023)	
	National Newspapers	1
	Local Newspapers	Nil
	Total amount spent on newspapers and magazines	4309.00
vi.	Miscellaneous	Nil
	Books/Journals sent for binding during 2022-2023	Nil
	No. of CD/DVD	153 (Nos.)

Number of Academic Books purchased during 2022-23

S. No.	No. of Titles	No. of Copies	Expenditure
1.	85 (as on 30.03.2023)	228	Rs. 4,57,688.00
2.	e-Books	15	Rs. 1, 26,177.00

2.2.6 College of Agricultural Egineering & P.H.T., Ranipool, Sikkim

S. No.	Library Collection	Nos.
i.	Books (Total holdings)	8027
ii.	Theses (Reference Section)	316
iii.	Journals	Nil
a.	Indian Journals	-
b.	International Journals	-
c.	Total Bound Volume Journals	Nil
iv.	Popular Magazines	08
v.	Newspapers	Nil
a.	Books/ Journals sent for binding during 2022-23	Nil

Number of Academic Books purchased during 2022-23

S. No.	No. of Titles	No. of Copies	Expenditure
1.	38	171	Rs. 106,729.00

2.2.7 College of Community Science, Tura, Meghalaya

S. No.	Library Collection	Nos.
i.	Books (Total holdings) From 2004 to 2023 (7046 collections) Books Acquired during 2022-23	118 titles
ii.	Theses (Reference Section)	Nil
iii.	Journals	
	Indian Journals (subscribed during 2022-23)	4
	International Journals	Nil
	Total Bound Volume Journals	Nil
iv.	Popular Magazines (subscribed during 2022-23)	
v.	Newspapers (subscribed during 2022-23)	
	National Newspapers	
	Local Newspapers	1
	Total amount spent on newspapers and magazines	17669.00
vi	Miscellaneous	
	Books/Journals sent for binding during 2022-23	Nil

Number of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	78Titles	1 Copy each	Rs 1,29,831/-

2.2.8 College of Veterinary Sciences & A.H., Jalukie, Nagaland

S. No.	Library Collection	Nos.
1.	Books (Total holdings)	1653
2.	Thesis (Reference Section)	-
3.	Journals	-
	Indian Journals	02
	International Journals	-
	Total Bound Volume Journals	-
4.	Popular Magazines	-
5 .	Newspapers	03
	National Newspapers	-
	Local Newspapers	03
	Total amount on Newspapers and Magazines	Rs. 4020.00
6.	Miscellaneous	Rs. 1325.00
	Books/Journals sent for binding during 2022-23	

Number of Academic Books Purchase during the year 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	43	126	1,12,221.00

2.2.9 College of Horticulture, Bermiok, Sikkim

S. No.	Library Collection	Nos.
i.	Books (Total holdings)	2259
ii.	Theses (Reference Section)	Nil
iii.	Journals	
a.	Indian Journals	Nil
b.	International Journals	Nil
c.	Total Bound Volume Journals	Nil
iv	Popular Magazines	Nil
v	Newspapers	Nil
a.	National Newspapers	Nil
b.	Local Newspapers	Nil
	Total amount Spent on newspapers and magazines	Nil
vi	Miscellaneous	
a.	Books / Journals sent for binding during 2022-23	Nil

No. of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	50	152	Rs 17,68,293.00

2.2.10 College of Horticulture, Thenzawl, Mizoram

S. No.	Library Collection	Nos.
1.	Books (Total holdings)	2133

No. of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	91	211	2.29 lakhs

2.2.11 College of Food Technology, Lamphelpat, Manipur

S. No.	Library Collection	Nos.
i.	Books (Total holdings)	1572
ii.	Theses (Reference Section)	-
iii.	Journals	2
	Indian Journals	2
	International Journals	-
	Total Bound Volume Journals	-
iv.	Popular Magazines	-
v.	Newspapers	-
	National Newspapers	1
	Local Newspapers	1

Number of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	23 e -Books		

2.2.12 College of Agriculture, Pasighat, Arunachal Pradesh

S. No	Library Collection	Nos.
1.	Books (Total holdings) Text Books Bank (Text book)	1955 977

Number of Academic Books purchased during 2022-23

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.		567	Rs. 267855.00

2.2.13 College of Agriculture, Kyrdemkulai, Meghalaya

S. No.	Library collection	Nos.	Expenditure (Rs)
1.	Prashant Book Agency	353	266, 621.00
2.	Atlas Books and Periodicals	2	34, 226.00
e-Books		551	10, 405.00

Number of Academic Books purchased during 2022-2023:

S. No.	Titles	No. of Copies	Expenditure (Rs)
1.	55	355	3, 00847.00

2.3 Computer facilities

2.3.1. College of Agriculture, Iroisemba, Manipur

The Computer Lab of College of Agriculture, Iroisemba, provides facilities like conducting practical classes for UG/PG/Ph.D. students, statistical computing with statistical packages (say, SAS, IBM SPSS), internet serving for searching of research materials, organizing other training program/examination related to computer, etc. The Lab is now open during office hours in all working days for all students, faculties, scientists, staff of the College. Besides this, there is one Language laboratory having 31 computer systems to enhance computing skills as well as improving language skills of the students.

2.3.2. College of Horticulture and Forestry, Pasighat, Arunachal Pradesh

The College has well-furnished air-conditioned Computer Laboratory. It houses 20 Desktop Computers with Internet facility. The lab is used for conducting practical classes for B.Sc. Horticulture, B.Sc. Forestry and M.Sc. students. Students also use the Computer Lab for their research, statistical calculation and other academic activities. The college has 2 Mbps Leased line Internet connection from BSNL. The College provides unlimited Internet

facility to the staffs and students. Wi-Fi Internet hotspot facility has been provided at Academic building, old College building, VC Camp, Guest House and Daisy Girls' Hostel and Boy's hostels. Faculty members and students utilize internet and computer facility for carrying out academic research and extension activities. The name of official website of the College of Horticulture and Forestry, Pasighat is http://chfcau.org.in which was hosted in Sep'2014. The website design and development was performed by the Department of Basic Science and Humanities, CHF Pasighat.

2.3.3. College of Community Science, Tura, Meghalaya

The college has an Information Technology Laboratory with 17 computers and 10 mbps Wi-Fi internet facility that caters to the practical courses of Computer Aided Interior Designing, Agricultural Informatics, and Statistics. To achieve effective teaching-learning goals, it has four interactive white boards in the four main lecture halls, and in the current session (2020-21) a smart classroom facilitated through NAHEP (Institutional Development Programme) has been set up. A Language Laboratory with 30 computers having 20 mpbs internet connection has also been established in an endeavor to improve the communication and life skills of the students. The computers and internet

connection will also be utilized to meet the other requirements of the students. The college library also has internet connection that is used for various purposes. Although there are no separate computers for the students in the library, there are adequate IT facilities in the IT lab and in the Language Lab to meet their requirement. The library is fully automated with KOHA library software and database entries of all collections have been completed as of now. Circulation section of Issue return and users Card are all done through Barcode. OPAC (Online Public Access Cataloguing) service is provided to all users.

2.3.4. College of Fisheries, Lembucherra, Tripura

A computer laboratory with Internet (16 MBPS) facility is set up to cater the needs of the students/faculty/research staff of the college. Presently 15 computers are provided to facilitate the computation/analytical need of the students for their practical and research purposes. Statistical Package for Social Sciences (SPSS-22) is recently procured and installed. LAN Topology and Connectivity: Mesh Topology and 16 MBPS leased line connection from BSNL for the entire college. Plagiarism software has been purchased to stop Plagiarism in writing of thesis and research paper. Online procurement system has been started through government e-procurement/ GEM portal. Online financial management system PFMS has been started. The college also has smart classroom facility.

2.3.5. College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya

The network facility in CPGSAS (CAU-I) Umiam campus has been upgraded to a planned decentralized manner which includes two major parts – namely a *Public Domain* (via the College Website – www.cpgs.ac.in) and a *Private Domain* (via the College's Intranet Setup). A setup consisting of Bharat Fibernet BSNL FTTH connections (currently 20 Nos.) has been installed in various locations of the college campus. Students and staff of the college can use these connections to connect directly to the Internet and/or to the CPGS Intranet (provided through OpenVPN Access) for all facilities such as KOHA OPAC Online Library, CeRA journals, IP-based academic e-journals, e-books and all other e-resources.

2.3.6. College of Veterinary Sciences & A.H., Selesih, Aizawl, Mizoram

The College provides the computing facilities to the teaching staff and Research students. It also provides Internet browsing to all teaching staff, administrative staff and Students. There are nearly 150+ users which are using internet facilities and computing facilities. There are two Computer Labs in this College. Both are well equipped with internet facilities to all the 27(17+10) PCs. This centre is being used for imparting teaching computer classes to the first year students as per VCI norm. This facility is also accessible to all the students, faculty and staff of the college. The College supports a wide High Speed fiber optic and Wireless network Bridge that connects administrative Building, all the Departments, library, Hostels, VC camp and other central facilities to the Computer Centre. The College procured 50 Mbs with uploading speed of 1:1 lease line connection from private service provider for internet connectivity. Users can use the computing resources of Computer Center from their offices, Academics Unit and Hostels. Computer Centre operates 24 hours a day, 365 days a year. It has a power back up through a 10 KVA UPS and a 300 KVA generator set. Facility is provided to all the students, faculty and staff members for browsing Internet. The computer centre is also installed with high capacity printer and service is provided to the end users (faculty members, staff and student).

2.3.7. College of Agricultural Engineering & P.H.T., Ranipool, Sikkim

The College of Agricultural Engineering and Post-Harvest Technology (CAEPHT) Computer Laboratory, under Central Agricultural University (CAU), Imphal is well-equipped with 20 new computers for computing facilities to all the students of the college, teaching and non-teaching staff members along with Internet connectivity. It is equipped with some industry-standard software to cater to various extension activities that the college may be hosting at regular intervals. It also provides Internet facilities to all teaching staff, administrative staff and all students of the college. There are approximately more than 300 users who are availing the Internet and computing facilities. The Computer Centre supports a wide 1000 Mbps fiber optic network (OFN) that connects all the academic units, hostels, library, dispensary, residence and other central facilities to the Computer Centre. Users can use the computing resources of Computer Center from their offices, academics unit, hostels and residences.Login is provided to all the students, faculty and staff members for Internetbrowsing.Besides, Wi-Fi facilityis

provided to boys' hostel, girls'hostel, ATIC Building, guest house, dispensary, VC camp, and Dean's residence. LAN is provided through optical fiber connection in North Academic building, South Academic building, new girls' hostel, auditorium, staff quarter, medical unit and Farmers Produce Processing cum Skill Development Centre. The network Security is Provided through UTM/Firewall.

2.3.8. College of Agriculture, Pasighat, Arunachal Pradesh

Presently faculties and students of the College of Agriculture, Pasighat, Arunachal Pradesh were utilizing the computers laboratory/facilities of the College of Horticulture and Forestry, Pasighat, Arunachal Pradesh.

2.3.9. College of Horticulture, Thenzawl, Mizoram

The College of Horticulture, Thenzawl has 15 nos. of desktop and 5 nos. of laptops at present. There is no separate computer laboratory yet in the college.

2.3.10. College of Veterinary Sciences & A.H., Jalukie, Nagaland

The College has two computer labs which are attached with the Department of Animal Genetics and Breeding (15 Computers) and Department of Veterinary and Animal Husbandry Extension Education (09 computers). The College has licensed software packages installed on the computer systems, including software related to veterinary sciences such as simulation software, data analysis software, and statistical software.

2.3.11. College of Horticulture, Bermiok, Sikkim

The COH, Bermiok Computer Lab is equipped with computing facility with Dual Core computers connected through the Local Are Network. In order to empower the students in advanced ICT, computer applications have been made a part of the curriculum. Besides regular courses, the students are encouraged to use computers for Practical Assignment, Project work, Presentation and Reserach work. The Computer centre houses 20 personal computers with internet connection and a server to cater the needs of the students and faculty. All the machines are linked to LAN. The Computer system is equipped with licensed software like Microsoft Windows XP, MS Office, India Stat, SPSS, Tally etc. Students, faculty and staff have access to the computer labs, which provide the tools and technologies to edit papers, complete class assignments, communicate via email, conduct data analyses and access library resources. Microsoft Windows software

is available for word processing, statistics, spreadsheets and database management.

2.3.12. College of Agriculture, Kyrdemkulai, Meghalaya

The College of Agriculture, Kyrdemkulai, Meghalaya has 20 nos. of desktops at present. There is no separate computer laboratory yet in the college.

2.4 Students' Welfare & Extra Co-Curricular Activities

2.4.1. Hostel facilities

The hostels are located inside the college campuses that ensure close proximity and connectivity. The academic programmes of the University are purely residential and co-education except College of Home Science, Tura, Meghalaya where only girl students are admitted. Hostels are well furnished with telephone, TV, computers with free wi-fi facilities, kitchens, indoor games (TT board, carom, chess etc.), gymnasium, newspapers, first aid box & medical facility, inverter and generator systems and other basic facilities. There are separate hostels for boys and girls

as well as for under graduate, post graduate and doctoral research scholar also. Wardens monitored the hostels 24x7 hours pattern. Student clubs run their mess in their respective hostels. A 24 hours security is provided by security guards in the hostel.

2.4.2. Canteen facilities

All the constituent colleges are having well organized hygienic canteens located within the

campus. The facility is available for the students and staff of the college at the nominal rate. A committee monitors the hygienic and nutrition of food prepared in the canteen.

2.4.3. Medical Facilities

Each constituent college has well equipped medical unit for regular health check-up of staff and students. These 24x7 hours medical facilities are available in all campuses with well qualified resident medical officers assisted by compounder cum dresser, trained nurses and attendants. Ambulance services are also provided for the students and staffs for emergencies and effective health care management. The centre is also the place for conducting students' counseling as and when required under the guidance of the clinical psychologist.

2.4.4. Placement cell

The University has placement cell in all campuses which facilitates placement for the students in different agri allied sectors including banks, private establishments, NGO's, industry etc. Pass out students of the University also qualified for UPSC / State Civil Services examination and many of them are working in the ICAR, State Agricultural Universities, Technical Institutes of Higher Education, Krishi Vigyan Kendras, and Research Institutes of high

Career/Job Fair 2023 at CoVSc & AH, Jalukie

repute etc. Many students are doing Doctoral Degree Research in International Research Institutes as well as in the Universities in India and abroad.

2.4.5. Some glimpses of major activities observed during the year

The University promotes co-curricular activities and encourages students participation in all aspects of campus life. All constituent colleges of the university have well managed games and sports infrastructure including all season indoor facilities, auditoriums and gymnasiums. A separate cell for cocurricular activities was opened in the Directorate of Instruction *w.e.f.* 1st November, 2013 to co-ordinate and improve various Games and Sports & Cultural activities of the University. To inculcate the sense of competitiveness among the students, the constituent colleges organized co-curricular activities in the form of annual College Week, Sports & Games and Social/Cultural meets. To provide a common platform for the students of constituent colleges located in different states of the region, the university organises annual InterCollegiate Games & Sports Meet and Youth Festivals on shifting venue basis. The university shines in the All India ICAR Inter Agricultural Universities Games and Sports Meet (s), All India University

tournaments and Championships as well as all India University Youth Festivals and ICAR Youth Festivals, etc. All constituent colleges of the university organizes Swachh Bharat abhiyaan programme to create awareness among the CAU community, the sense of sanitation, hygiene and healthy living in tune with clean environment. It also organises International Day of Yoga to inculcate the students, a sense of nationalism through different community services. Further, it also has National Social Service (NSS) activities monitored by NSS cells in all the constituent colleges and organises programmes like blood donation, tree plantation, water harvesting, sanitation, health and hygiene activities, eco-environmental conservation and preservation etc. It organises animal health camps, field visits, seminars on stress management, communal harmony weeks with poster campaigns and other community service-related activities on regular intervals.

College Week: All the constituent colleges organise the Annual College Week in which the students within the college take part in Games and Sports events (both indoor and outdoor) and in literary and cultural events like fine arts, theatre, music and dance, etc. Based on the performance at college level, the students are selected and prepared for participation in the Inter-Collegiate Sports and Games and Inter-Collegiate Youth Festival held annually at the University level.

As an example, the College of Veterinary Science and Animal Husbandary, Aizawl, Mizoram organized annual college week in which annual games and sports events as well as literary cum cultural meets were held by the students in various events.

Swachh Bharat Abhiyaan: The Central Agricultural University, Imphal across its constituent colleges and KVK's conducted cleanliness drive under the Swachh Bharat abhiyaan programme. Hon'ble Vice Chancellor, Dr. Anupam Mishra, Directors, Deans, Officers, Senior Scientist and Heads of KVKs, teaching and non-teaching staff members and students of the university actively participated in cleaning and planting of saplings at the University headquarters and its constituent colleges and KVKs.

Celebration of Hindi Pakhwada: The Hindi Saptah was celebrated in the constituent colleges during 14th to 29th September, 2022, where different events were organized *viz.* speech, song, poem and essay competition. The staff and students took active participation in the event.

International Day of Yoga: International Day of Yoga was celebrated in the constituent colleges of CAU, Imphal on 21st June, 2022 with great enthusiasm and vigour. The practice of yoga helps to create overall harmony of body

Students Participation in Hindi Week competition

and mind thus providing mental and physical strength and enables to lead a healthy life.

Celebration of Birth Anniversary of Father of Nation: In commemoration of the birth anniversary of Father of Nation, Mahatma Gandhi, the constituent colleges of the University organised essay writing, quiz and painting competitions. “Swachh Campus” drive was also initiated in the constituent colleges with the objective to create clean, safe, healthy, plastic free and green environment campus.

Hindi Saptah - 2022: All constituent colleges of the University celebrated the Hindi Saptah divas from 14th to 20th September, 2022. Essay competition, extempore speech, Hindi knowledge quiz competition, Hindi typing competition and antakshari competition were conducted.

30th Foundation day celebration of the University

Prabhat Pheri by College of Agriculture, Imphal

Freshers meet at College of Food Technology, Imphal

Har Ghar Tiranga Campaign at College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

Celebration of Constitution Day at College of Community Sciences, Tura

Students of CAEPHT, Sikkim at essential oil extraction plant at Kanha Vanam, Hyderabad during Heartful Agro Youth Summit, 2023

Celebration of Gandhi Jayanti at college of Agriculture, Kyrdemkulai, Meghalaya

Entrepreneurship Development Programmes for students of CoHF, Pasighat at Entrepreneurship Development Institute of India (EDII) Gandhinagar, Gujarat

Cultural programme by CPGSAS, Barapani students during the Rising SunWater Fest at Umiam Sports Complex

Student Foreign Training Programme at Queen Sirikit Botanic Garden, Chiang Mai, Thailand during March 2023 under IDP-NAHEP

3

RESEARCH AND DEVELOPMENT

3. Research and Development

3.1 Status of university and externally funded research projects (2022-23)

During the year 2022-23, University carried out 25 Intramural Research Projects (IRPs) under University Funded Research Programmes and 102 Externally Funded Research Projects (EFRPs) alongwith research through 33 AICRPs. The details of the research projects are given below:

University Funded Intramural Research Projects (IRP)

S. No.	Directorate/College	Year (2022-23)			Total
		Completed (2022-23)	On going	Newly sanctioned during (2022-23)	
1.	College of Agriculture, CAU, Imphal, Manipur	-	-	-	-
2.	College of Veterinary Sciences & AH, CAU, Selesih, Aizawl, Mizoram	-	2	-	2
3.	College of Fisheries, CAU, Lembucherra, Tripura	-	3	-	3
4.	College of Horticulture & Forestry, CAU, Pasighat, Arunachal Pradesh	2	5	-	7
5.	College of Community Science, CAU, Tura, Meghalaya	2		-	2
6.	College of Agricultural Engineering & PHT, CAU, Gangtok, Sikkim	2	1	-	3
7.	College of PostGraduate Studies in Agricultural Sciences, CAU, Umiam, Meghalaya	1	1	-	2
8.	College of Agriculture, CAU, Pasighat, Arunachal Pradesh	-	2	-	2
9.	College of Agriculture, CAU, Kyrdemkulai, Meghalaya	-	-	-	-
10.	College of Horticulture, CAU, Bermiok, Sikkim	-	1	-	1
11.	College of Food Technology, CAU, Imphal, Manipur	-	-	-	
12.	College of Horticulture, CAU, Thenzawl, Mizoram	-	1	-	1
13.	College of Veterinary Sciences & Animal Husbandry, CAU, Jalukie, Nagaland	-	1	1	2
	Total	**7**	**17**	**1**	**25**

Externally Funded Research Projects (EFRP)

S. No.	Name of the College	Year (2022-23)			Total
		Completed (2022-23)	On going	Newly sanctioned during (2022-23)	
1.	Directorate of Research, CAU, Imphal	-	2	-	2
2.	College of Agriculture, CAU, Imphal, Manipurā	1	2	2	5
3.	College of Veterinary Sciences & AH, CAU, Selesih, Aizawl, Mizoram	3	9	-	12

S. No.	Name of the College	Year (2022-23)			Total
		Completed (2022-23)	On going	Newly sanctioned during (2022-23)	
4.	College of Fisheries, CAU, Lembucherra, Tripura	-	15	-	15
5.	College of Horticulture & Forestry, CAU, Pasighat, Arunachal Pradesh	3	15	1	14
6.	College of Community Science, CAU, Tura, Meghalaya	-	-	-	-
7.	College of Agricultural Engineering & PHT, CAU, Gangtok, Sikkim	1	5	-	6
8.	College of Post-Graduate Studies, CAU, Umiam, Meghalaya	2	16	11	29
9.	College of Agriculture, CAU, Pasighat, Arunachal Pradesh	1	1	2	4
10.	College of Agriculture, CAU, Kyrdemkulai, Meghalaya	1	1	-	2
11.	College of Horticulture, CAU, Bermiok, Sikkim	-	1	-	1
12.	College of Food Technology, CAU, Imphal, Manipur	-	-	-	-
13.	College of Horticulture, CAU, Thenzawl, Mizoram	1	1	-	2
14.	College of Veterinary Sciences & Animal Husbandry, CAU, Jalukie, Nagaland	-	4	1	3
	Total	**13**	**72**	**17**	**102**

As an outcome of these internal and external funded research endeavours, the university was successful in developing location specific deliverables, recommendations and research findings on agriculture and allied disciplines for the farmers and agri-entrepreneurs of NEH Region. The salient research achievements of the university are highlighted as follows.

3.2. Agriculture and Horticulture

A. Crop Improvement

3.2.1. Rice varieties in pipe line:

CAU R5 is a promising line of rice under the process of releasing as a new variety in the state of Manipur.

NECTAR-CI-08 (Improved line CAUS 105 (IET27496) of paddy): CAUS 105 (IET27496) is a high yielding improved pure line derived from a cross between Shahsarang and Priya. The line carries PsTOL1 gene, hence is suitable for phosphorus deficient acidic soil conditions.

CAU R5 (Yield Potential= 8 t/ha; Rice recovery=70%)

The line is suitable under low fertilizer input and organic cultivation practices and possesses resistance to leaf and neck blast diseases.

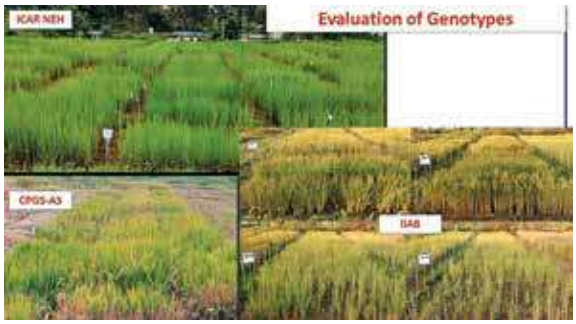
CAU R6 is a promising high yielding semi glutinous rice developed through hybridization programme.

NECTAR-CI-09 (Improved line CAUS 107 (IET28210) of paddy): CAUS 107 (IET28210) is a high yielding improved pure line derived from a cross between Shahsarang and CAUR-1. It has semi-glutinous endosperm. The line has high zinc content (28 ppm) in unpolished grain and is suitable for phosphorus deficient acidic soil conditions. The line is suitable under low fertilizer input and organic cultivation practices and possesses resistance to leaf and neck blast.

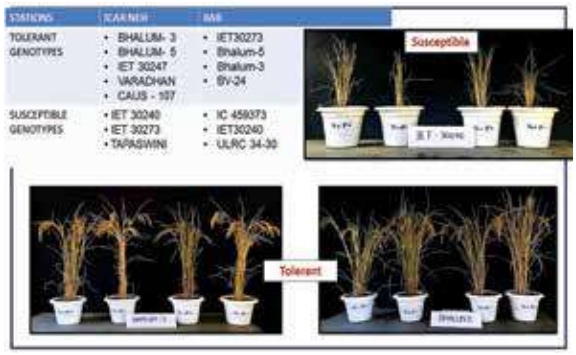
Promising semi dwarf mutant lines of rice developed through mutation breeding

Thirty improved parental lines having nitrogen use efficiency and low P tolerance ability were evaluated under different N-P conditions in upland and lowland soils.

CAU R6 (Yield potential= 7.5 t/ha; Rice recovery= 69%)



Evaluation of elite lines possessing nitrogen use efficiency and P deficiency tolerance across five different locations under low P and N conditions



Identification of the most suitable parental genotypes to be used for expression studies and in the marker assisted forward breeding programme

Allelic status of parental lines was ascertained for the 40 reported candidate genes/QTLs and markers.

CRISPR-Cas9 constructs designed for editing two candidate genes.

Three mapping populations evaluated under low N and P conditions.

Twenty five new crosses made for identifying transgressive segregants suitable for low input acidic soils.

F1 Hybrid (Kalikhasa X IR64) seed generated under improvement of traditional aromatic rice variety Kalikhasa for height and grain yield through Marker Assisted Breeding

F1 Hybrid of Kalikhasa

Evaluated the early & medium maturity (NIVT, AVT) field corn, OPV- I-II-III and specialty corn (Popcorn, sweet corn, baby corn & QPM) for yield and reported the high yielding accessions of field corn (DKC 7211, DKC 8211), OPV (L316, ADC-3 & ADC-23) and specialty corn i.e., IMHSB 21KP 1, IMHSB 21KP 2 (popcorn); FSCH 144, CPSC-301 (sweet corn), JH 32048, IMHSB-19KB-2, JH 32434 (baby corn) and IQPMH 2102, IQPMH 2105, IQPMH 2103 & HQPM30 (QPM) suitable for the region.

3.2.2. Soybean varieties under pipeline

CAUMS 1 developed through selection had a yield advantage of 14.03 % as compared with national check variety JS 335

CAUMS 1

CAUMS 2 developed through selection had a yield advantage of 18.46 % as compared with national check variety JS 97 -52

CAUMS 2

3.2.3. Underutilized crops

Seven local cultivars of millets were collected from different districts of Arunachal Pradesh. Characterization & multiplication is going on to obtain IC number from NBPGR.

Collection and characterization of millets

Twenty-three buckwheat accessions were collected from different districts of Arunachal Pradesh- Tawang, Shi-Yomi, East Siang and Lower Dibang Valley.

Out of 14 entries on Buckwheat, three (IC-540266 (17.00 q/ha), IC-540279(18.46q/ha) and IC-540279(18.25q/ha), were very promising in Pasighat condition.

Out of 25 germplasm of Jobs Tear, three were promising in first trial (IC-416831(0.10q/

Collection and characterization of Buckwheat

ha), C417053(23.80q/ha) and C540279(23.93q/ha)), five in second trial (RJTGP-43 (32.26q/ha), RJTGP-48 (41.30 q/ha), RJTGP-53 (28.26q/ha) and RJTGP-55 (29.63q/ha)) and four in the third trail (RJTGP-77 (29.93q/ha), RJTGP-78 (28.33 q/ha), RJTGP-80 (32.766q/ha) and RJTGP-97 (32.70q/ha).

Seven germplsam of job's tear, 11 of buckwheat and 14 of Faba bean from different parts of North East and Arunachal Pradesh were collected and maintained at CHF, CAU, Pasighat.

B. Crop production

3.2.4. Natural Farming /Organic Farming

Developed a model natural farm at CoA, Kyrdemkulai which has multiple units like forestry block, apiary unit, animal unit, quality planting material production unit, water harvesting structure, terrace planting, horticultural crop unit.

150 RILs of lentil generated from a cross between BM-4 and L-4602 were evaluated in acidic field conditions along with hydroponic study for aluminium tolerance and phosphorus acquisition efficiency.

Altogether 25 identified strains of bacteria have been screened for an array of PGP traits.

Formulated acid soil compatible liquid NPKZn biofertilizer consortium for rice-oilseed rotation.

Generation advancement of mapping population of lentil in experimental field at CPGS-AS, Umiam

Generation advancement of mapping population of lentil in experimental field at Lamsang Imphal West

Formulated acid soil compatible liquid Citrus biofertilizer consortium.

Formulated acid soil compatible liquid NPKZn biofertilizer consortium for *Jhum* mixed crops.

CAU-BIOENHANCER (NECTAR-CM-14): A liquid formulation of microbial biofertilizer

Performance evaluation of NPKZn biofertilizer consortium on yield of cucumber at farmer's field

Method demonstration on the seedling root-dip method of co-application of compatible formulations of Biofertilizer (CAU-Bioenhancer) and Biopesticide (Um-Comb) for cultivation of organic scented rice and sticky rice (***Kharif,*** 2022)

Mesocosm experiment on response of scented rice cv-Kunkuni joha to aerobic and saturated soil water conditions under low (25 kg ha^{-1}) and high (125 kg ha^{-1}) N-application. The rhizospheric metagenome (16S rRNA sequencing for microbial taxonomic diversity) of different sample types are in the process of analysis.

consortium consisting of *Bacillus altitudinis* 41E (MH021876), *Pseudomonas saponiphila* 69E (MH021684), *Bacillus altitudinis* 47E (MH021982) and *Pseudomonas putida* (B1). All four bacterial strains are compatible to each other and can grow together in growth medium.

Industry-scale liquid biofertilizer CAU-Bioenhancer and CAU-Jhum Bioenhancer production unit at CPGSAS, Umiam.

CAU JHUM BIOENHANCER (NECTAR-CM-15): CAU JHUM Bioenhancer is an eco-friendly liquid biofertilizer consortium of four beneficial bacteria (*Pseudomonas fluorescens* CCF10T1; *Pantoea anthophila* TMF5T6; *Serratia marcescens* TMF5P7 and *Kosakonia radicincitans* BHF20T4). Bacterial colonizers of early succession plants from burnt jhum fields were isolated and screened for multifaceted

Table: Yield improvement in field demonstration (2022)

S. N.	State (No. of districlts covered)	No. of villages covered	No. of Beneficiaries			Yield benefits	Actual profit
			Male	Female	Total		
1.	Meghalaya (7)	54	172	174	346	1. Cucumber: 20-25% more yield over traditional farmers' practice 2. Kharifrice: Comparable yield with 100% RDF 3. Ginger: 15-25% more rhizome yield over traditional practice 4. Potato: 15-25% more tuber yield over traditional farmers' practice	1. Rs. 18,000/- additional income/acre 2. Rs. 4,000/- additional income/acre 3. Rs. 20,000/- additional income/acre 4. Rs. 7,000/- additional income/acre
2.	Tripura (1)	6	84	24	108		
3.	Arunachal Pradesh (1)	2	28	47	75		
4.	Manipur (2)	4	40	60	100		
5.	Nagaland	1	10	7	17		

plant growth promoting properties.

Jhum Bioenhancer can provide habitat-fitness benefits to Jhum crops and improve yield. Adoption rate (among target group/ region): CAU, Imphal signed MOA with State Government of Meghalaya, State Government of Nagaland and JVES, WB CAU, Imphal for technology dissemination of CAU BIOENHANCER and JHUM BIOENHANCER.

ROOT-DIPPING IN SSP-MC SLURRY (NECTAR-CM-14): A Method of P Management in rice-vegetable rotation. Adoption of the root-dipping in SSP-MC Slurry Method of P Management along with 50% recommended dose of fertilizers in farmers' fields could produce comparable or higher yields (up to 20-30% in rice and 25 to 50% in vegetables) of rice-vegetable cropping system compared to 100% recommended dose of fertilizers (farmers' recommended practice). Successful trials conducted by Directorate of Agriculture, Government of Mizoram on this method

Preparation of vermicompost by using different locally available substrates is going on.

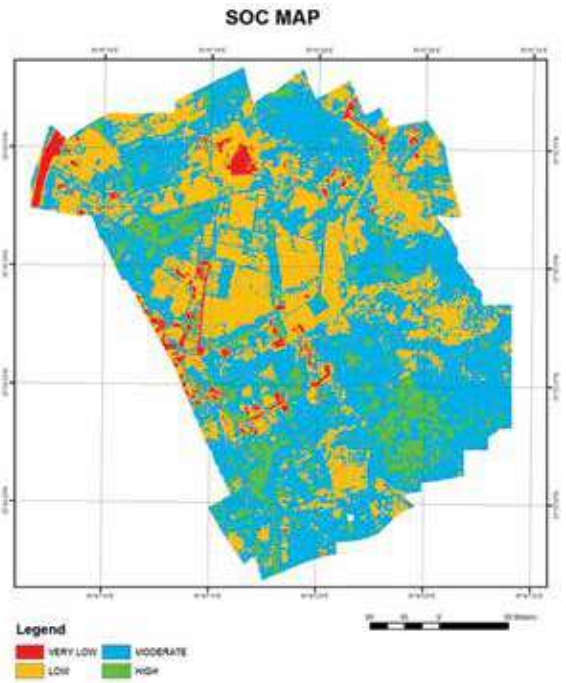
Established and commissioned six industry-scale liquid biofertilizer production units at 6 different constituent colleges (CoA, Imphal; CoFT, Imphal; CoH, Thenzawl; CoHF, Pasighat; CCS, Tura, and CoA, Kyrdemkulai).

Developed 6 model natural farm units in 6 different constituent colleges (CoA, Imphal; CoFT, Imphal; CoH, Thenzawl; CoHF, Pasighat; CCS, Tura, and CoA, Kyrdemkulai).

Developed geo-portal and its integration with IIDS 2.0 for providing Evidence Based Agro-Advisory Service (EBAAS)to registered farmers.

Recommendation on organic production of Patchouli : Apply FYM @ 10 t/ha for highest dried herbage yield and oil yield of Patchouli under organic farming.

Deployment of UAV for field data acquisition for prompt actions towards precision agriculture through EBAAS



Soil Organic Content (SOC) map of Lumshohriew cauliflower fields in Mawkriah Village, East Khasi Hills District

Recommended dose of Vermicompost (10 t/ha) and 100 % Panchagavya Spray (400 lt/ ha) positively influenced N, P and K content in grain, N and P content of straw and nutrient uptake of direct seeded rice cv CAUR1 in Mizoram.

3.2.5. Millets

At farmers' field in rain fed low- and mid-

hills, Finger millet cv. GPU 67 & GPU 28 (Blast resistance) showed promising performance in four districts (E. Siang, Siang, U. Siang & LDV of Arunachal Pradesh) ranging from 18.2 - 20.7 q/ha. The highest yield was recorded in cv. the GPU 67 (Semi-dwarf) in all the locations as against the local check yeilding 7.7 - 10.0 q/ha.

Successfully tested Improved Finger Millet Variety (GPU-67) at farmers Field at Riga, East Siang District (AR)

Foxtail Millet cv. SiA 3085

Foxtail millet cv. SiA 3085 (early duration, Blast & downey mildew resistance) was introduced to Tirap, Chanlang, Longding & E. Siang districts of Arunachal Pradesh. The results are encouraging with an average yield of 10-14 q/ha.

3.2.6. Groundnut

Groundnut cv. K-6 and TCGS were best suitable for the foothills (E. Siang) of the Arunachal Pradesh, while DH-245 & Kadri Lepakshi varieties were more suitable in plane land areas (medium rainfall and intermittent moisture deficiency condition).

Successful harvest of Improved high yielding Groundnut variety –DH-245 & DH-257

Groundnut cv. G-2-52 (7-8 q/ha) and DH-257 (11-12 q/ha) performed well in mid-hill regions (U. Siang), while DH-257 performed well in both places namely mid hills (Upper Siang) and low-hills (Lower Dibang Valley) regions.

Potato varieties for Arunachal Pradesh

3.2.7. Tuber Crops

Potato varieties Kufri Lalima, Kufri Pushkar and Kufri Khyati were recommended for the foot hill condition of Arunachal Pradesh.

Zn application in potato

Among all the treatments, the higher tuber yield of 16.44 t/ha was recorded under Zinc sulphate (21 % Zn) @ 2.5 kg/ha at the time of planting + Foliar application of Zinc sulphate @ 2g/liter at 25 and 50 days after planting in Pasighat region.

Kufri Surya

Application of Vermicompost @ 7.5 t/ha + Neem oil cake @ 5 t/ha + soil application of *Beauveria bassiana* @ 4 kg/ha + seed treatment with Trichoderma formulation @ 8 g/kg seed + foliar spray of neem oil @ 3 ml/l (on appearance of insects) + foliar spray of copper oxychloride @ 3 g/l (for management of foliar diseases) recorded the highest marketable tuber yield of 16.35 t/ha.

Application of Zn @ 3 kg/ha for Arunachal Pradesh is recommended for newly released verities of potato of ICAR-CPRI Shimla.

Optimum nitrogen dose for potato cv. Kufri Surya in Arunachal Pradesh is 150 kg/ha.

The IVT and AVT trials were conducted for red skinned, nutritionally superior and processing potato hybrids.

C. Crop Protection

3.2.8. Citrus Crops

Disease survey across citrus growing pockets in NER India was conducted and optimized LAMP assay for detection of HLB infection

Verification of LAMP amplification by presence of ladder like band pattern using FITC-probe and Biotin-BIP primer confirming amplicon product.

Quantification by RT-PCR for minimum detection limit for LAMP assay

Developed LAMP assay-based point-of-care diagnostic test kit for early detection of Huanglongbing disease in citrus.

Development of LAMP-LFA point-of-care diagnostic kit for early detection of Huanglongbing disease of citrus

3.2.9. Honey bee

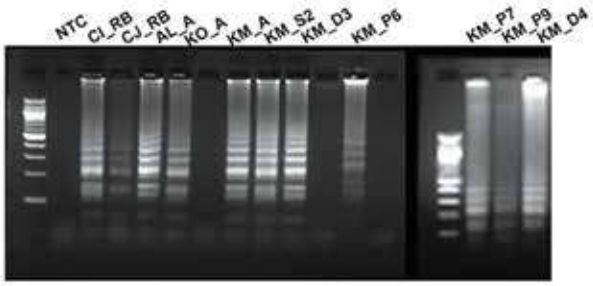
A NECTAR-CAU Food Pollen Substitute for rearing honeybees can be used in granule form during the dearth period or non-available of pollens in the field. It contains all the ingredients, texture and consistency that would be readily accepted by honeybees year-round, healthful and rich enough to meet all their nutrition and strength.

Nectar-CAU Food Pollen Substitute

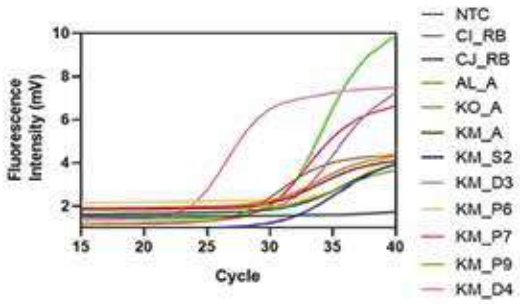
Study on floral cycle for Bee rearing

Honey bee species *Apis cerana himalaya* is widely domesticated bee in North East Hills

Scientific bee box of A. cerana Himalaya and Organic multi-floral honey



LAMP amplification: Positive confirmation of LAMP assay from the presence of ladder like band pattern in agarose gel electrophoresis



RealAmp amplification assay: Amplification curve obtained from fluorescence detection in real-time with amplification

LAMP amplification: Positive confirmation of LAMP assay after naked eye visualization of colour change to green with addition of SYBR Green I dye

Table: Ct values for the RealAmp assay

Sample ID	Ct values
CI_RB	32.30
CJ_RB	32.50
AL_A	35.62
KO_A	26.23
KM_A	33.20
KM_S2	27.65
KM_D3	32.50
KM_P6	34.30
KM_P9	26.20
KM_D4	23.34

region. The annual yield is 5 kg at this region. The maximum bees' flora bloom during January to May and December month whereas minimum bee's flora bloom during June to August. Therefore, the month of January, February, March, April, May and December were identified as the honey flow season, whereas the month of June, July and August was the lean season in this region. So, the most suitable time for honey harvesting in this region is the month of February, March and April.

Beekeeping in natural farming sites

Established the Honey quality testing Laboratory at CHF, Pasighat, collected honey from different bee keepers and quality analysis.

Quality analysis of Honey

Four new species of stingless bees *Lepidotrigona* (Hymenoptera: Apidae: Meliponini) drinking tears and sweat from human being were reported from North-East India for the first time in India.

S. No.	Name of the stingless bee	Location
1.	*Lepidotrigona thenzawlensis*	Thenzawl, Mizoram
2.	*Lepidotrigona rajithae*	Thenzawl, Mizoram
3.	*Lepidotrigona amruthae*	Thenzawl, Mizoram
4.	*Lepidotrigona sikkimensis*	Mamley, Sikkim

3.2.10. Medicinal and aromatic plants

Identified major and minor pest of medicinal and aromatic plants : *Herpetogramma sp*., *Aphis gossypii* and flea beetle were recorded as major pests of *Pogostemon cablin*; *Udaspes colus, Conognethes sp*. and *Curcuma caesia* ; *Saissetia coffeae* and *Nezara virudula* for on *Rauvolfia serpentine and Monolepta signata* for *Solanum nigrum.* The natural enemies associated with insects were also identified.

Identified Major and minor pest of medicinal and aromatic plants

Natural enemies asssociated with economically important insect pest of medicinal and aromatic plants

Field view of experimental plot of Patchouli

Chlorpyriphos was the best treatment against leaf roller *Pogostemom cablin*, and the 2nd best was spinosad. Spinosad was the best treatment against aphid. The highest population of NEs, fresh herbage yield and cost benefit ratio (2.19) were recorded from mulching with straw and the 2nd highest cost benefit ratio (1.70) was recorded from chlorpyriphos.

Field view of experimental plot of turmeric crop

Studied the biopesticides for the management of insect pests of turmeric crop: Chlorpyriphos was the best treatment against shoot borer in *Curcuma caesia*, and the 2nd best was spinosad. Spinosad was the best treatment against leaf folder, while Azadirachtin 1% was least toxic to natural enemies. Fresh rhizome yield and cost benefit ratio were highest in chemical check (3.04) followed by spinosad (2.19).

Aphid control in potato

Two sprays of pymetrozine 50 WG @ 0.06 % at 14 days interval recorded the highest mortality rate of aphid population (88.8%) in potato at 5th day after spraying as compared to other treatments.

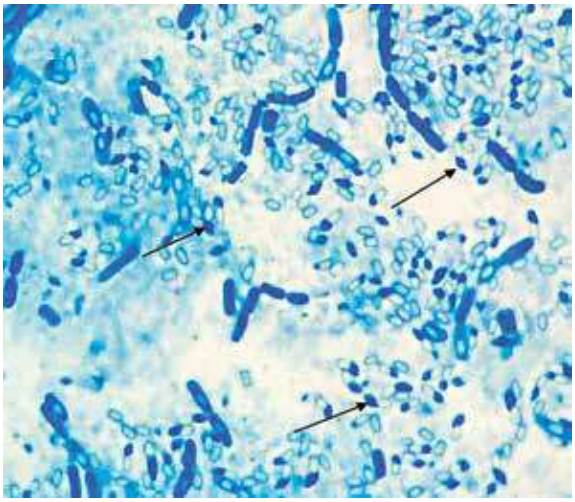
3.2.11. Isolation of Bt from NEH region

A total of 25 *Bt* isolates were isolated (18 from Meghalaya and 07 from Manipur) from soil/water samples collected from 56 different locations of Meghalaya covering 04 districts namely; Ri-Bhoi, East Khasi Hills, Jaintia Hills and West Khasi Hills and 35 different locations of Manipur covering 10 districts namely; Senapati, Kangpokpi, Imphal East, Imphal West, Thoubal, Kakching, Bishnupur, Churachandpur, Noney and Tamenlong.

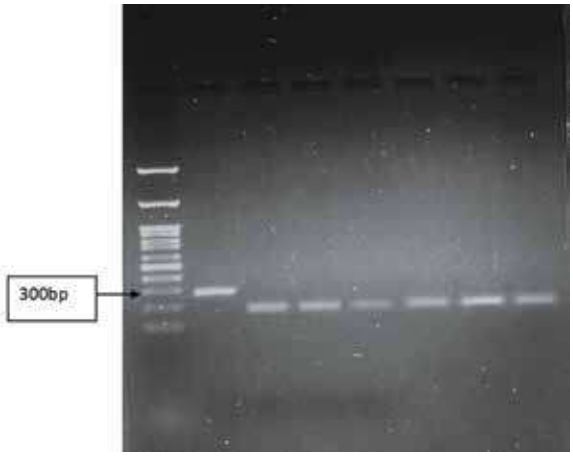
Almost all the selected 25 *Bt* isolates showed the presence of parasporal bodies with 04 *Bt* isolates showing typical bipyramidal crystals (using phase contrast microscopy)

Out of the total 25 *Bt* isolates, 08 *Bt*-isolates from Meghalaya were outsourced for sequencing and identified as *Bt* via NCBI Blast and assigned CAU-*Bt* series. Remaining 10 *Bt*-isolates from Meghalaya have been sent for sequencing and 07 *Bt* isolates from Manipur are in the progress for sequencing.

PCR based detection of *Cry* genes using specific primers: Detection of *Cry* genes namely *Cry1* and *Cry 2* was done using specific primers. Out of the total 25 *Bt* isolates, 13 isolates showed the presence of *Cry 1* gene. Detection of *Cry 2* gene is in progress.



Bacillus thuringiensis isolate (CAU-BT-1) showing bipyramidal crystals proteins in Phase Contrast Microscope under 100 X magnification



Agarose gel (1.5%) electrophoresis of PCR products amplified from Bacillus thuringiensis isolates with cry1 specific primers (270bp); Lane L= 100 bp ladder, Lane 1-7 1= Reference strain (HD1), 2=CAU-BT1, 3= CAU-BT2, 4= CAU-BT3, 5= CAU- BT4, 6=CAU-BT5, 7= CAU-BT6

3.2.12. Integrated Pest Management (IPM)

Farmers participatory location specific IPM trials were conducted for rice crop in 20 ha area involving 50 farmers and for tomato and cabbage each in 2.0 ha involving 30 farmers on different villages of Rhibhoi and West Jaintia Hills districts of Meghalaya.

Mass production of already proven native biocontrol agents based bioformulation like UmTricho (*Trichoderma harzianum*), UmBir (*Beauveria bassiana),* UmMet (*Metarhizium anisopliae*), UmLec (*Lecanicilliumleccanii*) and UmComb (A consortial formulation) using standardized liquid fermentation technology

IPM in Rice in West Jaintia Hills district.

IPM in Rice in Ribhoi district.

IPM in Tomato in Ribhoi district

IPM in Tomato in East Khasi Hills district

IPM in Cabbage in East Khasi Hills district

IPM in Tomato in Ribhoi district

supplemented with adjuvants, stickers, UV protectants, surfactants etc. was already started.

Completed survey & detection of citrus tristeza virus infection in citrus growing areas of Meghalaya & Tripura using molecular tools.

Isolated and characterized 5 new strain of biocontrol agents and obtained NCBI Accession no.

Variation in morphology of Acorus calamus

Khasi mandarin micrografted on *Citrus macroptera*

Citrus decline observed during survey work at Sasatgre, Garo Hills, Meghalaya

D. Horticulture

3.2.13. Fruits

Accomplished collection and characterization of 87 citrus germaplam of wild, semi-wild and domesticated types from Meghalaya, out of which, 57 accession numbers were obtained from ICAR-NBPGR, New Delhi and conserved in the Field Gene Bank at College of Agriculture, Kyrdemkulai.

Screened 7 species of citrus for organic acid profiles in root exudates and *Citrus macroptera* and *Citrus latipes* were identified as potential root stock against Aluminium toxicity tolerance.

Forty accessions of *Acorus calamus* (IC-0632778 to IC-0632817) were evaluated and characterized. Identified accessions such as IC-0632808 (1.8%), IC-0632810 (1.5%) performed well for oil yield and other agro-morphological characters against check (1.3%).

Standardized micro shoot tip grafting of Khasi mandarin using three different rootstock species

Collected germplasms of different citrus species from Sikkim

Field Gene Bank of Citrus

Thirty two citrus germplasm with 8 different species were collected from four districts of Sikkim.

Eight varieties of *Curcuma longa* collected from different locations of Arunachal Pradesh, Meghalaya, Mizoram and Manipur were tested for their non-toxic nanoformulations to prolong shelf life and reduce post-harvest loss of Mandarin Orange (*Citrus reticulata)* of North East India. Mizoram varieties contain more curcumin percentage than rest of the varieties. Mandarin treated with methyl cellulose along with curcumin, wrapped in shrink wrap and stored in cold condition was more effective than other treatments.

Tissue cultured and virus free planting material of Banana

Out of the six legume intercrops *viz*., green gram, blackgram, soybean, groundnut, cowpea and rice bean, cowpea and groundnut performed the best in terms of weed smothering efficiency, conservation of soil moisture and yield in young citrus orchard of Arunachal Pradesh.

Tissue cultured and virus free planting material of Banana var. G9/Grand Nain were developed at COA, Imphal. The banana planting materials were virus indexed at ICAR-National Research Centre for Banana (NRCB), Trichy, Tamil Nadu.

3.2.14. Floriculture

Residual effect from treatment combination of FYM (25t/ha) + Vermicompost (5t/ha) + Mustard oil cake (5t/ha) + Dolomite (222 kg/ha) improved the growth, flowering, yield, corm as well nutrient characters of gladiolus in marigold-gladiolus cropping system without compromising quality and yield.

Marigold i.e., Arka Abhi performed well with maximum plant height and flower diameter; while Arka Sabha had the maximum number of primary branches and loose flower yield per plant.

Arka Abhi

Arka Sabha

Dendrobium moschatum

Cleisostoma tricallosum

Callostylis rigida

Pteroceras teres

Eria bipunctata

Eria pannea


Dendrolirium


Dendrobium nobile alba


Dendrobium jenkinskii


Luisia filiformis


Cymbidium aloifolium


Liparis bistriataacinaforme


Coelogyne punctulata


Spathoglottis pubescens


Flickeringia fugax


Uncifera acuminata


Vanda bicolor

Out of the 20 species of tropical and sub-tropical orchids collected, 17 species have flowered at Pasighat, Arunachal Pradesh.

3.2.15. Vegetables and Spices

Promising line of Swamp taro (*Colocasia esculenta* var. stoloniferum (L.) Schott) line CAUST-2: IC-IC645898

The genetic material is developed through selection.

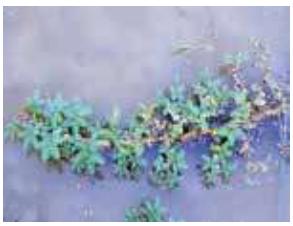
The plant is purplish petiole with average caudex yield of 13-16 t/ha^{-1} and average stolon yield of 4-6t/ha^{-1}

Field trial of CAUST-2

The genotype is also having starch content of 6-7% (Fresh weight basis) and dry matter percentage of 13-14%.

Recommended for release in Manipur during the 22nd Annual Group Meeting of AICRP-Tuber Crops held at ICAR-RC, NEH Barapani, Meghalaya during 11 -13 May, 2022.


Water Spinach


Water Mimosa

Promising line of water spinach (*Ipomoea aquatica*) line is CAU-WS-1 (IC – 0646874), A genetic material developed through selection. It is a semi-aquatic, tropical plant, grown as a leafy vegetable for its tender shoots and leaves.

Promising line of water mimosa (*Neptunia oleracea*) line is CAU-WM-1 (IC-0645889), A genetic material developed through selection, and it produces 40 stems harvested/plant with 12345 plants/ ha traits.

The whole plant parts are edible and commonly consumed raw or cooked.

This germplasm contains moisture (88%), vitamin A (5.4mg/100g), crude fat (1.2%), crude fiber (16%) and total ash (5.4%).

It is propagated by cutting and maintained clonally at Central Farm, College of Agriculture, CAU, Imphal

A total of 38 trials on different vegetable crops such as tomato, brinjal, pea, cabbage, cauliflower, palak, broad leaf mustard, amaranth, bottle gourd, sponge gourd, ridge gourd and chilli were conducted.

Onion varieties such as Bhima Red, Bhima Super and Bhima Shakti were promoted for spring and bulb production and Bhima Purple and Yamuna Safed varieties of garlic for common cultivation in farmers field.

In a study on heterosis for yield and quality attributing traits of Cherry tomato, 3 hybrids were promising for yield per plant (2460 g/ plant) and maximum lycopene (8.47 mg/100g). Also developed technology for maintenance of hybrid vigour through side shoots cutting in hybrid Cherry tomato.

Pre-harvest spray of NAA@ 30 ppm + GA3 @ 30 ppm + 0.5% ZnSO4 + 1% Urea (T10) was superior to other treatments in improving plant growth parameters of Rangpur lime.

Standardized Improved shiitake mushroom cultivation practices in natural growing conditions for the food and nutritional security of tribal farmers of India.

Foliar spray of diesel 60% was more effective in managing loranthus followed by stem injection with 2, 4-Dicholorophenoxy acetic acid 5%, and foliar spray of diesel 30% .

Application of RDF (75-60-60 kg NPK/ha) along with Tracel (Commercial micronutrient mixture) @ 5 g / litre improved almost all the growth and yield parameters and yield (62.83 q/ha) of cherry tomato with the maximum TSS (7.76 ^{o}B), ascorbic acid (56.01 mg/100g) and lycopene (6.65 mg/100g) content.

Application of 2.5 t/ha lime + 0.3% borax foliar spray is the most suitable treatment combination for the best growth, yield (15.60 t/ha) and quality in broccoli under protected condition.

Biochemical analysis of 50 underutilized vegetables (17 fruit vegetables and 33 leafy vegetables) found in NE States of India was completed. Out of the 17 fruit vegetables, *Momordica cochinchinensis*, *Momordica charantia* var. *muricata*, *Solanum macrocarpon*, *Solanum gilo*, *Nelumbo nucifera* and

T9-NAA @20 ppm+ GA@ 20 ppm+ 0.5 %% ZnSO4 +1% Urea

T10- NAA @30 ppm+ GA3@ 30 ppm +0.5% ZnSQ4+1% Urea

Cyphomandra betacea have good nutritional value. *Leucaena leucocephala*, *Solanum torvum*, *Capsicum annuum* and *Canavalia gladiata* were having the maximum antinutritional value, while *Cucumis melo* var. *agrestis*, *Solanum macrocarpon*, *Sechium edule*, *Nelumbo nucifera*, *Momordica charantia* var. *Muricata, Capsicum frutescens* and *Momordica cochin chinensis* have the least antinutritional content.

Out of 33 leafy vegetables, *Clerodendrum colebrookianum*, *Sauropus androgynus*, *Urtica dioica*, *Centella asiatica* and *Hibiscus sabdariffa* are good in nutritional value, where as *Colocasia esculenta*, *Centella asiatica*, *Urtica dioica*, *Manihot esculenta* and *Diplazium esculentum* have the maximum antinutritional composition and *Polygonum orientale*, *Cardamine hirsuta*, *Oenanthe javanica*, *Hibiscus sabdariffa*, *Ipomoea aquatica* and *Nasturtium officinale* have the least antinutritional value.

The Biointensive Integrated Pest Management (BIPM) module recorded significantly lower pest incidence (1.50 DBM larvae/plant, 3.26 aphids/plant and 8.50 % head damage) in comparison to common packages of practices (POP) module (2.36 DBM larvae/plant, 12.30 aphids/plant and 9.80 % head damage).

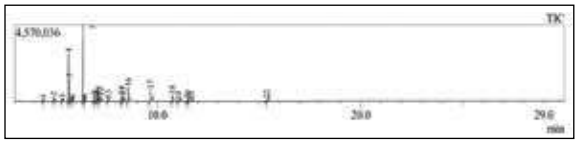
Evaluation of entomopathogens against *Epilachna vigintioctpunctata* on Brinjal: *Metarhizium anisopliae* IIHR Strain oil formulation ($1x10^8$ spores/ml) @ 5 ml/L was the best treatment in reduction of Hadda beetles incidence (3.21 beetles/plant) and infestation (4.95 % defoliation) on Brinjal and thus higher yield (30.20 q/ha).

Some of the MAPs maintained at herbal garden

Significantly maximum plant height, primary and secondary branches/ plant, plant spread, stem diameter, leaves/plant, fresh weight of leaves and plant and leaf area of marigiold were recorded with Humic acid @40 kg/ha + 200 kg N/ha. The flowering parameters in terms of days taken to bud initiation, days to flower bud maturity, days to first flowering, days to 50% flowering and days to first harvest was significantly minimum with the same treatment resulting in the maximum duration of flowering, flower diameter, yield parameters in respect of flowers/ plant, fresh weight of flowers, flower yield/ plot and flower yield/ plant. But, the highest essential oil yield was obtained with Humic acid 40 kg/ha and 150 kg N/ha. The chemical composition of hydrodistilled essential oil from the herbage of *Tagetes patula* cv. Arka Pari was analysed using GCMS (Gas chromatography- Mass spectrometry). The major compounds identified were D-Limonene, cis β- ocimene, trans β- ocimene, Dihydrotagetone, 2- carene, (Z)- myroxide, (E)- Tagetone, (Z)- Tagetone, Levoverbenone, Piperitone, Piperitenone, 3- Carene-5 one, Caryophyllene and Germacrene D.

Marigold plant (Tagetus Patula)

Essential oil from (Tagetus patula)



GCMS chromatograph of Tagetus patula essential oil

Some of the important medicinal plant germplasms were registered at NBPGR and got the accession numbers. All together 10 germplasm of *Eryngium foetidum*, 10 of *Curcuma caesia*, 7 of *Clerodendrum coolebrookianum* and 7 of *Kaempheria parviflora* were registered at NBPGR, New Delhi. Samples of *Curcuma caesia* and *Kaempheria parviflora* were analysed using GCMS and LCMS to check the chemical compound content under shade and open condition.

Curcuma caesia

Kaempheria parviflora

Fifteen diverse genotypes of King chilli (*Capsicum chinense* Jacq.), 10 of bird eye chilli (*Capsicum frutescens* L.) and 15 of common chilli (*Capsicum annuum* L.) were evaluated. Sodium Dodecyl Sulphate Polyacrylamide Gel Electrophoresis (SDS-PAGE) showed considerable variation in protein band numbers in all the species. The genotypes C-3 was most distantly related to C-12 in King chilli, C-16 to C-19 in bird eye chilli and C-28 to C-38 in Common chilli indicating that these genotypes could be utilized for crossing programme to create more genetic diversity. SDS-PAGE marker data provided more sub groupings and revealed higher amount of diversity as compared to morphological data.

Out of 143 germplasm of bird's eye chilli collected and evaluated at Thenzawl, the promising lines were AZ 8, AZ 26, AZ 49, Hau-3, TZ-4, TZ-33,TZ 51 and Se 3 in terms of yield. Besides, AZ- 26 is a multi cluster bearing line (>10 fruits per node). The promising lines



will be evaluated for quality and seed will be multiplied for multi locational testing.

Evaluation of Pumpkin germplasm: Mai-4,12, 20: High starch content known as Mai ban (Preferred by Mizo tribe) and Mai- 5, 8: low seed cavity and high beta-carotene content.

A total of 128 cucumber (*Cucumis sativus L.*;) germplasm were evaluated for morphological diversity under polyhouse condition. Almost all germplasm were severly infected by powdery mildew (*Podosphaera xanthii*) and Fusarium wilt. Identified the promising germplasm viz., gynoecious (Cu-32), androceous (Cu-29), multipistillate (Cu-53), high Beta carotene content (Cu-13, Cu-18, Cu-54:), Soft flesh (Hma hnip preferred by Mizo tribe): (Cu 15, Cu-9, Cu-93, Cu102).

Standardized the training system and INM practice of red flesh and white flesh Dragonfruit for increased production under Mizoram condition.


Healthy planting material multiplication of organic ginger and turmeric under natural farming condition is in progress.

Evaluated data germplasm against RKT Fusarium wilt.

Off season production of tomato under protected cultivation initiated.

Lemon grass, citronella have shown good suitability in Thenzawl region.

Adaptation of low chilling varieties of Apple i.e., Anna and Dosett Golden under mid altitude Thenzawl climatic conditions was sucessful and completed plantation of 800 plants.

3.2.16. Oil Palm

The Oil palm cross combination "NRCOP-22" is the best under North Eastern Indian conditions with respect to number of leaves/plant (23.3), minimum number of male flowers (3.5) and maximum female flowers (10.6) with the highest sex ratio of 0.74, maximum number of fresh fruit bunches (10.4), bunch weight (13.5 kg) and yield (20.1 t/ha).


Evaluation of new cross combination in oil palm

In multilocational trial, oil palm cross combination NRCOP-37 performed well with the maximum plant height (98.1 cm), leaves/

plant (20.2), female flowers/plant (7.9), FFB/palm (7.8) bunch weight/palm (8.1 kg), yield/palm (63.3 kg) and yeild (9.1 t/ha).

Nutrient management studies in oil palm under North East Region (Agr. 12).

Application of 1500-750-1500 gram of N-P-K/plant/yr resulted in the highest plant height (234.6 cm), sten girth (136.2 cm) and leaves/plant (24.7) of a three year old oil palm plantation.

The recommended package of practices in a 15 year old oil palm plantation (29 plants) resulted in average height of 4.72 m, collar girth of 2.9 m with 22.8 leaves, 8.2 FFB, 17.6 kg bunch weight and 20.6 t yield/ha.

Demonstration on oil palm production potential in North East Region (Agr. 13).

3.3 Veterinary Science and Animal Husbandry

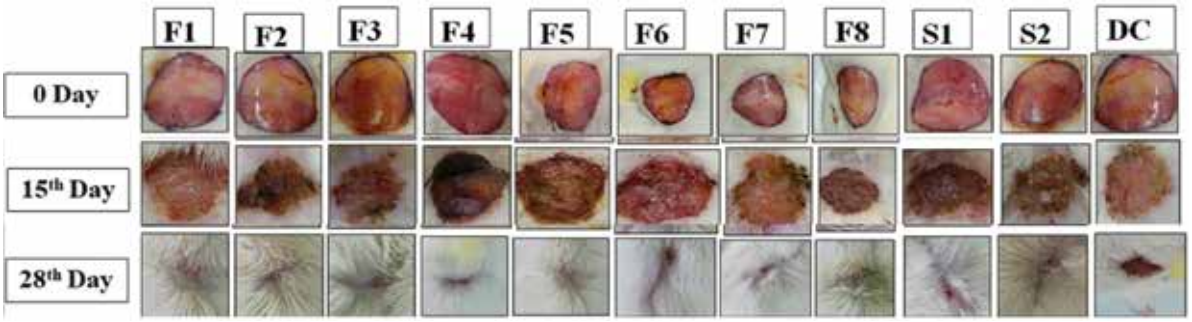
Eight lead plants as committed have been collected and authenticated by BSI with GPS tagging. Qualitative phytochemical analysis showed presence of several phytochemicals (Tannins, cardiac glycosides, anthraquinone, alkaloid, flavonoid, saponin and terpinoid). Out of these, few leads have shown promising wound healing potential. Pre-formulation of the lead plant extracts is completed along with placebo semisolid formulations including gel and cream. Development of polyherbal formulation is underway at CDRI, Lucknow.

Twenty five Mithuns were reared under semi intensive system. One health camp on Mithun was organised on 2 May 2022 and one training programme for Mithun farmers on 27-29 July, 2022.

Rearing Mithun under Semi-intensive System a New Peren Village (25 Numbers)

Total of 50 samples from different parts of Peren & Dimapur Districts of Nagaland were screened and presence of common bacteria such as *E.coli, Streptococcus sp. Staphylococus sp., Serratia sp. and Klebsiella sp* were identified.

More than 2500 samples were collected from Mizoram and West Bengal and screened for 13 zoonotically and transboundary importance diseases by serological and molecular assays.



In-vivo (in rats) wound healing activity of herbal ointment on excision wound model has shown faster wound contraction [F1 (CL), F2 (MP), F3 (MM) & F5 (LC) group] compared to standard/commercial ointment

The analysis indicated presence of zoonotic TB, Listeria, Salmonella, JE, Cryptosporidium.

More than 250 samples were collected from cattle, buffalo, yak and Mithun of Mizoram, Arunachal Pradesh, Meghalaya and Nagaland for detection of Tuberculosis infection by molecular tests.

More than 300 samples were collected from cattle, sheep and goat of Mizoram, Arunachala Pradesh, Sikkim, Manipur, Nagaland and Meghalaya for serological screening to detect Brucella infection. So far no animals were found to be positive for brucellosis

African Swine Fever Virus (ASFV), Porcine Respiratory & Reproductive Syndrome Virus (PRRSV), Classical Swine Fever Virus (CSFV), Porcine Circo Virus 2 (PCV2) were recorded as co-circulating in the pig population of NER, India.

Recorded syndemic infection of PRRS with CSFV and also PRRS with PCV2

The circulating field strain has been isolated and characterized as HP-PRRSV belonging to lineage 8 and subgroup IV.

The whole genome sequence based information is to be utilized for development of diagnostics and vaccine.

The Enzyme Linked Immuno Sorbent Assay (iELISA) diagnostic kit for detection of Ab against PRRSV is developed and validated through intra and inter-laboratory testing.

The recoded mutant of *Salmonella* Typhimurium has been developed

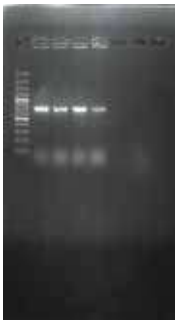
Recovery of dog from the disease condition on Auto-haemogenous therapy (Intramuscular

injection of blood 5ml weekly for a period of 5 weeks) was possible.

During the reporting period 2022-2023, 12 farrowings were obtained from Zovawk to produce 68 Zovawk piglets. Average litter size at birth of Zovawk was 5.67± 0.56. The corresponding mean value at weaning was 5.67± 0.68. The average individual weight (kg) at birth and weaning of Zovawk was 0.47±0.06 and 3.69±0.09, respectively. The pre-weaning mortality rate and adult mortality rate (%) was nil. The post-weaning mortality rate was 3.89%. The pre- weaning growth rate (g/day) in Zovawk was 73.90±0.47 and the post-weaning growth rate (g/day) was 159.78±1.50. The study on histomorphology of testis, epididymal sperm quality and fertility proteins of epididymal fluid in relation to attainment of puberty in Zovawk has been conducted.

Conducted Hands on Training for the pig farmers two times i.e., on 15-16 December, 2022 and then on 6-7 March,2023.

Under the attenuation of *Salmonella* Typhimurium via synthetic genome recoding of



717 bp

PCR amplification of recoded ArcA gene from recombinant p UC 57 vector.

717 bp

Colony PCR showing amplification of recoded ArcA from recombinant p KSI vector

167 bp

PCR confirmation of recoded Arc A mutants 1=100 bp plus Ladder, 2= Wild, 3,4= Mutants

key metabolic regulators vis-a-vis evaluation of synergistic effect of recoding, the recoded ArcA gene was amplified by using the recombinant pUC57 plasmid as template. The amplified product of 717 bp. The amplicon was then directionally cloned in p KSI1 vector which was also confirmed by colony PCR. Then the *Arc A* gene was knocked out from recoded *fnr* STM. Both donor plasmid, pKSI 1 containing donor construct and helper plasmid pREDTK1 were transformed by electroporation into the electro competent cells of recoded fnr *ΔArc A* STM mutant. Homologus recombination between the donor plasmid and the bacterial genome produced the desired mutants. The mutants were identified by antibiotic sensitivity testing and confirmed by PCR.

Methods (sample preparation) for quantification of multiple pesticide residues were developed and samples were prepared for analysis.

A total of 648 samples (blood/serum, rectal/cloacal swab, feces, raw/processed meat) were collected from various domestic animals including cattle, buffalo, sheep, goat, pig, poultry, rat etc. from 37 villages under 4 districts of Mizoram for screening of 12 predefined diseases. Similarly, a total of 1427 samples were collected from 112 villages under 7 districts of West Bengal for screening of 13 diseases during October 2021 to November 2022.

The targeted cattle were tested for tuberculosis by single intradermal tuberculin test and measurement of skin thickness was done using vernier calipers.

All the targeted samples were processed for isolation and identification of *Salmonella* spp. and *Listeria* spp. using standard bacteriological techniques and further confirmed by 16S rRNA based species specific PCR assay. All the isolates were further characterized by PCR based detection of selective virulence genes.

Due to non-availability of selected ELISA Kit, all the samples were screened by Rose Bengal Plate Test (RBPT) and standard tube agglutination test (STAT) using the reagents procured from ICAR-IVRI, Izatnagar. All the samples designated for the listed diseases were screened by ELISA using appropriate kit as per the recommendation of the PMC. The details of the Kits used is listed below.

Establishment of BSL-II Laboratory

Images of sample collection and Awareness Camp

Images of Hands-on Training

Images of Tuberculin Test in Cattle

3.4 Fisheries

A Mini Fish Smoking Kiln was designed with a capacity of smoking ~10 kg fish at time, which is fit for domestic use as well as for small entrepreneurs having advantages like energy efficient, environment friendly and easily movable for hygienic production of smoked fish.

Developed technology for acceleration of fermentation process of *shedal*. Mixing additives such molasses at lower concentration (0.5%) with dried Puntius fish expedites fermentation and reduces the maturation period from 6 to 3 months without altering the product's organoleptic properties.

Developed low cost of *pabda* hatchery for farmers with cost of establishment of Rs. 10,000/- in which 50,000 fingerling of *pabda* can be produced.

Live wolffia as exclusive allochthonous feed resulted in superior growth and health performance of *pengba* compared to that of a commercial floating feed (CP: 30%)

Replacement of mrigal *(Cirrhinus mrigala*) with olive barb (*Systomus sarana*) at a ratio of 1:2.6 remarkably increased fish yield in respect of biomass by 47% and net returns by 47% at same price for all fishes.

Ten unique Simple Sequence Repeats (SSRs) and their associated flanking region associated with growth and reproduction related genes in genome sequence of *pengba* (*Osteobrama belanger*i) was created.

Standardized the optimal C:N (20:1) for seed rearing of *O. bimaculatus*.

Standardized breeding of *Labeo gonius* using synthetic hormone, and a total of 2 lakh seeds were produced. Preliminary success was obtained in rearing *L. gonius* in biofloc system.

Formalin treatment at a concentration of 10% increased hardness of fish muscles by 80 % and the chewiness of muscles by 16-121% compared to untreated fish that deceives the consumers in identifying fresh fish along with enhanced shelf life due to reduction in bacterial load. Formaldehyde treatment not only reduced bacterial load but also improved the textural properties of the fish muscles, creating the impression that the fish is fresh.

Different washing methods of formalin (10 %) treated fish with running tap water, saline water and lukewarm water reduced formalin content to an acceptable level (i.e., below 4 mg) within 20, 20 and 10 min, respectively. Similarly, frying of formalin treated fish for five minutes reduced its content to the acceptable limit (< 4 mg).

Traditional fermented fish products from different places of Manipur (Hentak and Ngari) were found positive for *E.coli* and *Staphylococcus aureus*. Tungtap from Meghalaya was free from *E. coli* and Salmonella, but was positive for fungus and *S. aureus*. Level of benzopyrene, a carcinogen, was below 5 ppb in 15 different smoked fish products collected from five locations of Manipur. A study on repellant properties of different plant materials like neem, curry and tulsi leaves powder on dry fish insects (Dermestes) revealed the highest repellency in 2% neem leaf powder. Hentak, a traditional fermented paste product was developed in the laboratory using Puntius fish, which was fit for consumption in room temperature storage up to 60 days.

A total of 303 fish species from 23,987 samples were taxonomically identified. The fishes were classified into 13 orders, 33 families and 104 genera. Out of these, 183 fish species were barcoded. Database of 303 NE fish species was categorically prepared and published as a booklet. Developed both a Referral and DNA barcoded fish museum.

Proximate composition of biofloc produced from wheat, maize and tapioca flour revealed 30-40% crude protein along with other essential minerals. Essential fatty acid and amino acid found in biofloc was suitable for dietary requirement of fish specially IMC.

Recirculatory Aquaculture System (RAS) is under construction and the system will help in demonstration/ training to the unemployed youth for technology dissemination.

A total of 25 lytic *A. hydrophila* phages were isolated, which were capable of lysing other *Aeromonas* species such as *A. caviae, A. media and A. veronii*. Characterization results collectively indicate the therapeutic potential of AhP-2 phage against *A. hydrophila* infection

Produced and supplied 0.36 and 0.1 lakh *Gambusia affinis* and *Poecillia reticulata* larvivorous fish seed, respectively.

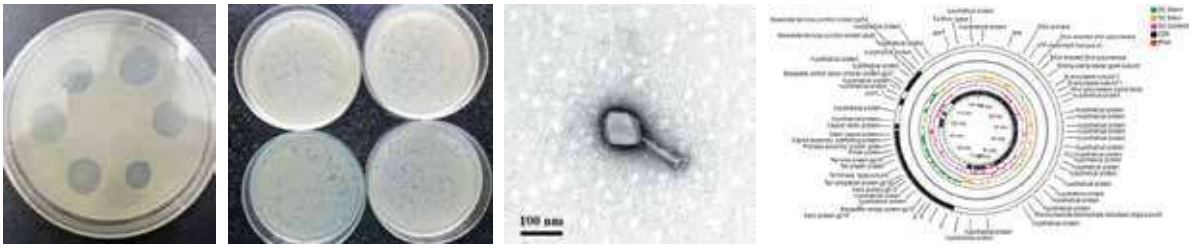
Pilot mass scale wolffia production unit was established and an inception workshop has been conducted on 25 January, 2022. Impact of different drying methods of wolffia was evaluated. Higher crude protein as well as crude fiber contents was evident in freeze dried samples in comparison to sun dried and oven dried samples. Further, DPPH scavenging activity was the highest in freeze-dried wolffia as compared to other two samples.

An IVRS based mobile agro advisory system for the fish farmers in Tripura has been designed and customized through deployment in all the districts of Tripura. A total of 2730 fish farmers from eight districts of Tripura were registered in the year totalling to 8690 till date. A total of 3192 advisories were provided during the period in different pull-based format and altogether 7109 advisories were provided to the registered fish farmers till date.

Under "Surveillance of Fresh Water Fish and Shell Fish diseases in Tripura" During 2022-2023, out of 61 samplings, 12 farms have been recorded with diseases. Pathogens like *Dactylogyrus* spp., *Argulus* sp., infection with *Aeromonas* spp,. and *Citrobacter freundii* were identified from the diseased samples and few are unidentified and under the process of identification.

Installation of FRP hatchery for Demonstration of Mass Scale Seed Production in Mizoram and Manipur

Demonstration of Seed Production Technology of *Pabda*



Different stages of phage isolation and characterization

Established Water and Soil quality Analysis laboratory, Microbiology laboratory, Molecular Diagnostics and a total of 284 samples (Water and Lime etc) were analyzed.

3.5 Agricultural Engineering

3.5.1 Soil & water engineering

The recession curves of the studied springs are separated into quick and slow flows. The more slope or in other words the rapid depletion of quick flow is probably a measure of the degree of fracturing of the formation and interconnectivity of pores. The permeability of the porous medium is responsible for the discharge rate and its capacity is responsible for the perennial or seasonal behavior of the springs.

IoT based Micro-irrigation system having intelligent irrigation control ability through remote for variable soil moisture, temperature and humidity has been successfully developed and working efficiently in polyhouse condition.

3.5.2 Farm Machinery

A cherry pepper destemming machine was designed and fabricated. The capacity of the machine is about 35-40 kg/batch with efficiency of 75-80%.

The portable setup for testing the performance of Solar Photovoltaic module for Indoor and outdoor conditions in the NEH region of Sikkim has been developed. Performance of SPV module of 75Wp was satisfactory with efficiency ranking in between 8 to 21 % for cloudy to cleaner sky conditions. The Indoor efficiency of modules ranged from 16 to 25.03 % for both series and parallel connections while for outdoor conditions efficiency ranged from 6.4 to 20.8%. The maximum values of V_{oc} were 26.82 V for single module, while minimum was 0.01 V. The maximum value for V_{oc} was 54.23 V for modules connected in series and 24.9 V for modules connected in Parallel under outdoor condition.

A prototype Laboratory Fog Harvester was developed which will be applicable to most of the hilly regions of NE India.

A hand tool has been designed and developed for segregation of capsules (bulbs) from large cardamom spikes (inflorescence), which can segregate 5 to 7 spikes per minute, whereas same person can segregate 2-3 spikes per minute. The OCR of the similar workers was about 10% higher while using the device.

A small power thresher designed and developed for buckwheat crop suitable for small farms with the threshing efficiency, cleaning efficiency, broken grain percentage and total grain losses of 99.21, 97.25, 0.44 and 1.13%, respectively at optimum conditions and at cylinder speed of 10.5 ms^{-1}, concave clearance of 25 mm and concave grade opening of 16 mm. The throughput capacity of the thresher was 234 kg/h at the optimum

operating conditions. The thresher was small and weighs only 64 kg with estimated cost of ₹25,000. and the cost of threshing was ₹ 22.4/ quintal of the crop.

A remote controlled direct rice seeder has been conceptualized as a battery operated unit, which can be remotely controlled with a mobile application or remote control device. The equipment consists of a seed drum for two row seeding, battery, drive DC motor, stepper motor for steering gear, ESP 32 Wi-Fi module, motor drivers, frames and wheels and is powered by a 24V 20Ah Li-ion battery.

Precision direct seeding of multiple rice seed pellets was developed using natural filler material and optimization of process parameters.

3.5.3 Post Harvest Management

Characterization of physical, chemical and nutritional profile of Yak milk and Yak milk cottage cheese (*hard churpi*) was completed. Standardization and optimization of cream separation and coagulation process of Yak milk was also completed.

Process technology of one value added product from chayote viz., chayote tuber chips was standardized.

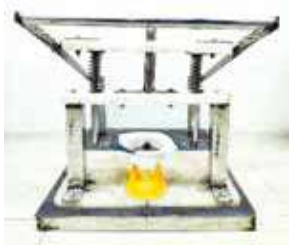
Developed Large cardamom Grader : Capacity: 100 kg/h

Developed small scale primary processing machines for cherry pepper and chayote fruits

Developed hand operated device for harvesting fruits and vegetables

Developed manual operated poultry feed chopper

Optimized process technology for value added cherry pepper and chayote fruit products



Hand operated chayote corer

Cherry pepper destemming machine

Red cherry pepper powder

Red cherry pepper chutney powder

Chayote-mandarin blended RTS beverage

Red cherry pepper chutney powder

Fried tuber chips

Baked tuber chips

3.6 Home Science

Agricultural income and occupation was significantly correlated with the Women's nutritional status

Income from Agriculture, Horticulture, Non-Agriculture and Agriculture labour influenced the Women's nutritional status and expenditure towards meat and meat products, vegetables, fruits, oil, whereas own production of pulses influenced the women's body mass index BMI.

Anemia was prevalent in 60 to 70% of women in selected villages of Meghalaya.

Livelihood status, vulnerability indices, occupational drudgery and gender friendly technologies for women were identified and assessed through survey.

Successfully developed technologies for the formulation of following value added products

Value added papad with pumpkin powder

Pumpkin flour mix (Roti mix, Puri mix, dhokla mix, bread mix, cake and doughnut mix)

Pumpkin Squash

Pumpkin Jam

Value added pasta with pumpkin powder

Value added-ice cream with pumpkin pulp

Value added curd with pumpkin pulp

Value added chikki with pumpkin seeds

Value added gulab jamun with pumpkin puree

Value added rasgulla with the Pumpkin

Pumpkin seed butter flavor with spices & condiments

Value added Schezwan chutney with pumpkin pulp

of pumpkin i.e., papad, flour mix, squash, jam, ice-cream, pasta, curd, chikki, gulab jamun, rasgolla, seed butter and sahezwan chutney.

Various value added products from cashew apple were developed viz., juice, squash, powder and cake and assessed for sensory evaluation of the developed products.

Squash

Syrup

Powder

Cake

4

EXTENSION ACTIVITIES

THE Directorate of Extension Education, CAU, Imphal is responsible for dissemination of useful and latest agricultural information to the farmers through thirteen constituent colleges and six Krishi Vigyan Kendras (KVKs), six Vocational Training Centres (VTCs) and six Multi Technology Testing Centres (MTTCs) of the University besides planning, monitoring and execution of extension progress based on results of the researches conducted in all campuses/units of the University.

Owing this responsibility, Directorate of Extension Education, CAU, Imphal deals with front line activities to disseminate agricultural know how and emphasizes over to get acquainted with the technologies among the farming communities for further adoption through different constituent colleges situated all over the North Eastern Region except Assam and with the help of six KVKs *i.e.,* Imphal East, Andro (Manipur); Aizawl, Selesih (Mizoram), East Siang, Pasighat (Arunachal Pradesh), East Garo Hills (Meghalaya), South Garo Hills (Meghalaya) and Sepahijala (Tripura); six VTCs and six MTTCs. The farming community can avail the services of any of the units of the University to get the solutions for their farming problems and to improve their livelihood.

4. Training Programmes

4.1 Capacity Building Training Programmes for Extension Personnel

The Directorate organized the following capacity building training programme for extension personnel of the line depts., KVKs and ATMAs to keep them updated with latest technical know-how in identified area of agriculture and allied fields sponsored by ICAR-ATARI-Zone VII.

S. No.	Title of the Training	Date	Venue	Male	Female	Total
1.	Artificial Insemination in Pig	13th to 15th March, 2023	College of Vety. Sc & AH, Jalukie, Nagaland	5	5	10
2.	Ethno veterinary Practices	22nd to 24th March, 2023		7	3	10

4.2. Training Programme for Farmers and Farm Women

The following training programmes for the farmers and farmwomen were organized by the Directorate funded by ICAR- ATARI, Zone VII.

S. No.	Title of the Training	Date	Location	Male	Female	Total
1.	Scientific poultry farming	8th Feb, 2023	Taboul, Bisnupur	32	5	37
2.	Scientific poultry farming	12th Feb, 2023	Kakching, Kakching	27	5	32

4.3. Workshop/ Interface Meeting

The Directorate of Extension of Extension Education, CAU, Imphal organized the following progammes:

S. No.	Programme	Duration	Date	No. of participant
1.	Annual Zonal Workshop of KVKs	3 days	30th June to 2nd July, 2022	90
2.	Interface with Award winning KVKs-Building of success of the National / Zonal Awardees with Scientists of KVKs of NEH Region	3 days	28th Sept. to 30th Sept., 2022	124
3.	8th Extension Education Council Meeting	3 days	17th to 19th Dec., 2022	46

Interface with Award winning KVKs-Building of success of the National/ Zonal Awardees with Scientists of KVKs of NEH Region

Annual Zonal Workshop of KVKs (Zone VI and VII)

4.4. Participation in Agri Fair/ Exhibition

The Directorate of Extension of Extension Education, CAU, Imphal has participated in the following programmes.

S. No.	Title of the Training	Date	Venue
1.	Exhibition in connection with International Conference on SDGs	15th to 17th April, 2022	DRI, Chitrakoot, MP
2.	Global Organic Expo, 2022	26th to 28th May, 2022	IARI, New Delhi
3.	3rd Gramodya Mela	9th to 12th Oct., 2022	DRI, Chitrakoot, MP
4.	Regional Agri Fair (Krishi Kumbha)	4th to 6th Jan., 2023	ICAR RC for NEH Region, Umiam, Meghalaya

Regional Agri Fair (Krishi Kumbha)

Global Organic Expo, 2022

Exhibition in connection with International Conference on SDGs

4.5. External Funded Projects and Sponsored Programmes/Activities

4.5.1. ICAR-NIBSM Sponsored Project/Programme

A. Training

S. No.	Implementing centre	Title of training	No. of participants	Date
1.	MTTC and VTC, College of Community Sc., Tura, Meghalya	Pest and disease management of potato	40	28th to 30th Nov. 2022
		Scientific pig rearing	40	21st to 23rd March, 2023
2.	MTTC and VTC, College of Agriculture, Pasighat, Arunachal Pradesh	Scientific bee keeping	30	6th to 8tth Dec. 2022
		Orchard management in foothills of Arunachal Pradesh	31	26th to 28thDec. 2022
3.	MTTC and VTC, College of Horticutlure, Thenzawl, Mizoram	High value vegetable cultivation and floriculture	60	30th Nov. to 2nd Dec., 2022
4.	MTTC and VTC College of Horticulture, Bermirok, Sikkim	Recent organic production technology in horticultural crops	25	30th Nov. to 2nd Dec., 2022
		Pest and disease management of vegetables	25	28th to 30th Nov, 2022
5.	MTTC and VTC, College of Agriculture, Imphal, Manipur	Mushroom production technology	30	3rd to 8th Dec., 2022
		Processing and value addition of locally available fruits and vegetables	30	3rd to 8th Dec., 2022
6.	MTTC & VTC, College of Fisheries, Lembuchrera, Tripura	Scientific fish farming	25	21st to 23rd Nov., 2022

S. No.	Implementing centre	Title of training	No. of participants	Date
7.	Directorate of Extension Education, CAU, Imphal, Manipur	Scientific poultry farming	25	18th Nov., 2022
		Scientific poultry farming	25	19th Nov., 2022
		Scientific poultry farming	22	21st Nov., 2022
		Scientific poultry farming	30	23rd Nov., 2022
		Scientific poultry farming	27	24th Nov., 2022
		Scientific poultry arming	25	13th Feb., 2023
		Homestead farming system	32	16th Feb, 2023
		Integrated farming System	44	18th Feb., 2023
		Homestead farming system	17	25th Feb., 2023
		Homestead farming system	36	4th March, 2023
		Integrated farming system	25	30th March, 2023
		Total	**644**	

B. Demonstration of frontline technologies

S. No.	Implementing centre	Technology	No. of participants	Input supplied
1.	MTTC and VTC, College of Agriculture, Pasighat, Arunachal Pradesh	Oyster mushroom cultivation	30	Mushroom spawn
		Vermicomposting	24	Vermibed
		Scientific beekeeping	20	Bbee box
2	MTTC and VTC, College of Horticulture, Thenzawl, Mizoram	Mushroom cultivation	20	Mushroom spawn, plastic busket
		Vermicomposting	20	-
3.	MTTC and VTC College of Horticulture, Bermiok, Sikkim	Mushroom cultivation	25	Mushroom spawn
		Integrated Farming System	24	-
4.	MTTC & VTC, College of Fisheries, Lembuchhera, Tripura	Mushroom cultivation,	40	Mushroom spawn
		Integrated Farming System	40	Dragon fruit cutting
		Integrated pest management in vegetables	40	-
		Total	**283**	

C. Input distribution

S. No.	Implementing centre	Input distributed	No. of participants
1.	MTTC and VTC, College of Community Sc., Tura, Meghalya	Vegetable seeds (cucumber, bottle gourd, musk melon, bitter gourd, chilli, brinjal, cowpea, okra) and tools (Khurpi and Hand Hoe)	45
		Mushroom spawn	30
		Vermi compost	42
2.	MTTC and VTC, College of Horticulture, Thenzawl, Mizoram	Vegetable seed (tomato, cow pea, ash gourd, long yard bean, chilli), Watering cane, Hand hoe and Neem oil	45

S. No.	Implementing centre	Input distributed	No. of participants
3.	MTTC and VTC College of Horticulture, Bermiok, Sikkim	Vegetable seed (palak, coriander, pea, brocoli, cabbage) Trichoderma, Compost, Khurpi, Hand gloves, Neem oil	20
4.	MTTC & VTC, College of Fisheries, Lembuchhera, Tripura	Dragon fruits cutting, Mushroom spawn, Khurpi, Trichoderma, Fish seed	45
5.	Directorate of Extension Education, CAU, Imphal, Manipur	Poultry chicks and vegetable seed (pea, okra, sponge gourd, cucumber)	308
		Total	**535**

Pest and disease managmment of potato

Integrated farming system

Homestead farming system

Input support for farmers

Sceintific poultry farming

Homestead farming system

4.5.2. Other sponsored training programmes

Following training programmes were organized for the farmers and farm women in the state of Manipur.

S. No.	Training title	Sponsored by	Date	No. of participants
1.	Aquapreneurship development programme for tribal youths and farm women of Manipur	Dept of Sc. and Technology, New Delhi	22nd Aug, 2022	33
2.	Integrated Farming system with special reference to livestock production, fisheries and horticulture for empowerment of Farm women from different district of the state of Manipur	National Commission for Women	15th to 23rd March, 2023	88

Aquapreneurship development programme for farm women of Manipur

Integrated Farming system with special reference to livestock production, fisheries and horticulture for empowerment of Farm women

4.5.3. ICAR- CICR NEH Component funded by Central Institute of Cotton Research, Nagpur

S. No.	Name of training	Date	No. of participants
1.	Homestead farming system	30th March, 2023	85
2.	Homestead farming system	31st March, 2023	35

Homestead farming system

4.5.4. Sponsored by FLD on Rapeseed and Mustard Project ICAR-DRMR, Bharatpur

S. No.	Implementing centre	No. of FLD	Location	State
1.	MTTC & VTC, College of Community Science, Tura, Meghalaya	125	Harigaon, Amanda Rangsangre, Darechikgre	Meghalaya
2.	MTTC & VTC, College of Fisheries, Lembucherra, Tripura	125	East Ramachandraghat, Namapara	Tripura
3.	MTTC & VTC, College of Agriculture, Pasighat, Arunachal Pradesh	125	Rani, Namsing, Riga, Pangkang	Arunachal Pradesh
4.	Directorate of Extension Education, CAU, Imphal, Manipur	125	Bishnupur, Imphal East, Thoubal, Imphal West	Manipur

FLD on Rapeseed- Mustard

Field day

4.5.5. RKVY-RAFTAAR AGRI-BUSINESS INCUBATOR (R-ABI) Sponsored by MoA&FW

4.5.5.1. Salient achievements of College of Fisheries, R-ABI, Tripura

Mass Awareness campaign was conducted in the month of April 2022 to publicize the next 7th Cohort incubation programme at College of Veterinary Science and Animal Husbandry, Agartala and College of Agriculture, Lembucherra.

'Kisan Bhagidari, PrathmiktaHamari' campaign was launched by RKVY-RAFTAAR–Agri- Business Incubator (R-ABI) on 26.04.2022.

An interaction programme for students and startup incubates with Mrs. Shubhra Devi, Proprietor of M/s. Meira Foods, Imphal, Manipur was organized on 28th May 2022.

Two-days intensive capacity building workshop on "*Entrepreneurship and Intellectual Property Rights*" on 6th & 7th September, 2022 at College of Fisheries, Lembucherra was organized.

A Sensitization program for Entrepreneurship Development was organized at College of Veterinary Science and Animal Husbandry, R.K. Nagar, Tripura on 9th September, 2022.

"PM Kishan Samman Sammelan" was organized at Mela Ground, PUSA, IARI, New Delhi during 17th - 18th October, 2022. Team of COF, R-ABI along with our Startups attended the event which was inaugurated by the Hon'ble Prime Minister of India.

4.5.5.2. Salient achievements of College of Vety Sc. And AH, R-ABI, Mizoram

Three batches of co-hurts were trained for two months duration each for Agripreneurship

Orientation Programme (AOP). Twenty five Agripreneurs were trained, mentored and incubated.

Eight of the incubates/Agripreneurs from this R-ABI centre are selected for pre-stage funding of Rs. 5 lakhs each by the Ministry of Agriculture and Farmers Welfare, Govt. of India.

One of the incubate is selected for Seed Stage funding of Rs. 25 lakhs.

4.5.5.3. Salient achievements of College of Horticulture and Forestry, R-ABI, Arunachal Pradesh

Four successful startups incubated under CHF R-ABI were nominated to represent North East and to showcase their products at Agri Startup Conclave & Kisan Sammelan 2022 held on 15th-18th Oct, 2022 at IARI Mela Ground, Pusa, New Delhi.

Conducting RKVY –RAFTAAR entrepreneurs Meet-Cum-Awareness Programme, as a part of commemorating 75th years of India's Independence.

Two-month internship/incubation programmes was successfully completed for the seventh batch of incubatees/start-ups focusing on both technical and business mentoring.

Conducted 12 days G20 side events on the subject " Women Led Development" on various themes given by the Ministry of Agriculture and Farmers Welfare, New Delhi from 1st to 12th February,2023.

Organized one day workshop on the theme "Hands on with Entrepreneurship" in 29th March, 2023 in collaboration with advancing North East, an initiative of North Eastern Council (NEC) and Ministry of Development of North Eastern Region and ideated by North Eastern Development Finance Corporation Ltd (NEDFi).

Capacity building programme at CoF, Tripura

Start-up fund felicitation at CoVety. & AH, Mizoram

4.5.6. Mobile Based Agro-Advisory System funded by MeitY, GOI, New Delhi

4.5.6.1. College of Post Graduate Studies in Agricultural Sc., Umiam, Meghalaya

S. No.	Project Activities	Performance
1.	Awareness programme of DHaBReT	23 awareness programs conducted
2.	Baseline Survey	Completed
3.	Customization / Enhancement of IIDS Farm registration / Language / Farm History	Under testing
4.	Registration of 600 Sample farmers for UAV Based Crop Mapping & Monitoring (100 each for Cabbage, Cauliflower, Paddy, Ginger, Turmeric and Pineapple)	Completed

S. No.	Project Activities	Performance
5.	Mobile App for tracing of Farmers Field	Completed
6.	Establishment of Agro Advisory Lab	Completed
7.	Flight Planning of Identified 6 Crop	Completed
8.	UAV Data Acquisition & Data Processing for Point Clouds/ DSM/ DTM / Ortho Photo / Vegetation Index. Generation of TIN, Slope and Aspect maps of Thynroit (Cabbage), Mawkriah (Cauliflower), Thandnongiaw (Paddy & Ginger), Kdonghulu (Paddy & Ginger), and Liarkhla villages (Paddy & Ginger).	27 #s of UAV data acquisition (Continuous Process) Completed
9.	Ground Truthing - Sample Data Collection + Correlation with UAV Data Outputs	Performing (Continuous Process)
10.	Analysis of NDVI & Advisory to Farmers	- Do -
11.	Generated indices for determining the following soil attributes of cabbage fields of Thynroit village: i. Soil Organic Carbon (SOC) ii. Soil Moisture Content (SMC) iii. Nitrogen iv. Phosphorus v. Potassium	- Do -
12.	Review meeting of the project amongst CPGS-AS, CAU (I), Umiam, Meghalaya; NESAC, Barapani, Meghalaya and DIC, New Delhi on 28.09.2021 being presided by Dr. Vinay Thakur, Senior Director DIC and Additional Director General, BISAG-N.	Monitoring of research project DHaBReT has been performed.
13.	Number of proactive calls providing Evidence Based Agro-Advisory Services	547 #s
14.	SMSs pushed	#s

4.5.6.2. College of Fisheries, Tripura

Distribution of Farmers' Registration

S. No	Name of the Districts	Aril' 2022-March'2023	Total
1.	West Tripura	126	2559
2.	Khowai	142	1798
3.	Sepahijala	156	2186
4.	Gomati	102	1559
5.	Dhalai	49	495
6.	North Tripura	56	414
7.	Unakoti	64	299
8.	South Tripura	66	210
Total		**761**	**9520**

Trainings/Workshops/Farmer-Scientist interaction

S. No	Activities	No. of training progamme
1.	Awareness Building/ Sensitization	21
2.	Workshop/trianing	9

4.5.6.3. College of Agriculture, Imphal, Manipur

S. No	Activities	Target	Achievements
1.	Awareness Building/ Sensitization	40	60
2.	Training to farmers (Agri/ AH/ Fisheries)	8	18
3.	Registration of farmers	2800	5143
4.	No. of calls received (Answer/All)	60000	4022/10746
5.	No. of calls made (Answer/All)	18000	18477/18818
6.	No. of text SMS pushed/ SMS consumed	265000	9746 / 4875308
7.	No. of voice Message Pushed/ SMS consumed	265000	433 / 841577
8.	Content Development/ Manuals/ Crop Calendar (Agri/AH/Fishery)	10	10

4.5.6.4. College of Horticulture and Forestry, Pasighat, Arunachal Pradesh

S. No	Activities	No. of training progamme
1.	Awareness Building/ Sensitization	46
2.	Training/ Heath camp/ workshops	43

Achievement:

Farmer Registration	Awareness Program		Training/Health Camp to farmers		Advisory		Message		Umang-app Regist-ration
	Program	Partici-pants	Program	Partici-pants	Calls Received	Calls Made	Text	Voice	
3446	46	2313	43	2163	5514	5348	425283	34746	1027

4.5.6.5. College of Vety. Sc. & AH., Aizawl, Mizoram

Achievements:

S. No.	Deliverables / Milestones	Achievement
1.	Detailed Farmer Registration	Farmers registered = 311nos.
2.	Awareness Building / Sensitization Programs among Farmers	11 Nos. No. of Participants= 385
3.	Training to Farmers/project Staff	4 No. No. of Participants= 107
4.	Animal Health Camps	9 Nos. No. of Participants= 341 nos.
5.	Content development in Animal Husbandry, Agri/Horti	4 Nos. Booklet (Cattle reproduction, Handbook on Swine reproduction, Zoonotic Diseases of Livestock, Parasitic Diseases of Livestock)
6.	SMS (text & Voice)	SMS (Text & Voice) created= Text-51, Voice-19
7.	Small Videos	7 Nos. of case studies & success stories
8.	Expected No. of Advisories to be provided	Total Advisories (Pull based and pushed based) = 4,01, 507 (Pull Based Call=3769, Pushed based Text and Voice message consumed= (Text=3,14,385, Voice=83,349)

4.5.6.6. College of Agril. Engg. & PHT, Ranipool, Sikkim

S. No	Index	Targets/Milestone	Achieved	Target Gap
1.	Farmer Registration	2000	1889	111
2.	Awareness Program	40	49	+9
3.	Awareness Participants	2000	1815	-185
4.	Training Programme	40	12	-28
5.	Training to farmers participants	2000	533	-1467
6.	Advisory Calls Received	45000	7804/12715 consumed	-32285
7.	Proactive / Follow-up calls made	12000	2665	-9335
8.	Text Message	185000	4490/1133539 Consumed	-71641
9.	Voice Message	211584	238/196857	-14727

Animal Health Camp at Mebo Village, Siang district, Arunachal Pradesh

Sensitization of Mobile Based Agro Advisory Services in Sikkim and Biological Control in Green House and Nursery Production at Sikkim

Food processing training program at Manipur

UAV data acquisition of nursery farmlands for pineapple cultivation at Mawphrew village, East Khasi Hills district, Meghalaya

4.6. Farmers FIRST Project sponsored by ICAR, New Delhi

S. No.	Project sites	Number of Farm families
1.	ShangshakKhullen village, Ukhrul district, Manipur	250
2.	Maopungdong village, Senapati district, Manipur	250
Total	**2 Villages**	**500 Farm families**

Summary of activities:

S. No.	Particular	Date and venue	No. of participants
1.	4th& 5th University Advisory Committee (UAC) & Site Plan Implementation Group (SPIG) Meeting	28th July, 2022 at Directorate of Extension Education, CAU, Imphal	35
2.	Launching of Farmer FIRST Programme at Shangshak Khullen, Ukhrul, Manipur	30th August, 2022 at ShangshakKhullen village, Ukhrul, Manipur	180
3.	Farmers Training programme cum Input distribution	13th October, 2022 at Maopungdong village, Senapati, Manipur	35
4.	Launching of Farmer FIRST Programme cum Farmer- Scientist Interaction	7th November, 2022 at Maopungdong village, Senapati, Manipur	80
5.	Interaction cum Inputs distribution programme	20th February, 2023 at Maopungdong village, Senapati, Manipur	85
6.	Demonstration on utilization of Drone in Agricultural Development	10th March, 2023 at ShangshakKhullen, Village, Ukhrul, Manipur	125
7.	Farmers training programme on Scientific Livestock and Fish farming	10th March, 2023 at ShangshakKhullen, Village, Ukhrul, Manipur	35
		Total	**575**

Launching of Farmer FIRST Programme cum Farmer- Scientist Interaction

Inputs distribution programme

4.7. Activities of 13 Colleges of CAU, Imphal, Manipur

4.7.1. Training for Farmers and Farm Women

S. No.	Name of College	No. of training conducted	No. of participant		
			M	F	Total
1.	College of Agriculture Pasighat, Arunachal Pradesh	17	314	382	696
2.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	108	2084	2901	4985
3.	College of Horticulture, Thenzawl, Mizoram	6	89	123	212
4.	College of Vety. Sciences & A.H., Aizawl, Mizoram	20	171	398	569
5.	College of Fisheries, Lembuchhera, Tripura	16	203	141	344

S. No.	Name of College	No. of training conducted	No. of participant		
			M	F	Total
6.	College of Agricultural Engineering and Post Harvest Technology, Ranipool, Sikkim	24	632	521	1153
7.	College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	8	172	139	311
8.	College of Agriculture, Kyrdemkulai, Meghalaya	12	117	155	272
9.	College of Community Science, Tura, Meghalaya	22	329	572	901
10.	College of Veterinary Science and Animal Husbandry, Jalukie, Nagaland	14	44	185	229
11.	College of Food Technology, Imphal, Manipur	3	35	52	87
12.	College of Agriculture Pasighat, Arunachal Pradesh	3	98	52	150
	Total	**253**	**4288**	**5621**	**9909**

4.7.2. Training/ Workshop for Extension Personnel of Line Department/KVK SMSs

S. No.	Name of College	No. of training conducted	Title	No. of participant		
				M	F	Total
1.	College of Agriculture Pasighat, Arunachal Pradesh	1	Insect-Pest and Disease Management in Sustainable Agriculture	11	15	25
2.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	3	Molecular Biological Applications	5	9	14
			Technological advancements in cultivation, post-harvest handling & marketing of spices	53	29	82
			Workshop on Natural Farming: Theory to Practice-Learning from Practitioners	12	13	25
3.	College of Vety. Sciences & A.H., Aizawl, Mizoram	1	Epidemiological investigation of food borne disease outbreak	9	4	13
4.	College of Fisheries, Lembuchhera, Tripura	4	Design and construction of fish farm for NE region	8	3	11
			Promising location specific aquaculture technologies for NE region	7	14	18
			Fisheries biodiversity management and fish habitat restoration for livelihood	7	17	21
			Market Ka Eklavya-Basics of stock investment express	30	46	76
5.	College of Horticulture, Bermiok, Sikkim	1	Recent advances and value addition of horticultural crops	8	13	20

S. No.	Name of College	No. of training conducted	Title	No. of participant		
				M	F	Total
6.	College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	1	Organic cultivation of ginger	2	16	18
7.	College of Community Science, Tura, Meghalaya	2	Value addition and processing of Jackfruit	2	23	25
			Value addition and processing of Jackfruit	6	26	32
8.	College of Veterinary Science and Animal Husbandry, Jalukie, Nagaland	2	Artificial Insemination in pig	5	ā5	10
			Ethno-veterinary practices	5	5	10
9.	College of Food Technology, Imphal, Manipur	2	Food processing of spices and condiments	20	30	50
			Processing of value added fruit products	20	30	50
	Total			**210**	**298**	**508**

4.7.3. Vocational/Training/Skill Development programme for School dropout/Rural Youth

S. No.	Name of College	No. of training conducted	Title	No. of participant		
				M	F	Total
1.	College of Agriculture Pasighat, Arunachal Pradesh	3		23	37	60
2.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	7		96	52	148
3.	College of Fisheries, Lembuchhera, Tripura	3		53	30	83
4.	College of Agricultural Engineering and Post Harvest Technology, Ranipool, Sikkim	1		52	17	69
5.	College of Horticulture, Bermiok, Sikkim	1		12	5	17
6.	College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	2		13	32	45
7.	College of Food Technology, Imphal, Manipur	2		25	25	50
	Total			**274**	**198**	**472**

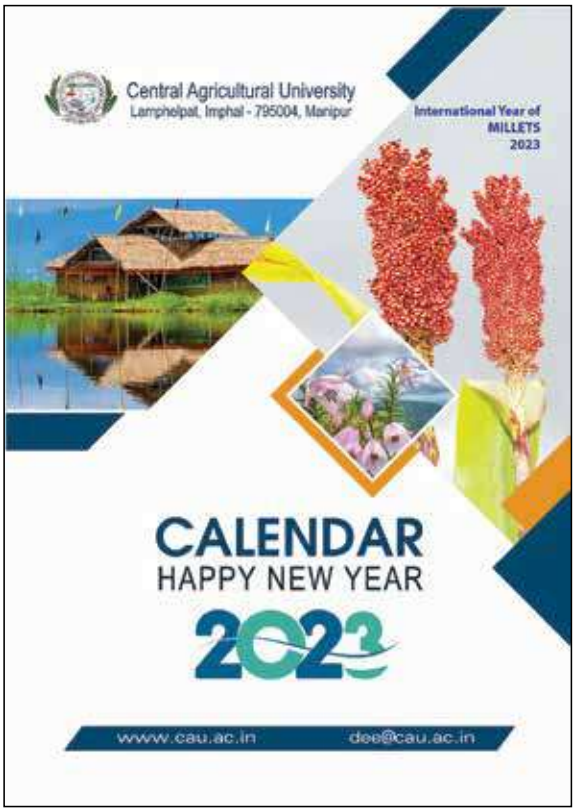
Training on Hygienic Production and Handling of Meat to Control Meat Borne Zoonoses at CVSc &AH, Aizawl, Mizoram

Training on recent advances and value addition of horticultural crops at COH, Bermiok, Sikkim

Training programme on design and construction of fish farm for NE region at CoF, Tripura

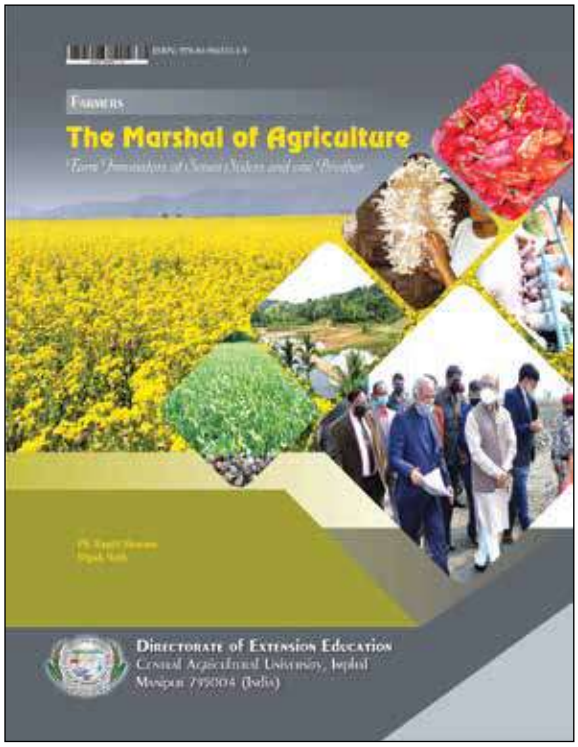
Training on nursery management of flower crops

4.8. Extension Publications:

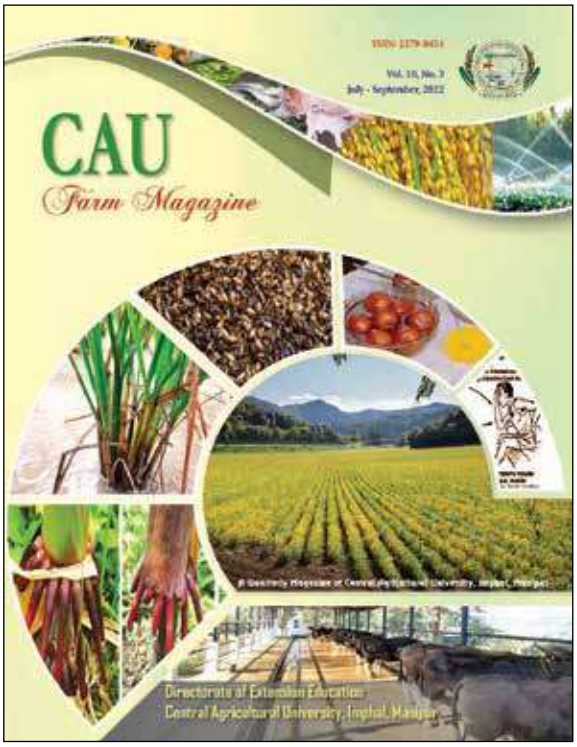


CAU, Calendar

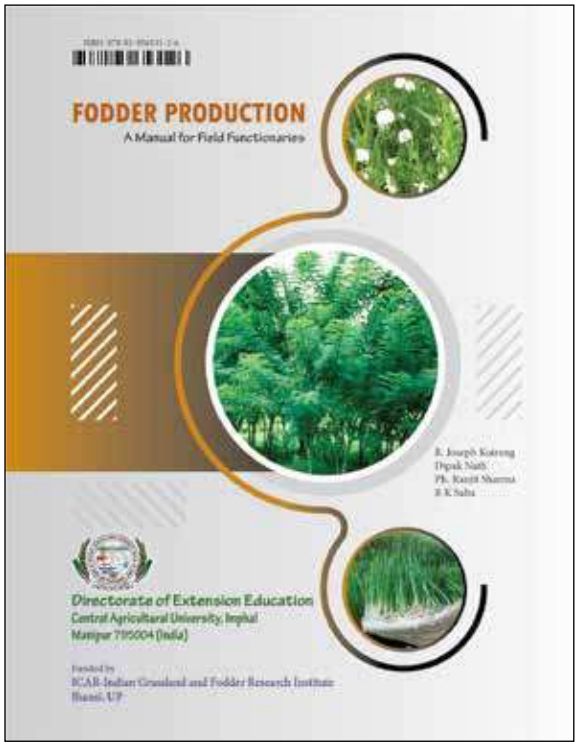
CAU Table Calendar



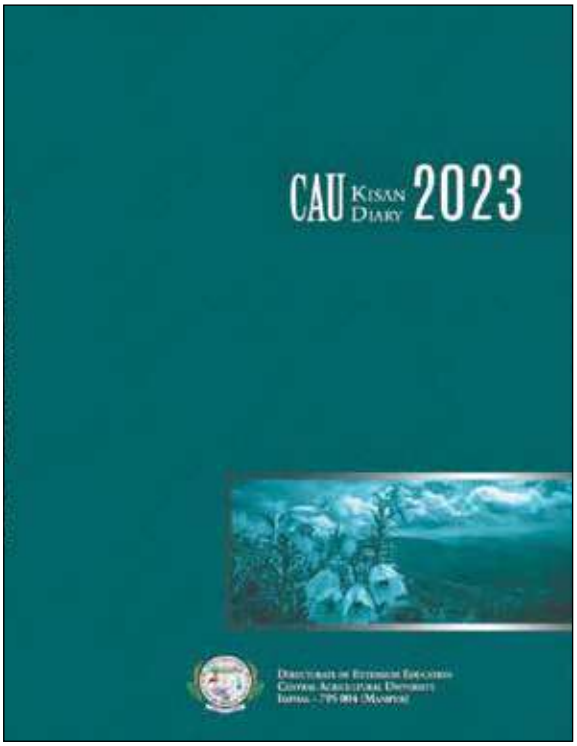
Success story



CAU Farm Magazine



Technical Bulletin



CAU Kisan Diary 2020

5

HUMAN RESOURCE DEVELOPMENT

INSPITE of its remoteness and other location related disadvantages, the University maintained excellent academic environment in its constituent college campuses for professional success of the students. The comfortable staff per student ratio creates an engaged and interactive teaching environment. The University encourages and supports all the faculty members and staffs to attend trainings, conferances, seminars and worshops at national and international levels. Each constituent college arranges distinct on-campus and off-campus trainings of common interests by inviting experts from within and outside the University.

Table. 5.1. Staff details of Central Agricultural University, Imphal, Manipur

S. No.	Headquarters/College	Administrative	Teaching	Non-Teaching		Total
				Tech	Non-tech	
1.	CAU Headquarters, Imphal	11	-	44	94	149
2.	Constituent colleges of CAU, Imphal	17	300	243	374	934
	Grand Total	**28**	**300**	**287**	**468**	**1083**

Table. 5.2. List of newly appointed employees

S. No.	Name of employee	Designation	Date of appointment	Date of joining
	College of Agriculture, Imphal			
1.	Smt. K. Kasimlu Kabui	MTS	29.04.2022	10.05.2022
	College of Horticulture and Forestry, Pasighat			
1.	Mr. Anthony Tangu	MTS	29.04.2022	30.04.2022
	College of Agril. Engg. & PHT, Sikkim			
1.	Dr. N.S. Chauhan	Dean (I/c)	27.12. 2022	27.12. 2022
	College of Post Graduate Studies in Agil. Sciences, Barapani, Meghalaya			
1.	Dr. Mayank Rai	Dean (I/c)	30.07. 2022	01.08. 2022
	College of Community Science, Tura, Meghalaya			
1.	Dr. Jyoti V Vastrad	Dean	19.04. 2022	05.05. 2022
2.	Brithina R. Marak	MTS	29.04.2022	02.05.2022
	College of Veterinary Science & A.H., Jalukie, Nagaland			
1.	Dr. I. Shakuntala Devi	Dean	08.04.2022	25.05.2022
	College of Food Technology, Imphal, Manipur			
1.	Dr. Ngaseppam Iboyaima Singh	Dean	08.04. 2022	17.07. 2022
	College of Agriculture, Pasighat, AP			
1.	Dr. Anil Kumar Tripathi	Dean	08.04. 2022	11.04. 2022
	College of Horticulture, Thenzawl			
1.	Dr. Shri Dhar	Dean	08.04.2022	31.05.2022
	College of Horticulture, Bermiok, Sikkim			
1.	Dr. Ajai Kumar Pandey	Dean	08.04. 2022	09.06. 2022

Table. 5.3. List of Resigned/Retired/Demised Employees

S. No.	Name of employee	Designation	Date of Resignation / Retirement / Demise
	CAU Headquarters, Imphal, Manipur		
1.	Shri Ramji Prasad	Driver	30.11.2022
2.	Shri R.K. Sanjit Singh	MTS	23.08.2022
3.	Shri Th. Sivananda Singh	Driver	18.11.2022
4.	Shri M. Brojen Singh	Head Assistant	31.01.2023
5.	Shri Kh. Meghachandra Singh	Head Assistant	31.01.2023
6.	Shri L. Ibomcha Singh	Accountant	31.01.2023
	College of Agriculture, Imphal		
1.	(L) A. Dilip Singh	MTS	16.05.2022
2.	Dr. E.V.D. Sastry	Professor (GPB)	30.06.2022
3.	Md. Rashimuddin Khan	MTS	30.09.2022
4.	Dr. Y. Chakrabarty Singh	Professor (Agril. Eco.)	31.12.2022
5.	Shri. Ch. Chittaranjan Singh	Assist. Engineer	31.12.2022
6.	Shri. Y. Ranjit Singh	UDC	31.01.2023
7.	Shri. N. Nabachandra Singh	UDC	31.01.2023
8.	Shri. A. Ashok Kumar Singh	Sr. Steno.	28.02.2023
9.	Shri. K.S. Anam	MTS	28.02.2023
	College of Horticulture And Forestry, Pasighat		
1.	Dr. Aatish Kumar Sahu	Associate Professor	30/06/2022
	College of Veterinary Science & A.H., Selesih, Aizawl		
1.	K. Pakunga	MTS	14.1.2022
2.	L. Gangte	Security guard	28.2.2022
3.	C. Ialbiakkunga	MTS	14.9.2022
4.	Shri T. Priyo Kumar Singh	Accoutant	31.01.23
	College of Fisheries, Lembucherra, Tripura		
1.	Dr. Dibyendu Kamilya	Asstt. Prof.	20.11.2022
2.	Dr. Radhakrishnan KV	Asstt. Prof.	30.11.2023
	College of Agricultural Engineering & PHT, Ranipool, Sikkim		
1.	Shri Pawan Kumar	Sr. Library Assistant	30.11.2022
2.	Late Arun Chetry	MTS	08.08.2022
3.	Dr. Shivam	Asstt. Prof.	15.12.2022
	College of Community Science, Tura, Meghalaya		
1.	Sathro Hajong	Driver	24.05.2022
	College of Agriculture, Pasighat, A.P.		
1.	Dr. S. K. Bandyopadhyay	Professor	31.03.2023

Table. 5.4. List of Transfers

S. No.	Name of employee	Designation	Place of Transfer	Date of Transfer
	CAU Headquarters, Lamphelpat, Imphal, Manipur			
1.	Shri L. Jatinkumar Singh	MTS	NEC Farm, DEE, Imphal	04.05.2022
2.	Shri Kh. Bijoykumar Singh	MTS	NEC Farm, DEE, Imphal	04.05.2022
3.	Shri A. Shyam Singh	MTS	NEC Farm, DEE, Imphal	04.05.2022
4.	Md. Haffizuddin	MTS	COA, Imphal	04.05.2022
5.	Shri S. Kaka Meitei	MTS	COA, Imphal	04.05.2022
6.	Shri Sunil Kumar	Accounts Assistant	CVSC, Jalukie, Nagaland	08.07.2022
7.	Shri S. Lalchand Singh	Computer Operator	CVSC, Aizawl, Mizoram	08.07.2022
	College of Agriculture, Imphal			
1.	Dr. Th. Ranadhir Singh	Professor	Director of Extension Education	10.06.2022
2.	Dr. Ng. Joykumar Singh	Associate Professor	COFT, Imphal	05.07.2022
	College of Horticulture & Forestry, Pasighat, AP			
1.	Shri Suren Boro	Driver	COA, Pasighat	06.07.2022
	College of Veterinary Science & A.H., Selesih, Aizawl			
1.	O. Panthing Singh	Computer Operator	CAU Hqrt., Imphal	18.06.2022
2.	N. Devid Singh	J.E. (Civil)	COH, Thenzawl	30.06.2022
3.	Dr. Lalhmingsanga	Assistant Professor	COH, Thenzawl	29.08.2022
4.	Dr. L. Devarishi Sharma	Assistant Professor	COH, Thenzawl	29.08.2022
5.	Dr. C.G. Sawant	Assistant Professor	COH, Thenzawl	29.08.2022
6.	Dr. Rahul Sadhukan	Assistant Professor	COH, Thenzawl	29.08.2022
	College of Agricultural Engineering & PHT, Ranipool, Sikkim			
1.	Dr. Diana Sagolsem	Assistant Professor	COH, Bermiok	20.08.2022
2.	Dr. Sunil Kr. Chongtham	Assistant Professor	COH, Bermiok	20.08.2022
3.	Dr. Y. Rupert Anand	Assistant Professor	COH, Bermiok	20.08.2022
4.	Dr. S. Vinodh	Assistant Professor	COH, Bermiok	20.08.2022
5.	Dr. M. Victoria Devi	Assistant Professor	COH, Bermiok	20.08.2022
6.	Shri Vishal Bardewa	Accounts Assistant	COH, Bermiok	20.08.2022
7.	Shri Lalcha	Accounts Assistant	COH, Bermiok	20.08.2022
	College of Post Graduate Studies in Agricultural Sciences, Barapani, Meghalaya			
1.	Dr. Veronica Kadam	Assistant Professor	COH, Thenzawl	2.11.2022
2.	Dr. Pramod Kumar Pandey	Assistant Maize Breeder AICRP on Maize	COA, Kyrdemkulai	23.07.2022
3.	Dr. MB Tengli	Assistant Prof.	CPGSAS, Barapani	30.04.2022
	College of Community Science, Tura, Meghalaya			

S. No.	Name of employee	Designation	Place of Transfer	Date of Transfer
1.	Dr. Swapnali Borah	Professor	A.A.U., Jorhat	16.7.2022 on lien
	College of Horticulture, Pasighat, AP			
1.	Dr. Pranabjyoti Sarma	Associate Professor	COA, Kyrdemkulai	04.08.2022
	College of Horticulture, Thenzawl			
1.	Dr. Amarjeet Kumar	Assistant Professor	COA, Kyrdemkulai	26.07.2022

5.5. List of Promotions

S. No.	Name of employee	Designation	Promoted to	Date of promotion
	College of Agriculture, Imphal			
1.	Dr. L. Nongdrenkhomba Singh,	Assoc. Prof.	Professor	08.04.2022
2.	Dr. Thiyam Ranadhir Singh	Assoc. Prof.	Professor	08.04.2022
3.	Dr. Kh. Ibohal Singh	Assoc. Prof.	Professor	08.04.2022
4.	Dr. Th. Renuka Devi	Assoc. Prof.	Professor	08.04.2022
5.	Dr. Ng. Joykumar Singh	Asstt. Prof. (S.G.)	Associate Professor	08.04.2022
6.	Dr. Daya Ram	Asstt. Prof. (S.S.)	Asstt. Prof. (S.G.)	08.04.2022
7.	Dr. Jamkhogin Lhungdim	Asstt. Prof. (S.S.)	Asstt. Prof. (S.G.)	08.04.2022
8.	Dr. N. Surbala Devi	Asstt. Prof. (S.S.)	Asstt. Prof. (S.G.)	08.04.2022
9.	Dr. Bireswar Sinha	Asstt. Prof. (S.S.)	Asstt. Prof. (S.G.)	08.04.2022
10.	Dr. M. Norjit Singh	Asstt. Prof.	Asstt. Prof. (S.S.)	08.04.2022
11.	Dr. M. Deepa Devi	Asstt. Prof.	Asstt. Prof. (S.S.)	08.04.2022
12.	Dr. S. Romen Singh,	Asstt. Prof.	Asstt. Prof. (S.S.)	08.04.2022
13.	Dr. Meinam Chanchan,	Asstt. Prof.	Asstt. Prof. (S.S.)	08.04.2022
	College of Horticulture and Forestry, Pasighat			
1.	Dr. Dilip Kumar Pandey	Assoc. Prof.	Professor	08.04.2022
2.	Dr. Pran Kanu Debnath	Assoc. Prof.	Professor	08.04.2022
3.	Dr. Lobsang Wangchu	Assoc. Prof.	Professor	08.04.2022
4.	Dr. Tara Singh Mehra	Assoc. Prof.	Professor	08.04.2022
5.	Dr. Chandra Deo	Assoc. Prof.	Professor	08.04.2022
6.	Dr. Pranabjyoti Sarma	Assoc. Prof.	Professor	08.04.2022
7.	Dr. Tisu Tayeng	Asstt. Prof. (SG)	Associate Professor	08.04.2022
8.	Dr. Saroj Kumar Pattanaaik	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
9.	Dr. Raghubir Kumar Patidar	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
10.	Dr. P. Raja	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
11.	Dr. Barun Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
12.	Dr. Bikram Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
13.	Dr. Ramesh Chandra Shakywar	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
14.	Dr. Nicolee Lyngdoh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022

S. No.	Name of employee	Designation	Promoted to	Date of promotion
15.	Dr. Arunkumar Phurailatpam	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
16.	Dr. Amit Kumar Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
17.	Dr. Telem Matouleibi Chanu	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
18.	Dr. Senjam Romen Singh	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
19.	Dr. Anju Choudhury	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
20.	Dr. N. Surmina Devi	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
21.	Dr. P.S. Mariam Anal	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
22.	Dr. Shivani Dobhal	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
23.	Dr. Kalkame Ch Momin	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
	College of Veterinary Science & A.H., Selesih, Aizawl			
1.	Dr. A.K. Samanta	Assoc. Prof.	Professor	08.04.2022
2.	Dr. Saidur Rahman	Assoc. Prof.	Professor	08.04.2022
3.	Dr. Girin Kalita	Assoc. Prof.	Professor	08.04.2022
4.	Dr. Kalyan Sarma	Assoc. Prof.	Professor	08.04.2022
5.	Dr. Bedanga Konwar	Assoc. Prof.	Professor	08.04.2022
6.	Dr. Prava Mayengbam	Assoc. Prof.	Professor	08.04.2022
7.	Dr. Parimal Roy Choudhury	Assoc. Prof.	Professor	08.04.2022
8.	Dr. Arup Kalita	Asstt. Prof. (SG)	Associate Professor	08.04.2022
9.	Dr. Y. Damodar Singh	Asstt. Prof. (SG)	Associate Professor	08.04.2022
10.	Dr. T. C. Tolenkhomba	Asstt. Prof. (SG)	Associate Professor	08.04.2022
11.	Dr. Pragati Hazarika	Asstt. Prof. (SG)	Associate Professor	08.04.2022
12.	Dr. (Mrs.) Ranjana Goswami	Asstt. Prof. (SG)	Associate Professor	08.04.2022
13.	Dr. Basanta Saikia	Asstt. Prof. (SG)	Associate Professor	08.04.2022
14.	Dr. Gautam Patra	Asstt. Prof. (SG)	Associate Professor	08.04.2022
15.	Dr. Parthasarathi Behera	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
16.	Dr. Suvendu Kumar Behera	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
17.	Dr. Jagan Mohanrao Gali	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
18.	Dr. Rajat Buragohain	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
19.	Dr. Ravindran R	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
20.	Dr. Devajani Deka	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
21.	Dr. Hitesh Bayan	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
22.	Dr. L Lallawmzuali Ralte	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
23.	Dr. M. C. Lallianchhunga	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
24.	Dr. Biren Kumar Das	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
25.	Dr. J. B. Rajesh	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
26.	Dr. Rahul Singh Arya	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
27.	Dr. Jitendra Kumar Chaudhary	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
	College of Agril. Engg. & PHT, Ranipool, Sikkim			
1.	Dr. Shobh Nath Yadav	Assoc. Prof.	Professor	08.04.2022

S. No.	Name of employee	Designation	Promoted to	Date of promotion
2.	Dr. Ajay Kumar Vashisht	Assoc. Prof.	Professor	08.04.2022
3.	Dr. Jagabandhu Panda	Assoc. Prof.	Professor	08.04.2022
4.	Dr. Sujata Jena	Assoc. Prof.	Professor	08.04.2022
5.	Dr. Basant Kumar Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
6.	Dr. Angbabu Sherpa	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
7.	Dr. Dhananjoy Roy	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
8.	Er. S.M. Kamaruzzaman	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
9.	Dr. Santosh Rang Rao Yadav	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
10.	Er. Nandita Sen	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
11.	Dr. G.T. Patle	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
12.	Er. Ph. Robert	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
13.	Dr. Ch. Birendrajit	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
14.	Dr. A. Anuradha Devi	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
15.	Dr. M. Chanchan	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
16.	Dr. Said Prashant Pandharinath	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
17.	Dr. Ghanashyam Singh Yurembam	Asstt. Prof	Asstt. Prof. (SS)	08.04.2022
	College of Fisheries, Lembucherra, Tripura			
1.	Dr. Arun Bhai Patel	Assoc. Prof.	Professor	08.04.2022
2.	Dr. Mrinal Kanti Datta	Assoc. Prof.	Professor	08.04.2022
3.	Dr. Biswajit Lahiri	Asstt. Prof (SS)	Asstt. Prof (SG)	08.04.2022
4.	Dr. Sagar Chandra Mandal	Assoc. Prof	Professor	08.04.2022
5.	Dr. Dr.Himanshu Priyadarshi	Asstt. Prof	Asstt. Prof (SS)	08.04.2022
6.	Dr. Anil Datt Upadhyay	Asstt. Prof	Asstt. Prof (SG)	08.04.2022
7.	Dr. Dibyendu Kamilya	Asstt. Prof (SS)	Asstt. Prof (SG)	08.04.2022
8.	Dr. Pampa Bhattacharjee	Asstt. Prof (SS)	Asstt. Prof (SG)	08.04.2022
9.	Dr. Janmejay Parhi	Asstt. Prof (SS)	Asstt. Prof (SG)	08.04.2022
10.	Dr. Anindya Sundar Barman	Asstt. Prof (SS)	Asstt. Prof (SG)	08.04.2022
11.	Dr. Prasenjit Pal	Asstt. Prof (SS)	Asstt. Prof (SG)	08.04.2022
12.	Dr. Sudhansu Shekhar Mahanand	Asstt. Prof	Asstt. Prof (SS)	08.04.2022
13.	Dr. M.Bhargavi Priyadarshini	Asstt. Prof	Asstt. Prof (SS)	08.04.2022
14.	Dr. Yumlembam Jackie Singh	Asstt. Prof	Asstt. Prof (SS)	08.04.2022
15.	Dr. Himadri Saha	Asstt. Prof	Asstt. Prof (SS)	08.04.2022
16.	Dr. Naresh Kumar Mehta	Asstt. Prof	Asstt. Prof (SS)	08.04.2022
	College of Post Graduate Studies in Agricultural Sciences, Barapani, Meghalaya			
1.	Dr. K. Noren Singh	Assoc. Prof.	Professor	08.04.2022
2.	Dr. Binodini Sethi	Assoc. Prof.	Professor	08.04.2022
3.	Dr. L. Hemochandra	Assoc. Prof.	Professor	08.04.2022

S. No.	Name of employee	Designation	Promoted to	Date of promotion
4.	Dr. A.K. Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
5.	Dr. Devyani Sen	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
6.	Dr. Lala I.P. Ray	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
7.	Dr. R. Josmee Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
8.	Dr. N. Janaki Singh	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
9.	Dr. Raghubir Patidar	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.2022
10.	Dr. Kennedy N	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
11.	Dr. Mercy Nesa Rani	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
12.	Dr. Ng. Tombisana Meetei	Asstt. Prof.	Asstt. Prof. (SS)	08.04.2022
13.	Dr. Dipali Majumder (after retirement)	Assoc. Prof.	Professor	08.04.2022
	College of Community Science, Tura, Meghalaya			
1.	Dr. Namita Singh	Assoc. Prof.	Professor	08.04.22
2.	Dr. Swapnali Borah	Assoc. Prof.	Professor	08.04.22
3.	Dr. Lakshmi Dhar	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.22
4.	Dr. Biswajit Lahiri	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.22
5.	Dr. Ranima Saikia	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.22
6.	Dr. Shipra Nagar	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.22
7.	Dr. Lokesh Kumar Mishra	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.22
8.	Mr. Ferdinand B. Lyngdoh	Asstt. Prof.	Asstt. Prof. (SS)	08.04.22
9.	Dr. Ashok Kumar	Asstt. Prof.	Asstt. Prof. (SS)	08.04.22
10.	Dr. Arambam Jolly Devi	Asstt. Prof.	Asstt. Prof. (SS)	08.04.22
11.	Dr. Shatabhisa Sarkar	Asstt. Prof.	Asstt. Prof. (SS)	08.04.22
	College of Veterinary Science & A.H., Jalukie, Nagaland			
1.	Dr. Gunjan Das	Assoc. Prof.	Professor	08.04.22
2.	Dr. Shyamananda Mukherjee	Assoc. Prof.	Professor	08.04.22
3.	Dr. Samares Kumar Das	Asstt. Prof. (SS)	Asstt. Prof. (SG)	08.04.22

5.6. Trainings/Seminars/Conferences/Workshops/Summer Schools, etc. organized by constituent colleges

S. No.	Type of the Programme	Sponsored by	Title of the programme	Duration (Days)	From	To	No. of participants
	College of Agriculture, Imphal **Organized a total of 57 different activities during 2022-23. Some of the important activities are given below.**						
1.	National Conferance	CAU, Imphal	82nd Anuual Conference of ISAE	3	10.11.2022	12.11.2022	300

S. No.	Type of the Programme	Sponsored by	Title of the programme	Duration (Days)	From	To	No. of participants
2.	Training	IDP-NAHEP, CoA, Iroisemba, Imphal	Training on Paper Recycling unit	2	09.09.2022	10.09.2022	10
3.	Training	IDP-NAHEP, CoA, Iroisemba, Imphal	Three days training on personality development and soft skills Communication, Interview and Personality Development	3	29.09.2022	01.10.2022	40
4.	Workshop	IDP-NAHEP, CoA, Iroisemba, Imphal	Communication Skill, Soft Skills, Personality Development and Stress Management	7	07.05.2022	18.06.2022	84
5.	Language training	IDP-NAHEP, CoA, Iroisemba, Imphal	Japanese Course for beginners	6	26.07.2022	31.07.2022	41
6.	Training	IDP-NAHEP, CoA, Iroisemba, Imphal	Communication, Interview and Personality Development	3	27.03.2023	29.03.2023	46
College of Horticulture & Forestry, Pasighat Organized a total of 45 different activities during 2022-23. Some of the important activities are given below.							
1.	RKVY RAFTAAR Entrepreneurs Meet cum Awareness Program	CHF RABI	Entrepreneurs Meet cum Awareness Program	1	26.9.2023		60
2.	Agri Startup Conclave & Kisan Mela 2023	AICRP, COA, & CHF RABI	Agri Startup Conclave & Kisan Sammelan	2	04.01.2023	05.01.2023	850
3.	Training-Internship Program	CHF RABI Project, MOAFW,	Agristartup Incubation for AOP Program	60	14.12.2022	13.02.2023	5
4.	Workshop	CHF RABI Project, MOAFW, GOI, NEC & NEDFi	Hands on with Entrepreneurship	1	29.03.2023		30

S. No.	Type of the Programme	Sponsored by	Title of the programme	Duration (Days)	From	To	No. of participants
College of Veterinary Science & A.H., Selesih, Aizawl Some of the important activities organized during 2022-23 are given below.							
1.	Training	SERB, DST	Hands on training on High-end scientific equipments for research excellence in North Eastern region	10	27.04.2022	06.05.2022	25
College of Fisheries, Lembucherra, Tripura Organized a total of 45 different activities during 2022-23. Some of the important activities are given below.							
2.	Workshop	IDP-NAHEP	Communication Skills and Soft Skills for Career Development and Entrepreneurial Orientation	1	25.032023		53
College of Agricultural Engineering & PHT, Ranipool, Sikkim Some of the important activities organized during 2022-23 are given below.							
1.	Training	Inter University Centre for Yogic Sciences, Bengaluru	One Week Training Programme on "Yoga Practices for Personality Development"	7	15.06.2022	21.06.2022	50
2.	Training	NAHEP-IDP	Personality Development Programme	3	22.09.2022	24.09.2022	50
College of Post Graduate Studies in Agricultural Sciences, Barapani, Meghalaya Some of the important activities organized during 2022-23 are given below.							
1.	Training programme		Applications of Remote Sensing and GIS in Agriculture and Allied Areas	14	29.08.2022	09.09.2022	10
2.	Training	IDP-NAHEP	Intellectural Property and Incubation Management	2	26.09.2022	27.09.2022	50
3.	Faculty Development Programme	IDP-NAHEP	Faculty Development Programme Cum IDP-Review Meeting	3	17.12.2022	17.12.2022	40

S. No.	Type of the Programme	Sponsored by	Title of the programme	Duration (Days)	From	To	No. of participants
			College of Community Science, Tura, Meghalaya				
1.	Workshop	NAHEP-IDP	Building a Professional Career	2	11.06.2022	12.06.2022	29
2.	Workshop	NAHEP-IDP	Entrepreneurship Development Programme	3	26.06.2022	28.06.2022	123

Table 5.7. Details of the programmes attended by faculty and staff

S. No.		Conference		Seminars			Training		
	Higher Studies	National	International	National	International	Workshop	Long term (>3 weeks)	Short term (<3 weeks)	Others (Please specify)
				College of Agriculture, Imphal					
1.	-	-	01	01	-	01	-	01	-
				College of Veterinary Science & A.H., Selesih, Aizawl					
1.	-	08	06	-	01	01	-	08	-
				College of Horticulture & Forestry, Pasighat					
1.	-	04	01	-	01	02	01	03	-
				College of Fisheries, Lembucherra, Tripura					
1.	-	-	02	02	03	01	06	02	-
				College of Agricultural Engineering & PHT, Ranipool, Sikkim					
1.	-	-	02	-	-	-	01	02	-
				College of Post Graduate Studies in Agricultural Sciences, Barapani, Meghalaya					
1.	-	05	04	01	-	01	-	03	01
				College of Community Science, Tura, Meghalaya					
1.	-	03	02	01	-	09	02	04	02
				College of Veterinary Science & A.H., Jalukie, Nagaland					
1.	-	03	04	01	-	03	03	01	-
				College of Food Technology, Imphal					
1.	-	-	-	-	-	-	-	03	-
				College of Agriculture, Pasighat, A.P.					
1	-	01	06	01	01	01	03	-	05

S. No.		Conference		Seminars			Training		
	Higher Studies	National	International	National	International	Workshop	Long term (>3 weeks)	Short term (<3 weeks)	Others (Please specify)
					College of Horticulture, Thenzawl				
1.	-	02	02	01	-	01	01	03	04
					College of Agriculture, Kyrdemkulai, Meghalaya				
1	-	04	04	-	-	-	-	-	01
					College of Horticulture, Bermiok, Sikkim				
1.	-	02	02	-	-	-	07	-	-
	Total	**32**	**36**	**7**	**6**	**20**	**24**	**30**	**13**

Table. 5.8. Lectures/keynote address/invited talks/chairperson etc. delivered and the guest lecture organized

S. No.	Colleges	Number of lectures/keynote address/invited talks/chairperson etc. delivered by the faculties	Number of guest lecture organized
1.	College of Agriculture, Imphal	16	7
2.	College of Horticulture & Forestry, Pasighat	52	1
3.	College of Agricultural Engineering and Post Harvest Technology, Ranipool, Sikkim	5	-
4.	College of Fisheries, Lembuchherra, Tripura	10	14
5.	College of Community Science, Tura, Meghalaya	6	2
6.	College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya	32	1
7.	College of Veterinary Sciences & A.H., Selesih, Aizawl, Mizoram	60	3
8.	College of Veterinary Sciences & A.H., Jalukie, Nagaland	11	1
9.	College of Horticulture, Bermiok, Sikkim	10	-
10.	College of Horticutlure, Thenzawl, Mizoram	6	-

S. No.	Colleges	Number of lectures/keynote address/invited talks/chairperson etc. delivered by the faculties	Number of guest lecture organized
11.	College of Food Technology, Lamphelpat, Imphal	-	1
12.	College of Agriculture, Pasighat	18	2
13.	College of Agriculture, Kyrdemkulai, Meghalaya	4	1
	Total	**230**	**33**

Table. 5.9. Awards and recognition of faculty members

S. No.	Name of the Faculty	Designation	Details of Awards/recognition received
		College of Agriculture, Imphal	
1.	Dr. N. Surbala Devi	Assistant Professor	Second position in oral presentation of scientific article in the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture, 17-19 March 2023at College of Agriculture, CAU, Imphal
2.	Dr. Shravan M Haldhar	Assocaite Professor	ICAR-NBAIR, Bengaluru given a certificate of appriaciation for transfer of biocontrol in NEH region.
			Best Poster Award in 31st National Conference on Innovative resource management approach for coastal and inland ecosystem to sustain productivity and climate resilient during October 13-15, 2022 at Navsari Agricultural University, Gujarat.
			Best Oral Award in International conference on innovation for resilient agriculture during October 19-20 2022 at Chiang Mai, Thailand.
3.	Dr. Ng. Piloo	Associate Professor	1st Prize in Oral presentation during International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture held on 17th -19th March 2023 at CoA, Iroisemba organized by the CAU, Imphal.
4.	Dr. S. Romen Singh	Assistant Professor	Best poster award of Theme 3 in virtual National Conference on “Underutilized Horticultural Genetic Resources, conservation and utilization” organized by Andaman Science Association collaboration with ICAR-Central island Agricultural Research Institute, Port Blair during June 3-4, 2022
5.	Dr. Abhinash Moirangthem	Assistant Professor	Young Teacher Award-2022 in the field of “Floriculture” on 4th International Conference on “Global Efforts on Agriculture, Forestry, Environment and Food Security at Institute of Forestry, Tribhuvan University, Pokhara Campus Nepal during September 17-19, 2022.
6.	Dr. K. Nandini Devi	Professor	Academic Fellow Award by GAASFSL- 2023

S. No.	Name of the Faculty	Designation	Details of Awards/recognition received
		College of Horticulture and Forestry, Pasighat	
1.	Dr. Priyanka Irungbam	Assistant professor	Young Scientist Award in Agronomy in the 7th International Conference on "Opportunities and challenges in Agriculture, Environment & Biosciences for Global Development" held during 29-31 October 2022.
			Best oral presentation award in the International Conference on "Natural Farming for revitalizing Environment and Resilient Agriculture" organized by Central Agricultural University (Imphal) during 17-19th March 2023
2.	Dr. Siddhartha Singh	Assistant Professor	2022 Outstanding Papers in Forage and Grazinglands Award by The C-6 Division of the Crop Science Society of America
3.	Dr. Kalkame Ch. Momin	Assistant Professor (Senior Scale)	Young Scientist Award for contribution in the field of Floriculture & Landscaping, National Seminar on Conservation of Biodiversity, 2nd – 3rd September, 2022, Society for Conservation of Natural Resources (SCNR)
4.	Dr. N. Surmina Devi	Assistant Professor (Senior Scale)	Young Scientist Award for contribution in the field of Plant Pathology, National Seminar on Conservation of Biodiversity, 2nd – 3rd September, 2022, Society for Conservation of Natural Resources (SCNR)
5.	Dr. T.M. Chanu	Assistant Professor	Best Oral presentation award 2022in National Seminar on "Agriculture and More: Beyond 4.0 organised by Society of Community Mobilization, New Delhi and SKUAST Kashmir
			Professor MS Swaminathan Best Scientist Award on 11th National Conference on Natural Sciences held on 19th March 2022 at Pushkaram College of Agriculture Sciences, Pudukkottai, Tamil Nadu, India
			Excellence in Women's Empowerment Award on the Occasion of International Women Day Organised by Daksta Sashaktikaran Evam Shodh Sansthan, Udaipur.
6.	Dr. Ajaykumara K.M.	Assistant Professor	Third position in Best Oral Presentation Award in Indian Phytopathological Society North Eastern Zonal Symposium & National Conference on 'Reframing Futuristic Plant Health Safeguards' during 24-25th November, 2022 at AAU-Jorhat.
			Best Oral Presentation Award in 7th National Conference on Biological Control: '75 Years of Biological Control of Crop Pests and Diseases in Agriculture: Challenges and the way forward' during 15 to 17th December, 2022 at ICAR-NBAIR-Bengaluru.
7.	Dr. Barun Singh	Assistant Professor	Best Oral Presentation at International Conference on Vegetable Oils 2023, January 17-21, 2023 at Hydrabad, India
8.	Dr. P. Raja	Associate Professor	Biodiversity conservation award 2022
			Bursary award by ICPP-2023

S. No.	Name of the Faculty	Designation	Details of Awards/recognition received
9.	Dr. Anil Kumar	Assistant Professor	Ron Cockcroft Award (RCA) 2022 of 25000 SEK (Swedish Krona) by International Research Group on Wood Protection, IRG Secretariat, Stockholm, Sweden at International Conference IRG-53 at Bled , Slovenia
10.	Dr. Lakshmi Dhar Hatai	Associate Professor	Awarded for "Excellence in Peer-Reviewing" of Research manuscript in the Journal of Global Research in Education and Social Science, 2022
			Awarded for "Excellence in Reviewing" of Research manuscript in the Journal of Experimental Agriculture International, 2022
			Awarded for "Excellence in Reviewing" of Research manuscript in the Asian Journal of Agricultural Extension, Economics & Sociology, 2022.
11.	Dr. B.N Hazarika	Dean	Fellow: National Academy of Biological Science (NABS), Chennai
			Best Academician Award during 7th International Conference on Opportunities and Challenges in Agriculture, Environment & Biosciences for Global Development
			Lifetime Achievement award by Society of Biotic and Environmental Sciences, Tripura
			Reviewer Excellence Award for the Journal viz. Current Science, Legume Research, Indian Journal of Agril Research, Agril. Science digest, International Journal of Plant and soil sciences, Asian journal of Agril. and Horticultural Research
			Lifetime Achievement award by Dr. B. Vasantharaj David Foundation, Chennai
	College of Veterinary		**Science & A.H., Selesih, Aizawl**
1.	Dr. Pranab Chandra Kalita	Professor and Head	Certificate of Appreciation as a Member of Reviewer Panel during 2021-22 from International Journal of Livestock Research.
			Campus Ambassador, E cell, IIT, Guwahati" during 2022
2.	Dr. Parthasarathi Behera,	Assistant. Professor	Awarded "Scientist of the year 2021" at 6th Annual Convention of SVBBI and National Symposium on Innovative approach and strategies for Animal Biochemistry and Biotechnology towards holistic development in Animal Health and productivity held on 5th-6th Jan, 2023 at College of Veterinary Science & A.H., Nanaji Deshmukh Veterinary Science University, Jabalpur
			Best poster award (3rd place) for the paper "Recoding anaerobic regulator *fnr*o f *Salmonella* Typhimurium attenuates it's pathogenicity" during 6th Annual Convention of SVBBI and National Symposium on Innovative approach and strategies for Animal Biochemistry and Biotechnology towards holistic development in Animal Health and productivity held on 5th-6th Jan, 2023 at College of Veterinary Science & A.H., NanajiDeshmukhVeterinary Science University, Jabalpur.

S. No.	Name of the Faculty	Designation	Details of Awards/recognition received
3.	Dr. Chethan G.E.	Assistant Professor	Young Scientist Award, Indian Society of Veterinary Medicine
4.	Dr. Pragati Hazarika	Associate Professor	Best oral paper presentation award in XI Conference of Indian Meat Science Association & International symposium on " Novel Technologies & Policy Interventions For Sustainable Meat Value Chain" Organized by ICAR-NRCM - Hyderabad, India on 14th to 16th December, 2022
5.	Dr. T. K. Dutta	Professor & Head	Associate Fellow by National Academy of Veterinary Sciences (India)
	College of Fisheries, Lembucherra, Tripura		
1.	Biswajit Lahiri	Associate Professor & Head	'Best Paper Presentation Award' for oral presentation on "Matsya Varta: A mobile-based smart ICT initiative for fisheries advisory system in Tripura, India" in the International Conference on "Responsible Aquaculture and Sustainable fisHeries Interact (RASHI)", organized by College of Fisheries, CAU (Imphal), Lembucherra, Tripura in collaboration with NESFA, during 13-16 December 2022 at College of Fisheries, CAU (Imphal), Lembucherra, Tripura
2.	Dr. Janmejay Parhi	Assistant Professor	CFSI Gold Medal to Coldwater Fisheries Society of India, Bhimtal
3.	Dr. M.K. Datta	Professor	Felicitated by Income Tax Department, Govt. of India to Prof (Dr) M.K. Datta for contribution in the field of fisheries in the state of Tripura on 30th May, 2022 in the eve of Azadi ka Amrit Mahotsav (75 years of Independence of India) at Agartala, Tripura
4.	Dr. Anil Datt Upadhyay	Associate Professor	Senior Scientist Award -2023, Confered by Kailash Research and Welfare Society, Prayagraj at the occasion of National Seminar on Ecology Vs Economic Development with Special Refrence to the Ganga Basin (NEED-2023) organized by CIFRI Centre and Nehru Gram Bharati (DU), Prayagraj during 25-26, Feb, 2023.
	College of Agricultural Engineering & PHT, Ranipool, Sikkim		
1.	Dr. Narale Pradip D.	Assistant Professor	Young Scientist Award received for outstanding contribution in the field of Renewable Energy Engineering on the occasion of VIIth International Conference in Hybrid mode on 'Global Research Initiatives for Sustainable Agriculture' during 21023 November, 2022 held at Birsa Agricultural University, Kanke, Ranchi, Jharkhand.
2.	Dr. Rakesh Kumar Raigar	Assistant Professor	JAE Best Paper Award received from Indian Society of Agricultural Engineers (ISAE), New Delhi in 56 Annual Convention of ISAE and International Symposium held at TNAU, Coimbatore, Tamilnadu during 09-11 Nov., 2022.
	College of Post Graduate Studies in Agricultural Sciences, Barapani, Meghalaya		
1.	Prof. D. Thakuria	Professor	"Outstanding Scientist Award 2022" conferred by Society for Biotic and Environmnetal Research (NITI Aayog Registered) for commendable contribution in the field of "Exploitation of microbial resources in *Jhum*, organic and alike eco-friendly farming systems".

S. No.	Name of the Faculty	Designation	Details of Awards/recognition received
			"Letter of Appreciation" to Prof. Dwipendra Thakuria by Y. KkhetoSema, I.A.S., Agriculture Production Commissioner, Government of Nagaland for outstanding contribution at the capacity of Technical Expert on Biofertilizers and Organic Farming in Nagaland.
2.	Prof. Mahesh Pathak	Professor	Best Oral paper presentation for paper Morpho-physiological effect of nanoparticles on Eri silkworm, Samia *Cynthia ricini* (Drury) by Kalita H, Haritha S, Sahoo BK, Pathak M, Patidar RK, Kennedy N and Dutta P. In IPS Zonal Symposium (NEZ) on Current Trends in Plant Disease Management for Sustainable Crop Production and Livelihood Security, organized by Indian Phytopathological Society, New Delhi & College of Post Graduate Studies in Agricultural Sciences, Central Agricultural University (Imphal), Umiam, Meghalaya, 7-8 March, 2022.
3.	Kennedy Ningthoujam,	Assistant Professor	Best Oral paper presentation for paper Morpho-physiological effect of nanoparticles on Eri silkworm, Samia *Cynthia ricini* (Drury) by Kalita H, Haritha S, Sahoo BK, Pathak M, Patidar RK, Kennedy N and Dutta P. In IPS Zonal Symposium (NEZ) on Current Trends in Plant Disease Management for Sustainable Crop Production and Livelihood Security, organized by Indian Phytopathological Society, New Delhi & College of Post Graduate Studies in Agricultural Sciences, Central Agricultural University (Imphal), Umiam, Meghalaya, 7-8 March, 2022.
	College of Community Science, Tura, Meghalaya		
1.	Dr. Puspita Das	Professor & Head	North East Woman Leaders Award presented by World Women Leadership Congress on 30th March 2023
2.	Dr. Mamoni Probha Borah	Assistant Professor	Young Researcher Awards 2022, Institute of Scholar (InSc) Bangalaru, Karnataka, India on 28th July 2022.
	College of Veterinary Science & A.H., Jalukie, Nagaland		
1.	Dr. K Ratika	Assistant Professor	Best Poster Presentation Award (3rd) in International Conference on "Natural Farming for Revitalizing Environment and Resilient Agriculture" held at college of Agriculture, Iroisemba, Imphal during 17-19th March' 2023.
2.	Dr. Bhabesh Mili	Assistant Professor	Dr. C. M. Singh Veterinary Science Excellent Award-2022, in recognition of significant & outstanding contribution in the field of veterinary sciences for the year 2022, by PashudhanPraharee.
3.			Best oral presentation award (1st prize), on the theme of the "Role of livestock in natural resources management" at the International conference on Natural Farming for Revitalizing Environment and Resilient Agriculture, organized by CAU, Imphal from 17/03/2023 to 19/03/2023.

S. No.	Name of the Faculty	Designation	Details of Awards/recognition received
4.	Dr. Gunjan Das	Professor	Shri Ram Lal Agarwal Gold Medal for the Year 2021 (A certificate, memento and Rs. 25,000/-) during 39th Annual Symposium of ISVM on "Advancements in Research and Innovations in Mitigation of Diseases of Livestock, Companion, Wild animals and Poultry" held at Pantnagar, U. K during 22th to 24th Feb' 2023.
		College of Food Technology, Imphal	
1.	Dr. Ng. Joykumar Singh	Associate Professor	**Best Centre Award of AICRP-PHET at JNKV, Jabalpur, sponsored by ICAR, New Delhi** Distinguished Service Award (Agril. Engg.) from Bioved Research Institute of Agriculture Technology & Sciences Prayagraj- 211002
		College of Agriculture, Pasighat, A.P.	
1.	Dr. Gireesh Chand	Professor	FPSI Award- 2020 on 26th March, 2022 from Indian Phytopathological Society, New Delhi, India. Outstanding Scientist Award – 2022 from International Research Awards on Science, Technology and Management, held on 14 & 15-May-2022, Chennai, India, and Organized by VDGOOD Professional Association.
2.	Dr. Denish Rajkhowa	Assistant Professor	Young Scientist Award-2022. RAAAHSTSE, Rampur
		College of Horticulture, Thenzawl	
1.	Dr. Sawant Chandrakant G.	Assistant Professor	Young Entomologist Award in 1st International Conference GIRISDA-2022 organized by GURU KASHI UNIVERSITY, AEEFWS Chandigarh and Just Agriculture Magzine during 06-08 June, 2022.
2.	Dr. Lalhmingsanga & B. Vanlalneihi	Assistant Professor	Best Article Award Archangkawm (Oroxylum indicum)-Source of Traditional Medicine in Mizoram, Agriculture & Food: E-Newsletter, 4(10):137 (2022).
		College of Agriculture, Kyrdemkulai, Meghalaya	
1.	Dr. G. Bhuvana Priya	Assistant Professor	Best Poster award in International Symposium on "Zoonotic and Transboundary Diseases: Breaking the chain through Multidisciplinary Approach" organized at ICAR RC for NEH Region Umiam, Meghalaya
2.	Dr. Sabyasachi Majumdar	Assistant Professor	International Travel Support (ITS) Award for Participation in 19th International Plant Nutrition Colloquium (IPNC) held at Brazil and funded by Science and Engineering Research Board (SERB), DST, New Delhi
3.	Dr. M. Premi Devi	Assistant Professor	Best Oral Presentation, CHES (ICAR-IIHR), Bhubaneshwar, Odisha Best 'PhD thesis award', awarded by Indian Association of Hill Farming (IAHF), ICAR RC for NEH region, Umiam, Meghalaya
4.	Dr. Amarjeet Kumar	Assistant Professor	Student Excellence Award- 2022 by G. B. Pant University of Agriculture and Technology, Pantnagar

5.10. MOU Signed/collaboration with other institutes during 2022-23

During the year under report, the university has signed MoU with the following institutes for strengthening the academic, research and extension activities of the university.

1. Pratiksha Institute of Pharmaceutical Sciences, Guwahati
2. Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar, W.B.
3. WeServe: An Initiative To Serve The Unserved (WeServe) MIG 002, Plot No. 147, Sector 5, Vaishali, Ghaziabad - 201010, Uttar Pradesh
4. Directorate of Agriculture, Govt. of Meghalaya, Shillong
5. NRC- Mithun, Medziphema, Nagaland.
6. Nahakpam Food and Beverages, Imphal
7. Arunachal University of Studies-Namsai, Arunachal Pradesh.
8. Apex Professional University - Pasighat, Arunachal Pradesh.
9. FEEDS Group of Institution (FGI), Hengbung, Manipur
10. Manipur International University (MIU), Ghari
11. Tamil Nadu Agricultural University, Coimbatore
12. Indian Institute of Information Technology (IIIT), Imphal
13. Shri Kshetra Siddhagiri Mahas Ansthan Math, Kaneri, Kolhapur
14. International Institute of Veterinary Education and Research (IIVER), Rohtak, Haryana
15. Rain Forest Research Institute, Jorhat, Assam
16. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Telangana

5.11. Institutional Development Plan (IDP NAHEP) during 2022-23

ICAR, New Delhi under National Agricultural Higher education Project (NAHEP) sanctioned the Institutional development Plan (IDP) in December, 2019 to CAU, Imphal on the project titled "Enhancing Entrepreneurial Competence in Students to Address Emerging Challenges in Agriculture and Allied Sectors". The vision of the project is to develop human resources equipped with knowledge base and capability of utilizing the agricultural resources in a sustained manner for overall wellbeing of society and the environment. The mission of the project is to produce competent agripreneurs with appropriate technical and managerial skills to support sustainable agricultural productivity in the changing scenario.

During 2022-23 under IDP NAHEP, the following major activities were conducted under the project:

Seven campus of the university including HQ, CAU have been converted into Solar Powered Renewable Energy Campus with savings of Rs. 12 – 15 lakhs annually in form of reduction in electricity bill.

Mr. Lokesh Pawar, BFSc. graduate has been selected for the coveted Erasmus Mundus Scholarship by European Commission worth Rs.43.5 lakhs for 2 years integrated Joint Post Graduation Programme i.e. International Masters in Marine Biological Resources (IMBRSea) 2023. He is one among the 2 selected candidates from India and 17 selected candidates from all over the world.

Phom P Nyamkham - B.F.Sc 2nd Year WON CARGILL GLOBAL SCHOLARSHIP WORTH INR 3, 90,000. Mr. Phom has been selected as 2022

Glimpses of job fair at different constituent colleges of CAU, Imphal, Manipur

Cargill Global Scholar (2022-2023) in India by the prestigious Institute of International Education, Inc. (IIE) in recognition of his academic achievements and demonstrated leadership potential which is sponsored by Cargill, Inc. In addition to a renewable financial award, the program also includes ongoing enrichment and mentorship activities all over the globe.

Ms. Niharika Nama, Ms. Parimita Rudra Paul, and Mr. Shukanta Saha, B.F.Sc 3rd year students, have ranked 2nd in the Young Fisheries Scientist Award in Indian Fisheries Outlook, 2022 (IFO 2022), organised by ICAR-Central Inland Fisheries Research Institute, Barrakpore, Kolkata for presenting their Innovative Idea entitled "Innovative self sustained unit for sewage treatment and mosquito eradication as well as livelihood generation from the same".

Job fairs were held in March 2023 in COF, Lembucherra, COA, Imphal and CVSc. & AH, Jalukie. Mayank Aaquaculture Private Limited,

CAU Imphal Faculty during Foreign Training - Meet with H.E. Mr. Nagesh Singh, Ambassador to Thailand and Dr. Niwat, President of Prince of Songkla University

CAU, Imphal students inside Glass House complex, Queen Sirikit Botanic Garden, Thailand

Godrej Agrovet, Probiotics manufacturing unit, M/S Hayagreeva Bio Organics Pvt.Ltd, Sesta Development Services, Virbac Animal Health India Pvt. Ltd. are some of the companies that participated in the job fair. Altogether offer of 12 trainees Cultivation Officer and 1 Lab Technician was made during the Job fair.

A total of 95 students from 10 colleges of the University and 28 faculties of the University have undergone foreign training of 2 weeks to 3 months in reputed institutions across Asian countries including Japan and Israel.

A total of 104 Communication skills webinars/trainings, 29 Personality development webinars /trainings, 9 Entrepreneurship traings, 6 Faculty Development programme, 10 Technical trainings, 3 numbers of environment sustainability, 2 numbers of Alumni talk series, 4 numbers of career Counselling cum Job Fair, 8 numbers of motivational talk and 2 numbers of seminars on social cause were conducted with Direct project beneficiaries of 3736 out of which 1750 are females.

Three pilot courses viz. 6 months French language course, 6 months Korean language course and 3 months Hindi language course were successfully completed.

Twenty-eight Days Entrepreneurship Development progrmmame was held at Entrepreneurship Development Institute of India (EDII), Gandhinagar. Forty Students of CAU, Imphal from 10 constituent colleges participated in the training programme which was held in the campus of EDII, Gandhinagar.

Six students got admission in foreign institution, 65 students got admission in reputed universities like IARI, IVRI, NDRI, CIFE, IIT, IIM, 105 student got placement.

National Student's Innovation Competetion 2022 was held as part of RASHI 2022

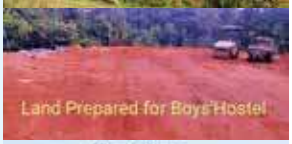
Entrepreneurship development: Since the establishment of 6 incubation centres under IDP NAHEP, entrepreneurship has been one of the keen areas of interest for the final year and fresh graduates of the university. Every year students are taking up entrepreneurship after graduating from the university. This year (2022-23) also we have 2 successful entrepreneurs from the university.

S. No.	Name		Batch	Enterprise/Startup
1.	Mr. Y. Nandan Singh		B.Tech. (Food Tech.) 2021	Mushroom Cultivation, Supply of Online Agricultural Organic Produce, Poultry Farming
2.	Ms. Amen Kadu		Community Science 2019-23	Runs a successful online business selling soft toys

6

INFRASTRUCTURE DEVELOPMENT

Physical achievement for the year 2022-23

S. No	Name of the College	Name of the buildings	Status of works	Photographs
1.	Establishment of new College of Horticulture at Thenzawl, Mizoram	Administrative & Academic block	Completed & handed over	
2.	Establishment of new College of Veterinary Sciences & Animal Husbandry at Jalukie, Peren Dist. Nagaland.	Administrative & Academic block	Completion stage	
3.	Establishment of new College of Agriculture at Kyrdemkulai, Ribhoi Dist. Meghalaya.	Administrative & Academic block	Completion stage	
		Boys' Hostel	Site leveling works completed and foundation works to be started very soon.	
		Girls Hostel	Completed and handed over to the College Authority.	
		Transit Accommodation	Completed and handed over to the College Authority.	
		Type-II	Site selection and leveling works in progress.	
4.	(A) Extension of College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram.	PG Girls' Hostel	Construction works in progress (80% completed)	

S. No	Name of the College	Name of the buildings	Status of works	Photographs
5.	(A) Establishment of new College of Agriculture, Pasighat.	Administrative & Academic block	Completed & handed over	
		Boys' Hostel	Completed & handed over	
		Girls' Hostel	Completed & handed over	
		Type-II Qtr.	Completed & handed over	
		Transit House	Completed & handed over	
6.	(A) Establishment of new College of Horticulture, Bermiok, South Sikkim	Administrative building	Completion stage	
		Academic building	Completion stage	
		Boys' Hostel	Completion stage	
		Girls' Hostel	Completion stage	

S. No	Name of the College	Name of the buildings	Status of works	Photographs
		Type-II Qtr.	Completed & handed over	
		Transit House	Completed & handed over	
7.	(A) Extension of College of Agriculture, Imphal.	P.G Boys' Hostel	Piling & foundation works completed. Reinforcement for columns erected and works in progress.	
		Boys' Hostel	Piling & foundation works completed and works in progress.	
		Girls' Hostel	Piling & foundation works completed. Columns & plinth beams concreted and works in progress.	
		Type III	Piling & foundation works completed. Reinforcement for columns erected and works in progress.	
		Type IV	Piling & foundation works completed. Columns & plinth beams concreted and works in progress.	

7

FINANCE

A. Unit Wise Budget Allocation for the year 2022-23

(Rs in Lakhs)

S. No.	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	CAEPHT	COPGS	COFT Imp	COA Pasighat	COH, Sikkim	COA, Barapani	COH, Mizoram	COVSC, Nagaland	PRMM	RMC	Raj Bhasha	Total Budget Estimate for 2022-23
		Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
I	SALARIES																					
	a) Pay & Allowances	17850.0																				17850.00
	b) Retiral Benefits	950.00																				950.00
	Total of (I)	18800.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18800.00
II	GENERAL																					
	a) Travelling Allowance	9.09	1.36	1.82	1.14	3.50	3.64	1.82	1.36	2.27	8.18	1.69	2.27	2.73	2.73	1.82	2.27	0.91	0.00	0.00	0.00	48.60
	b) Office Expenses	426.71	16.32	9.09	6.82	145.75	181.10	72.73	111.85	59.09	63.64	87.36	45.45	46.93	42.14	68.18	43.86	50.00	1.82	0.00	4.09	1482.93
	c) Fellowship/ Scholorship	0.00	0.00	0.00	0.00	34.63	19.02	11.36	9.55	1.36	5.45	34.53	4.36	0.45	2.27	0.00	0.45	0.45	0.00	0.00	0.00	123.90
	c) Adjunct/visiting Faculty	0.00	0.00	0.00	0.00	0.91	0.00	1.36	0.00	4.55	0.91	2.73	0.23	0.45	0.91	0.00	0.45	0.00	0.00	0.00	0.00	12.50
	d) H.R.D	0.45	0.18	0.00	0.00	0.45	0.23	0.45	0.23	0.45	0.45	0.91	0.11	1.36	0.23	0.00	0.91	0.23	0.00	0.00	0.00	6.66
	e) Advertisement & Publicity	0.91	0.00	0.00	4.55	0.45	0.45	0.45	0.82	0.45	0.32	0.43	0.11	1.36	0.23	0.45	0.23	0.23	0.00	0.00	0.00	11.45
	f) ARM	11.36	2.27	12.27	4.55	38.84	33.62	139.61	35.42	83.23	60.91	104.04	22.73	15.45	36.23	45.45	16.82	9.09	0.00	0.00	0.00	671.90
	g) Misc. Research & Exten. Programs.	0.00	0.00	40.91	48.41	64.09	5.00	9.75	16.45	8.64	16.82	3.25	7.73	4.32	11.82	12.73	11.59	2.50	0.00	78.06	0.00	342.07
	Total of (II)	448.53	20.14	64.09	65.46	288.62	243.05	237.54	175.68	160.05	156.68	234.93	83.00	73.07	96.55	128.64	76.59	63.41	1.82	78.06	4.09	2700.00

(Rs in Lakhs)

S. No.	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	COAEPHT	COPGS	COFT Imp	COA Pasighat	COH, Sikkim	COA, Barapani	COH, Mizoram	COVSC, Nagaland	PRMM	RMC	Raj Bhasha	Total Budget Estimate for 2022-23
		Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
III	CAPITAL																					
1	Other than civil works																					
a)	Equipment (including Machines, tools,live stock etc.)	105.86	1.38	4.13	2.29	47.19	229.19	20.63	99.46	11.46	118.92	46.59	54.08	67.10	29.10	27.50	21.08	16.04	0.00	0.00	0.00	901.99
b)	NEC Model Farm (DEE)/ Face Lifting/ RMC/PRMM		0.00	0.00	32.72	1.32	32.30	1.09	11.12	2.03	4.07	0.00	20.00	0.10	8.42	0.00	2.70	6.40	0.92	0.00	0.00	123.19
c)	Furniture & Fixture	28.01	0.92	0.92	0.69	21.60	6.88	11.23	18.29	6.87	7.87	18.33	12.51	53.62	10.34	22.92	7.79	13.75	0.00	0.00	0.00	242.52
d)	Vehicles	0.00						1.47		32.00	35.00	43.59		35.00		35.00	35.00					217.06
e)	Library Books	2.29	90.00	0.00	14.48	4.81	4.58	3.44	1.01	2.29	2.29	3.21	3.21	3.21	1.83	2.29	2.29	2.29	0.00	0.00	0.00	143.53
f)	Information Technology	228.40	2.02	0.00	3.99	1.27	2.31	4.59	4.58	4.58	20.76	1.65	2.29	8.02	36.00	9.17	2.29	4.58	0.00	0.00	0.00	336.52
	Total of (1)	364.56	94.31	5.04	54.17	76.20	275.26	42.44	134.46	59.24	188.91	113.37	92.10	167.05	85.70	96.88	71.16	43.07	0.92	0.00	0.00	1964.82
2	WORKS/ Construction																					
(i)	Land (Purchase/ Development)																		0	0	0	0.00
(iii)	Major Works																		0	0	0	0.00
a)	XIIth Plan Spill Over	3185.59																	0	0	0	3185.59

S. No.	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	COAEPHT	COPGS	COFT Imp	COA Pasighat	COH, Sikkim	COA, Barapani	COH, Mizoram	COVSC, Nagaland	PRMM	RMC	Raj Bhasha	Total Budget Estimate for 2022-23
		Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
b)	New Civil Works					11.03	88.72	66.37	11.03	11.03			20.72	79.33		11.03	23.03	27.30	0	0	0	349.59
	Total of (2)	3185.59	0	0	0	11.03	88.72	66.37	11.03	11.03	0.00		20.72	79.33	0	11.03	23.03	27.3	0.00	0.00	0	3535.18
	Total of (III)	3550.15	94.31	5.04	54.17	87.23	363.98	108.81	145.49	70.27	188.91	113.37	112.82	246.38	85.70	107.91	94.19	70.37	0.92	0.00	0.00	5500.00
	GRAND TOTAL OF "I" + "II"+"III"	22798.68	114.44	69.13	119.63	375.85	607.04	346.35	321.17	230.31	345.60	348.30	195.82	319.45	182.25	236.54	170.78	133.78	2.74	78.06	4.09	27000.00

Unit Wise Expenditure Incurred During 2022-23

(Rs in Lakhs)

S. No.	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	COAE	COPGS	COFT Imp	COA Pasighat	COH, Sikkim	COA, Barapani	COH, Mizoram	COVSC, Nagaland	Total Revenue for 2022-23
		Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	
1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21
a)	SALARIES																		
a)	Pay & Allowances	17849.98																	17849.98
b)	Retiral Benefits	949.99																	949.99
	Total of A	18799.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18799.97
II	GENERAL																		
a)	Travelling Allowance	25.79	1.51	1.95	0.50	4.76	3.82	3.49	3.54	4.53	5.68	1.36	5.63	4.73	1.12	1.71	1.42	3.02	74.56
b)	Office Expenses	550.82	17.55	2.63	11.83	214.03	141.16	127.91	98.10	112.81	97.99	139.98	98.12	54.10	44.73	84.90	44.39	86.82	1927.87

S. No.	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	COAE	COPGS	COFT Imp	COA Pasighat	COH, Sikkim	COA, Barapani	COH, Mizoram	COVSC, Nagaland	Total Revenue for 2022-23
		Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	
1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21
c)	Fellowship/ Scholorship		0.00			25.44	10.55	21.99	15.17	2.34	14.30	23.38	0.36	0.96					114.49
d)	Adjunct/Visiting Professor		0.00			0.02		0.14		2.74		0.52	0.52				0.27		4.21
e)	H.R.D		0.08					0.65		0.07	0.03	0.12					0.90	0.07	1.92
f)	Advertisement & Publicity	0.12	0.00		1.36	0.31	0.39	0.72		0.68	0.37	0.10			0.07	0.06	0.06	0.06	4.30
g)	Petty/ Departmental/ ARMO	62.02	0.00	2.50	0.85	17.66	9.85	40.76	24.57	12.50	13.71	29.11	19.60	18.87	10.24	18.07	16.80	6.77	303.88
h)	Miscellaneous Research and Extension Programme (incl. RMC)		0.00	52.87	55.40	37.59	3.97	42.19	27.94	3.88	8.94	0.65	1.30	3.44	12.69	6.26	11.48	0.07	268.67
	Total of B	638.75	19.14	59.95	69.94	299.81	169.74	237.85	169.32	139.55	141.02	195.22	125.53	82.10	68.85	111.00	75.32	96.81	2699.90

(Rs in Lakhs)

C	CAPITAL																		
1	Other then Civil Works																		
a)	Equipment (including Machine,tools,live stock & land etc.)	31.97		0.14	1.17	3.12	35.75	147.81	18.31	36.00	12.54	31.09	42.99	37.32	33.76	2.41	45.25	26.99	21.14	527.76
b)	NEC Model Farm (DEE)/ Face Lifting/RMC/PRMM					37.14	1.31	32.30		4.42		0.10	1.69	19.94	0.10	12.39	1.99			111.38
c)	Furniture & Fixture	9.83		0.52	0.08	2.32	23.28	9.78	16.42	9.48	10.33	20.80	21.34	23.44	2.26	39.63	19.60	6.70	17.47	233.28
d)	Vehicles	8.37					1.01		1.47		32.21	0.53	43.82		26.47	34.95	25.45	35.00		209.28
e)	Library Books			88.09			4.42	4.58	2.62	1.00	1.43	1.73	2.78		2.68		3.01	1.71	1.22	115.27
f)	Information Technology	70.74					4.01		5.13	0.42	4.79	1.66	2.89		3.00		6.18	0.06	5.30	104.18
	Total of C (1)	120.91		88.75	1.25	42.58	69.78	194.47	43.95	51.32	61.30	55.91	115.51	80.70	68.27	89.38	101.48	70.46	45.13	1301.15
2	WORKS/Construction																		

C	CAPITAL																		
(i)	Land (Purchase/ Development)	18.28					16.92												35.20
(iii)	Major Works																		0.00
a)	XIIth Plan Spill Over	3556.72							42.60					9.09					3608.41
b)	New Civil Works	60.80		10.00		44.15	127.03	64.46	11.03	34.65			26.73	87.92	24.43	40.64	23.00		554.84
	Total of C (2)	3635.80	0.00	10.00	0.00	44.15	143.95	64.46	53.63	34.65	0.00	0.00	26.73	97.01	24.43	40.64	23.00	0.00	4198.45
	Total of C (1+2)	3756.71	88.75	11.25	42.58	113.93	338.42	108.41	104.95	95.95	55.91	115.51	107.43	165.28	113.81	142.12	93.46	45.13	5499.60
	TOTAL AMOUNT	23195.43	107.89	71.20	112.52	413.74	508.16	346.26	274.27	235.50	196.93	310.73	232.96	247.38	182.66	253.12	168.78	141.94	26999.47

Statement showing unit-wise Actual Revenue Receipt of the University for the year 2022-23

(Rs in Lakhs)

S. No.	Head of Account	Name of Unit																	Total Revenue for 2022-23
		CAU (HQ)	DI	DR	DEE	COA (IMP)	COV (Aizawl)	COF	COHF	COCS	CAEPHT	CPGSAS	COFT	COA (AP)	COH, Sikkim	COA, (MEG)	COH, MZ)	COV (NL)	
1	Academic Receipt	0.00	0.00	0.00	0.00	94.98	89.93	72.55	70.00	22.07	53.87	33.50	28.27	33.54	17.06	24.45	4.64	9.19	554.05
2	Interest on Bank Account	26.36	1.12	0.19	0.41	3.75	1.40	3.95	21.25	4.62	3.89	4.01	1.59	4.63	0.59	2.80	0.00	0.00	80.56
3	Sale Proceeds of farm Produce	9.84	0.05	6.92	4.59	17.13	17.51	0.19	5.21	0.42	0.23	0.07	0.70	0.14	0.86	1.05	0.14	8.85	73.90
4	Miscellaneous Income *	8.29	0.00	0.00	0.00	10.30	17.07	13.72	4.99	3.62	7.81	13.88	0.00	0.00	0.11	1.26	0.51	0.00	81.56
5	Institutional / Overhead Charges	16.69	0.00	0.00	0.00	0.00	0.00	6.74	3.69	0.35	6.90	2.49	0.00	2.56	0.00	0.00	0.00	0.00	39.42
6	Other Income **	146.93	0.98	0.00	0.00	0.26	6.16	10.16	1.76	12.89	13.00	12.44	0.06	2.02	0.16	0.61	0.00	4.53	211.96
	Total amount	208.11	2.15	7.11	5.00	126.42	132.07	107.31	106.90	43.97	85.70	66.39	30.62	42.89	18.78	30.17	5.29	22.57	1041.45

Note :-
* Miscellaneous Income includes Income from Guest Houses, Xerox Charges, Licence fee, Water Charges and Electricity Charges from Staff.
** Other Income includes Prorata Pension, Leave Encashment from other Deptt., Application Fee, Registration Fee, Tender Fees and Fees from the students e.g. Migration Fee, Certificate Fees etc.
*** As regard CAU (HQ), Imphal, no Term Deposit Receipt Matured (Invested under Revenue Account) during 2022-23, hence, interest shown above is actual received on saving bank account of Revenue A/c. as well as SBI Main Account.

8

UNIVERSITY PUBLICATIONS

List of Scientific Publications

8.1. Research Papers

1. A Ibeyaima, Indira P Sarethy, Arunkumar Phurailatpam. 2022. Preliminary investigation of microbes and bioactive compounds in Chenghi- A review. J.res.tradit.med.8(2): 44-54
2. A Jolly Devi and Mrs. Vanlalruati. (2022) SWOT analysis of Pomelo, Citrus for effective value addition, marketing and commercialisation in North East India. *Scientist*.1(2):352-364 NAAS Score/ID – 5.07/I319
3. A. Arun Prince Milton, Kasanchi M. Momin, G. Bhuvana Priya, Samir Das, M. Angappan, Arnab Sen, D.K. Sinha, Ashok Kumar, Sandeep Ghatak. 2022. Development and evaluation of a novel polymerase spiral reaction based testing technique for sameday visual detection of Campylobacter coli in pork. *Food Microbiology*, 107: 104066 (NAAS 2022 rating: 11.52)
4. A.D. Upadhyay, P. Pal, Pramod Kumar Pandey and Jackie Singh (2022) Impact of COVID-19 on Consumption of Fish and Other Meats in NE Region of India Economic Affairs, Vol. 67, No. 02, pp. 37-42, March 2022 DOI: 10.46852/0424-2513.2.2022.7
5. A.K. Phurailatpam, Anju Choudhury, Tasso Yatung and Kalkame Ch. Momin. 2022. A review on the importance of two medicinal plants of North East India: *Paris polyphylla* Smith and *Kaempheria parviflora* Wall. ex Baker. Annals of Phytomedicine 11(2): 214-223
6. A.K. Kayina, G.Kalita, R.Goswami, D.J. Talukdar, Hemen Dasand L Hmar (2022) Study of some blood biochemical parameters of orphan piglets reared under intensive system. *Hayryana Vet*.(61):86-89
7. Abdul Sadam, Madhuri Patel, Sanjay Kumawat, W Ramdas Singh, Jafarsab, Anshuk Sharma, Aneesha VA, Madhu CL and Dinesh Kumar (2022). An experimental study for assessing the wound healing potential and for calculating the median effective concentration (EC50) of deferoxamine in diabetic wistar albino rats. *The Pharma InnovationJournal* 11(10): 17-21NAAS Score/ID – 5.08/A268
8. Abdul Sadam, Madhuri Patel, Sanjay Kumawat, W RamdasSingh,Anshuk Sharma, Aneesha VA, Madhu CL and Dinesh Kumar (2022). Experimental calculation of median effective concentration and assessment of healing potential of Hemin in diabetic wound model. *The Pharma Innovation*. 11(10): 824-827.NAAS Score/ID – 6.32/I042
9. Abhishek Paul, Champak Bhakat, Santu Mondal and Ajoy Mandal (2022).Effect of parity on back fat thickness, body condition score and milk yield in Jersey crossbred cows of lower Gangetic region.. *Indian J Dairy Sci* 75(2): 1-4
10. Ajay Kumar Chandra · Anjali Joshi · Aparna Tripathi· Amarjeet Kumar· Saurabh Pandey · Ashutosh Singh· Dalpat Lal · Alka Bharati· Sneha Adhikari · Vishal Dinkar (2022). Climate-Resilience Maize: Heat stress, Signaling, and Molecular Interventions. *Journal of Plant Growth Regulation.* https://doi.org/10.1007/s00344-022-10844-6(NAAS rating: 10.17)
11. Ajaykumar KM, R.C Shakywar, N.Surmina Devi, P.Raja, Senpon Ngomle and Gireesh Chand (2023). Field efficacy of disease management modules against ginger rhizome rot under foothills of Arunachal Pradesh. *Annl.Pl.Protec.Sci.*31(1): 22-27
12. Ajaykumara, K.M., Shakywar, R.C., Devi, N.S., Raja, P., Ngomle, S. and G. Chand (2023). Field efficacy of disease management modules against ginger rhizome rot under foothills of Arunachal Pradesh. *Annals of Plant Protection Sciences*, 31(1):22-27.
13. Ajithkumar,M., Hoque,F., Chakrabarti,P., Hussan, A., Das, A.,Parhi,J., Mandal, S.C.,Das,A., Sundaray, J.K.(2022).Photoperiod manipulation leads to successful voluntary captive spawning of butter catfish *Ompok bimaculatus* during the non-spawning breeding season: *Aquaculture Research*:53(16),5572-5581[NAAS rating: 8.18]
14. Alam ST, Sarowar S, Mondal HA, Makandar R, Chowdhury Z, Louis J and Shah J. (2022). Opposing effects of MYZUS PERSICAE-INDUCED LIPASE 1 and jasmonic acid influence the outcome of Arabidopsis thaliana–Fusarium graminearum interaction. *Mol Plant Pathol*, 2022; 23:1141–1153. DOI: 10.1111/mpp.13216.
15. Allapat Arjun , Chaudhary J. K. , Singh N. Shyamsana, T. C. Tolenkhomba, Kalita Girin and Gali JMR, (2022). Prediction of egg weight from egg quality characteristics by using regression analysis methods in White Leg Horn Chicken. *International Journal of Livestock Research*, Vol. 12 (2) :40-48
16. Alok Singh, RK Dilip Singh, Ng Piloo, NO Singh,

NS Devi and SR Singh (2022). Effect of GA3 and NAA on yield andbenefit: cost ratio of strawberry (Fragaria x ananassa Duch.) cv. Chandler under the open condition of Manipur. *Journal of Agriculture & Ecology*, 14: 93-98

17. Alok Singha, RK Dilip Singh, Ng. Pilooa, N. Okendro Singh, NS Devi and SR Singh (2022). Effect of GA3 and NAA on yield and benefit: cost ratio of strawberry (Fragaria x ananassa Duch.) cv. Chandler under the open condition of Manipur, *Journal Agriculture and Ecology*, 14: 93-98.
18. Amanish Kumar, Angad Prasad, Daya Ram, M. Deepa and NG Singh, (2022), Utilisation of mobile based agro-advisory services by the farmers of Thoubal district, Manipur and their level of satisfaction, *The Pharma Innovation Journal*, SP-11(9): 325-327
19. Amarjeet Kumar, Vijay Kumar Singh, Bhagwat Saran, Nadhir Al-Ansari, Vinay Pratap Singh, Sneha Adhikari, Anjali Joshi, Narendra Kumar Singh and Dinesh Kumar Vishwakarma (2022). Development of Novel Hybrid Models for Prediction of Drought- and Stress-Tolerance Indices in Teosinte Introgressed Maize Lines Using Artificial Intelligence Techniques. *Sustainability,* 14, 2287. https://doi.org/10.3390/su14042287(NAAS 2022 rating: 9.25)
20. Anju Choudhury, AK Phurailatpam and Iarasa Lakiang. 2022. iTEAMS –An agri business model for enhancing farmers' income in Meghalaya. Indian Journal of agricultural economics. 77(3): 480-490
21. Ankit Dongariyal, Ajay Kumar Chandra, Ankita Dongriyal, Amarjeet Kumar, Pramod Sharma (2023). Tending genome editing via CRISPR/Cas9-induced mutagenesis: Opportunity and challenges for yield, quality and nutritional improvement of fruit crops. *Scientia Horticulturae* 311 111790(NAAS rating: 9.46)
22. Ankita Debnath, J. B. Rajesh, Binipi Debbarma, Elone Lucy, Kalyan Sarma, Lallawmzuali Ralte, Hridayesh Prasad and Lalnuntluangi Hmar (2022). Prevalence of Methicillin Resistant *Staphylococcus aureus* in Canine Dermal Infection in Mizoram. *Journal of Animal Research:* 12(6): 01-05. NAAS Score/ID – 5.46/J170
23. Ankita Debnath, J. B. Rajesh, Binipi Debbarma, Elone Lucy, Kalyan Sarma, Lallawmzuali Ralte, Hridayesh Prasad and Lalnuntluangi Hmar (2022). Prevalence of Methicillin Resistant Staphylococcus aureus in Canine Dermal Infection in Mizoram. *Journal of Animal Research*: 12(6): 01-05.NAAS Score/ID – 5.95/I061
24. Aparna P. and Vastrad, J.V., (2022). Green waste mediated Zinc Oxide nanoparticles with citrus peel. *The Pharma Innovation Journal* 11(10):1-8 NAAS Score/ID – 8.54
25. APM Sharma, D Jhajharia, S Gupta, GS Yurembam, (2022). Multiple indices based agricultural drought assessment in Tripura, northeast India. *Arabian Journal of Geosciences*, 15 (7): 636. https://doi.org/10.1007/s12517-022-09855-0. NAAS Score: 7.8
26. Aprana P., Vastrad, J.V. Chandrashekhar S.S., Patil, R. V. and Mahale, G. (2022). Exploration of bio –active components in Citrus reticulate peel powder. *The Pharma Innovation Journal* 11(6): 1000-1003NAAS Score/ID – 5.23/T050
27. Aribam Priya Mahanta Sharma, Deepak Jhajharia, Shivam Gupta, Ghanashyam Singh Yurembam (2022). Multiple indices based agricultural drought assessment in Tripura, northeast India. *Arabian Journal of Geosciences*. 15(7), 1-13, 2022.
28. Arockiasamy Arun Prince Milton, Aleimo G. Momin, Pradeep Narayan Gandhale, Samir Das, Sandeep Ghatak , G. Bhuvana Priya, Dnyaneshwar Madhukar Firake, Kandhan Srinivas, Kasanchi M. Momin, Zakir Hussain, Arnab Sen. 2022. Prevalence, toxinotyping, antimicrobial susceptibility and biofilm forming ability of Clostridium perfringens isolated from free-livingrodents and shrews. *Anaerobe,* 77: 102618. (NAAS 2022 rating: 9.33)
29. Babu, P. J., Tirkey, A., Rao, T. J. M., Chanu, N. B., Lalchhandama, K., & Singh, Y. D. (2022). Conventional and nanotechnology based sensors for creatinine (A kidney biomarker) detection: A consolidated review. *Analytical Biochemistry*, 114622.NAAS Score/ID – 5.46/J170
30. Badnayak P., Vastrad, J.V. (2022). Investigation of the physico-mechanical and moisture management properties of chemically treated cotton fabrics. *Polymer Bulletin* 11:1-16NAAS Score/ID – 5.95/I061
31. Bana RS, Dawar Rakesh, Haldhar SM, Godara Samarth, Singh Arjun, Bamboriya SD, Kumar Vipin, Mishra AK and Choudhary Manoj. 2022. Natural farming: Is it safe to march ahead? *Journal of Agriculture and Ecology*, 14: 01-11.
32. Baruah, S., Kalita, B. B., Jose, S., Borah, M. P. and Kalita, S. (2022). Impact of weave on physico-comfort properties of eri/modal union fabric. *Journal of Natural Fibers*, *19*(13), 5371-5379. https://doi.org/10.1080/15440478.2021.1875377 NAAS Score/ID – 5.20/I031
33. Behera,B.K,Parhi,J.,Dehury, B., Rout, A.K., Khatei, A., Devi, A.L., MandaL, S.C. (2022). Molecular characterization and structural dynamics of

Aquaporin1 from walking catfish in lipid bilayers. *International Journal of Biological Macromolecules*: 196, 86-97. [NAAS rating: 14.03]

34. Bhattacharyay P. and Rajkhowa T. K. (2022). Prevalence and molecular diagnosis of Marek's Disease in the chicken population of Mizoram. *Indian J. Vet. Pathol*., 46(2) : 121-125, 2022: DOI: 10.5958/0973-970X.2022.00020.7.

35. Bhowmik S, Pal S, Sunder J, Sujhata T, De AK, Mondal T, Singh AD, Joardar SN, Batabyal K, Dutta TK, Bandyopadhyay S, Tiwari A and Samanta I (2023). Exploring broilers and native fowls of Andaman and Nicobar Island as a source of beta-lactamase producing Enterobacteriaceae even with limited anthropogenic activities and docking-based identification of catalytic domains in beta-lactamase variants. *Frontiers in Veterinary Science*. doi: 10.3389/fvets.2022.1075133NAAS Rating: 8.31

36. Biswas, P., Jena, A.K., Singh, S.K.(2023). Conservation aquaculture of *Ompok bimaculatus* (Butter catfish), a near threatened catfish in India, *Aquaculture and Fisheries*,8(1): 1-17, https://doi.org/10.1016/j.aaf.2022.04.007.

37. Borah P, Devarani, L, Singh, R. J, Choudhury, A., Rani· P. M. N and Singh, R. (2022). Constraints in Online-Teaching of Agricultural Undergraduates in North-East Region of India duringCOVID-19 Pandemic. *Indian Journal of Hill Farming* 35: 142-149NAAS Score/ID – 5.02/I040

38. Borgohain P., Barua P., Das, B., Mahanta J., Saikia B., Dutta, Pranab and Saikia L.R. (2022). Antifungal activity of selected Medicinal plants used by indigenous people of Assam in India to treat Onychomycosis. *Journal of Herbs, Spices and Medicinal Plants* doi: 10.1080/10496475.2022.2034701 NAAS Score/ ID – 5.57/J195

39. Boro Utpal, Talukdar D, Ahmed F.A., Lalrintluanga K., Ali A., Kalita G.,Tolenkhomba T.C., Rahman S, Das D., Debbarma V, Paul D. R. (2022). A Comparative Study on Certain Blood Metabolites and Hormonal Indices for Detection of Pregnancy of Crossbred Cows of High Altitude: Mizoram. *Indian Journal of Animal Research*, Vol. 12 (2) :40-48

40. Boro, U., Talukdar, D., Ahmed, F.A., Lalrintluanga, K., Ali, A., Kalita, G., Tolenkhomba, T.C., Rahman, C., Das, D., Debbarma, V. and Paul, D.R. (2022). A Comparative Study on Certain Blood Metabolites and Hormonal Indices for Detection of Pregnancy of Crossbred Cows of High Altitude: Mizoram. *Indian Journal of Animal Research.* DOI: 10.18805/IJAR.B-4828.

41. Boruah Sushruta, Pathak Mahesh, Kennedy Ningthoujam, Dutta Pranab, Patidar Raghubir Kumar and Thakur Azad N.S. (2022). Bio-intensive management of pest complex of brinjal, *Solanum melongena* L. in organic environment. *Indian Journal of Hill Farming* 35 (1): 138-144. NAAS Score/ ID – 5.02/I040

42. Boruah, S., Kalita, B. B., Jose, S., Borah, M. P. and Kalita, S. (2022). Thermo-physical comfort properties of eri/acrylic union fabrics. *Journal of Natural Fibers*, 19(2), 424-432.https://doi.org/10.1080/15440478.2020.1745122 NAAS Score/ID – 8.00/E033

43. Brijesh Kumar Singh, Monoj Sutradhar ,Chayanika Lahkar, Amit Kumar Singh, N.G. Tombisana Meetei and Nirmal Manda.l (2022). Screening of rice germplasms (*Oryza sativa* L.) for seedling stage cold tolerance utilizing morphological and molecular markers. *Ecological Genetics and Genomics*, 24:100128. https://doi.org/10.1016/j.egg.2022.100128

44. Brijesh Kumar Singh, Monoj Sutradhar, Chayanika Lahkar, Amit Kumar Singh, Ng. Tombisana Meetei and Nirmal Mandal (2022). Screening of rice germplasms (*Oryza sativa* L.) for seedling stage cold tolerance utilizing morphological and molecular markers. *Ecological Genetics and Genomics* Vol 24, 2022, 100128.https://doi.org/ 10.1016/j.egg.2022.100128NAAS Score/ID – 7.56/T105

45. Brijesh Kumar Singh, Monoj Sutradhar, Chayanika Lahkar, Amit Kumar Singh, N.G. Tombisana Meetei and Nirmal Mandal (2022). Screening of rice germplasms (*Oryza sativa* L.) for seedling stage cold tolerance utilizing morphological and molecular markers. *Ecological Genetics and Genomics*, 24 100128. https://doi.org/10.1016/j.egg.2022.100128

46. Brota S. Bey, Singh R, Gogoi J, Ahmed Rizwan, Lapasam R, R. Buragohain & Nivedita Deka (2022). Resource use in Surgarcane Cultivation under Tenant and Ownner farms of Assam: A comparative Economics Analysis. *Indian Journal of Agricultural Economics,* Vol. 77 (2): 243-256.NAAS Score/ID – 4.38/I344

47. C Lalremruata, Lalmuanzovi and Joy Lalmuanpuia. (2022). Comparative Study on the Performance of Srinidhi, Rainbow Rooster and Local Chicken Reared under Field Condition of Lunglei District, Mizoram. *Journal of Krishi Vigyan*. 10 (2): 45-49

48. C.G. Sawant, Guru P.N. S.G. Mundhe, C.S. Patil, L.D. Sharma and Lalhmingsanga. 2022. Studies

on method validation of ethion 50EC on GC-FPD and its decontamination behaviour from edible cabbage heads. *The Pharma Innovation Journal*, 11(12):5793-5799.

49. Chanam R., Kalita G., Goswami R., Das H., Kalita A. and Das B.K. (2022). Comparative study on diarrhoeal incidence and mortality rate of young pigs fed with diet containing skimmed milk and milk replacer during pre and post weaning periods. *International journal of Agriculture Sciences*. 14(5):11294 – 11297.
50. Chanam R., Kalita G., Goswami R., Das H., Kalita A., Jagan Mohan Rao G. and Das B.K. (2022). Comparative study on diarrhoeal incidence and mortality rate of young pigs fed with diet containing skimmed milk and milk replacer during pre and post weaning periods. *International Journal of Agriculture Sciences*, 14(5): 11294-11297.
51. Chandrabhan Bharti, Vishram Ram and Rahul Patidar (2022). Growth, yield attributes and yields of rice as influenced by nitrogen levels and its split application in plateau of North Eastern Hilly region. The *Pharma Innovation Journal* 11(7): 3585-3588. NAAS Score/ID – 5.12/J084
52. Chauhan, J. K., Meena, B. S., Meena, H. R., Bhakat, C., Upadhyay, A. D., Lahiri, B., Pal, P., Tengli, M. B., Kuamr, S., Chandegara, A. K.,Koreti, K.(2022). Assessment of livelihood security and diversification of tribal dairy farmers in NEH region of India. *Indian Research Journal of Extension Education,* 22(3), 182-187. (DOI: https://doi.org/10.54986/irjee/2022/apr_jun/182-187). [NAAS rating: 5.22]
53. Chethan, G.E., De, U.K., Roychoudhury, P., Rajkhowa, T.K., Singh, M., Prasad, H. and Sarma, K. (2022). Molecular Characterization and Phylogenetic Analysis of Canine Parvovirus Type 2 (CPV-2) in the Aizawl Region of Mizoram Reveals Circulation of CPV-2c Antigenic Variant: A Hospital based Study. *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4756
54. Choudhary OP, Sarkar R, Madkour F, Kalita PC, Doley PJ, Kalita A, Choudhary P and Eregowda CG. (2022). *Microscopy Research & Technique*. DOI: 10.1002/jemt.24274.NAAS Score/ID – 5.43/J049
55. D. K, Pandey, Singh, S., Dubey, S. K., Mehra, T. S., Dixit, S., and Sawargaonkar, G. (2023). Nutrient profiling of lablab bean (*Lablab purpureus*) from north-eastern India: A potential legume for plant-based meat alternatives. *Journal of Food Composition and Analysis*, 119, 105252.
56. D. K. Pandey, Dobhal, S., De, H. K., Adhiguru, P., Devi, S. V., and Mehra, T. S. (2022). Agrobiodiversity in changing shifting cultivation landscapes of the Indian Himalayas: An empirical assessment. *Landscape and Urban Planning*, 220, 104333.
57. D. Naveen, Daya Ram, M. Deepa Devi and Angad Prasad (2022). Adoption of organic pesticides by the vegetable growers in Manipur of North East India. *The Pharma Innovation Journal*, SP-11(8): 161-165
58. Das D, Sarma K, Chethan GE, Roychoudhury P, Rajesh JB, Behera P, Prasad H, Lalrinkima H, Aktar F, Bora N, Deka C, Thakur N, Tolenkhomba TC.(2022). Naturally occurring Anaplasma marginale infection in cattle: Molecular prevalence and associated risk factors, haemato-biochemical alterations, oxidant/antioxidant status and serum trace mineral levels. *Microbial Pathogenesis*,167(2022). https://doi.org/10.1016/j.micpath.2022.105575NAAS Score/ID – 6.32/I041
59. Das D, Sarma K, Chethan GE, Roychoudhury P, Rajesh JB, Behera P, Prasad H, Lalrinkima H, Aktar F, Bora N, Deka C, Thakur N, Tolenkhomba TC (2023). Naturally occurring *Anaplasma marginale* infection in cattle: Molecular prevalence and associated risk factors, haemato-biochemical alterations, oxidant/antioxidant status and serum trace mineral levels. *Microbial Pathogenesis*, 167: 105575.NAAS Score/ID – 6.37/I032
60. Das G. and Dutta Pranab (2022). Effect of nano-priming with Zinc oxide and silver nanoparticles on storage of chickpea seeds and management of wilt diseases. *Journal of Agricultural Sciences and Technology* 24 (1): 213-26. NAAS Score/ID – 5.11/B084
61. Das P, Deka Devajani and Lalrinkima H (2022). Molecular characterization of *Cryptosporidium parvum* among cattle and cattle handlers from Tripura (Assam). *Indian Journal of Animal Research*. doi:10.18805/ IJAR.B-4927.NAAS Score/ID – 8.08/A268
62. Dasari Gopal and Indira Sarangthem (2022). Interaction Effect of Zinc and Boron on the Growth, Yield and Yield Attributes of Tomato in Acid Soils of Manipur. *International Journal of Environment and Climate Change,* 12(11): 2693-2699.
63. Dayakar, B., Xavier, K. M., Ngasotter, S., Layana, P., Balange, A. K., Priyadarshini, B.,Nayak, B. B. (2022). Characterization of spray-dried carotenoprotein powder from Pacific white shrimp (*Litopenaeus vannamei*) shells and head waste extracted using papain: Antioxidant, spectroscopic, and microstructural properties. *LWT-Food Science and*

Technology, 159, 113188. https://doi.org/10.1016/j.lwt.2022.113188

64. Deb, Lipa, Dutta, Pranab, Devi, R.K.T., Thakuria, D. and Majumder, D. (2022). Endophytic *Beauveria bassiana* can protect the rice plant from sheath blight of rice caused by *Rhizoctonia solani* and enhanced plant growth parameters. *Archives of Microbiology* doi: 10.1007/s00203-022-03211-2NAAS Score/ID – 6.44/I040

65. Debajyoti Pal, Basanta Saikia, Kalyan Sarma, Bedanga Konwar, M.C. Lallinchhunga, J.K. Choudhary and Rahul Singh Arya (2022). Evaluation of Ketamine Hydrochloride in Combination with Midazolam, Dexmedetomidine and Butorphanol as Balanced Anaesthesia in Cats. . *Indian Journal of Animal Research* doi. 10.18805/IJAR.B-4786

66. Debapritam Deb., Girin Kalita., Hemen Das and Ranjana Goswami (2023). Socio- economic profile and various management (healthcare, milking and calf rearing) practices followed by members of dairy cooperative societies of Tripura. *The Pharma Innovation Journal* 12(2):1635-1638.

67. Debbarma M, Deka Devajani and Roychoudhury P (2022). Enumeration, serotypes and virulence genes associated with shigatoxigenic (STEC) and enterotoxigenic (ETEC) *Escherichia coli* from beef and chicken of Mizoram, India. *Asian Journal of Dairy and Food Research*. doi:10.18805/ajdfr.dr-1950.NAAS Score/ID – 10.61/P154

68. Debbarma M, Deka Devajani, Tolenkhomba T C and Rajesh JB (2022). Microbiological contamination of retail meat from Mizoram (India) with special reference to molecular detection and multi drug resistance of *Escherichia coli*. *The Indian Journal of Veterinary Sciences and Biotechnology*. 18(2): 32-35. NAAS Score/ID – 5.23/T050

69. Debbarma M, Deka Devajani, Tolenkhomba T C and Rajesh JB (2022). Microbiological contamination of retail meat from Mizoram (India) with special reference to molecular detection and multi drug resistance of *Escherichia coli*. *The Indian Journal of Veterinary Sciences and Biotechnology*. 18(2): 32-35. NAAS Score/ID – 5.23/T050

70. Debbarma, S. P., Ghosh, A., Debnath, R., Singh, Y. J., Pal, P., Lahiri, B. (2022). Socio-professional dimensions of fisheries extension professionals in Tripura: A descriptive study. *Indian Journal of Extension Education*, 58(1), 83-90. DOI: 10.5958/2454-552X.2022.00026.3. [NAAS rating: 5.95]

71. Debbarma,R., Meena,D.K., Biswas,P., Meitei,M.M., Singh, S.K., (2022).Portioning of microbial waste into fish nutrition via frugal biofloc production: A sustainable paradigm for greening of environment, *Journal of Cleaner Production*, Volume 334,130246,https://doi.org/10.1016/j.jclepro.2021.130246. [NAAS rating: 17.07]

72. Debbarma,S.,Acharya, A., Mangang, Y.A.,Monsang, S.J., Choudhury, T.G., Parhl, J.,' Pandey' P.K.,(2022). Immune-biochemical response and immune gene expression profiling of *Labeo rohita* fingerlings fed with ethanolic tea leaf extracts and its survivability against *Aeromonas hydrophila* infection. *Fish & Shellfish Immunology*: 130, 520-529. [NAAS rating: 10.62]

73. Debnath S., Bayan, H., Konwar, B., Mayengbam, P. and Sarma K. (2022). Haematobiochemical changes during pain management with intraperitoneal bupivacaine and bupivacaine-dexmedetomidine in dogs. *Indian Journal of Animal Research.* DOI: 10.18805/IJAR.B-4848. (1-6). NAAS Score/ID – 4.94/J490

74. Debnath, R., Ghosh, A., Chakraborty, R., Lahiri, B., Rudrapaul, P. (2022). Age of pandemics toward agricultural and economic fall-off: COVID-19 and more. *Indian Journal of Animal Health,* 61(2-Special):133-146. DOI: https://doi.org/10.36062/ijah.2022.spl.00122 [NAAS rating: 5.25]

75. Debnath, R., Ghosh, A., Lahiri, B., Singh, Y. J., Pal, P., Upadhyay, A. D., Baidya, S.(2022). Advisories on fish farming in Tripura for coping with COVID 19: An outlook. *Fishery Technology*, 59(4), 303-310. https://epubs.icar.org.in/index.php/FT/article/view/120511 [NAAS rating: 5.82]

76. Debroy S, Kalita PC, Kalita A, Choudhary OP, Doley PJ, Paul A and Sarkar R. (2022). Anatomy of the liver of Mizoram local pig (Zovawk). *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4447.NAAS Score/ID – 6.32/I042

77. Deepti, M., Meinam,T.,Meinam,M., Singh, Y.J.,Upadhyay, A.D.,Thangavel,V.(2023). Students' Perception Towards e-Learning in Manipur.*Indian Research Journal of Extension Education.*23 *(1),* 51-54. [NAAS rating: 5.22]

78. Deka, T. and Sanjay-Swami (2022). Development of organic nutrient management package for black turmeric (*Curcuma caesia* Roxb.) for higher yield in acidic soil. *The Pharma Innovation Journal,* 11(7): 2507-2510.

79. Devi Sri D., Nanita Devi Heisnam, Renuka Devi Thokchom, Bireswar Sinha and Okendro Singh

(2023). Principal component analysis among vegetable soybean genotypes (*Glycine max* L. Merrill), *Environment Conservation Journal*, pp-1-8. ISSN 0972-3099 (Print) 2278-5124 (Online)

80. Devi, A.A., Khan, M.I.R., Choudhury, T.G., Kamilya, D. (2022). In Vitro Assessment of Probiotic Potential of an Autochthonous Bacterial Isolate, *Pseudomonas mosselii* COFCAU_PMP5. *Microbiology*: 91 (2), 207-214. [NAAS rating: 7.51]

81. Devi, M.P.; Dasgupta, M.; Mohanty, S.; Sharma, S.K.; Hegde, V.; Roy, S.S.; Renadevan, R.; Kumar, K.B.; Patel, H.K.; Sahoo, M.R. (2022) DNA Barcoding and ITS2 Secondary Structure Predictions in Taro (*Colocasia esculenta* L. Schott) from the North Eastern Hill Region of India. *Genes*, 13, 2294. https://doi.org/10.3390/genes13122294 (NAAS 2022 rating: 10.14)

82. Devi, Yengkhom Sanatombi, Th. Renuka Devi, Ajay Kumar Thakur, Umakanta Ngangkham, H. Nanita Devi, Pramesh Kh., Bireswar Sinha, Pushparani Senjam, N. Brajendra Singh, and Lokesh Kumar Mishra (2022). "Evaluation of Indian Mustard Genotypes for White Rust Resistance Using *BjuWRR1*Gene and Their Phenotypic Performance" Agronomy 12: 3122. https://doi.org/10.3390/agronomy12123122

83. Dey, U., Sarkar, S., Awasthi, D.P., Dey, J.K.,Debbarma, P.,Saha, R.K.(2022). Integrated disease management of rice blast caused by *Magnaporthe grisea* (T.T. Hebert) Barr in Sepahijala district of Tripura (2022). *The Pharma Innovation Journal.* 11(12): 207-210. [NAAS rating: 5.23]

84. Dhar, B., Nayak, B.B., Majumdar, R.K., Balange, A.K., Kumar, H.S., Tripathy, P.S., Parhi, J.(2022). Changes in Bacterial Composition During Maturing Stages of Salt Fermentation of Pangas (*Pangasianodon hypophthalmus*). *Journal of Aquatic Food Product Technology:* 31:4, 388-398. [NAAS rating: 8.01]

85. Dhar, B., Tripathy, H. H. (2023). Development of semi-dried and smoked laminates from *Pangasius* sp. and its storage stability under vacuum packaging. International Journal of Oceanography and *Aquaculture*. 7(1): 000232.

86. Dhruba Das , Kalyan Sarma, Chethan Gollahalli Eregowda, Parimal Roychoudhury, Justus Babykutty Rajesh, Parthasarathi Behera, Hridayesh Prasad, Hniang Lalrinkima , Fatema Aktar, Nikitasha Bora, Champak Deka , Neeraj Thakur and Thingujam Chaa Tolenkhomba (2022). Naturally occurring Anaplasma marginale infection in cattle: Molecular prevalence and associated risk factors, haemato-biochemical alterations, oxidant/antioxidant status and serum trace mineral levels. *Microbial Pathogenesis*, 167 :105575 https://doi.org/10.1016/j.micpath.2022.105575

87. Dibyajyoti Talukdar , Papori Talukdar , Athokpam Donin Luwang , Kalyan Sarma , Dhiren Deka , Dhrubajyoti Sharma , Biswajit Das (2023). Phytochemical and Nutrient Composition of Aloe Vera (Aloe barbadensis miller) in an Agro-climatic Condition of Mizoram, India. *Asian Journal of Dairy and Food Research.* . doi: 10.18805/ajdfr.DR-2047 NAAS Score/ID – 7.13

88. Dileep Kumar Pandey, P. Adhiguru, Kalkame Cheran Momin and Prabhat Kumar(2022). Agrobiodiversity and agroecological practices in 'jhumscape' of the Eastern Himalayas: don't throw the baby out with the bathwater. *Biodiversity and Conservation* https://doi.org/10.1007/s10531-022-02440-7

89. Dileep Kumar Pandey; Siddhartha Singh; Shantanu Kumar Dubey; Tara Singh Mehra; Sreenath Dixit; Gajanan Sawargaonkar. (2023). Nutrient profiling of lablab bean (*Lablab purpureus*) from north-eastern India: A potential legume for plant-based meat alternatives. *Journal of Food Composition and Analysis*. 119: 105252. https://doi.org/10.1016/j.jfca.2023.105252.

90. Dileep Kumar Pandey; Siddhartha Singh; Shantanu Kumar Dubey; Tara Singh Mehra; Sreenath Dixit; Gajanan Sawargaonkar. (2023). Nutrient profiling of lablab bean (Lablab purpureus) from north-eastern India: A potential legume for plant-based meat alternatives. *Journal of Food Composition and Analysis*. 119: 105252. https://doi.org/10.1016/j.jfca.2023.105252.

91. Dinesh, K., Sinha, B., Ravikumar, M.R (2022). Genetic diversity analysis of Sclerotiumrolfsii employing ITS, ISSR and RAPD markers. *Indian Phytopathology*, 75, 259–265. https://doi.org/10.1007/s42360-021-00440-1

92. Dipak Nath, Abhinash Moirangthem and Ph. Ranjit Sharma (2022). Constraints encountered by the paddy growers of Manipur of north eastern region of India. *The Pharma Innovation Journal* 2022; SP-11(7): 4604-4606

93. Dipak Nath, Abhinash Moirangthem, Ranjit Sharma and Punabati Heisnam (2022). Usefulness of Mobile Phone Based Agro-advisories in Manipur, North Eastern India. *Asian Journal of Agricultural Extension, Economics & Sociology* 40(10): 648-652, 2022; Article no.AJAEES.90264 ISSN: 2320-7027

94. Dishari Biswas, Sonika Yumnam, Th Renuka Devi,

Bireswar Sinha and N Okendro Singh (2022). Genetic assessment for yield and its attributing traits in chickpea (*Cicer arientinum* L.) germplasms and estimation of correlation coefficient, path coefficient and cluster analysis. *The Pharma Innovation Journal* 11(10): 1640-1645

95. Divya Chaudhary, Swati, Jai Prakash Jaiswal, Amarjeet Kumar, Sivendra Joshi, Nimita Kandwal and Babita Bhatt.Field Screening for Morpho-Physiological Traits in Bread Wheat (*Triticum aestivum*L. em. Thell) Genotypes under Moisture Stress.*Biological Forum – An International Journal* 15(2): 758-763(2023).(NAAS 2022 rating: 5.11)

96. DivyaSirkeck and Bikram Singh (2023). Improving germination and dormancy breaking in *Gleditsia triacanthos* L. seeds by presowing treatments. *The Pharma Innovation Journal*, 12(2): 2137-2141.

97. DK Pandey, Shantanu Kumar Dubey, AK Tripathi, Barun Singh, BN Hazarika (2022). Economic gain apropos socio-ecological pain: expansion of plantation crops in biocultural jhumscape of North East India. *Current Science*, 123(6): 767-771

98. Doley PJ, Sarma K, Kalita PC, Goswami R, Kalita A, Sarkar R, Eregowda CG, Roychoudhary, P and Choudhary OP. (2022). Ultrastructural characteristics of the blood cells of chickens commonly reared under backyard poultry farming in Mizoram, India. *Anatomia Histologia Embryologia*. DOI: 10.1111/ahe.12874NAAS Score/ID – 5.95/I054

99. Dubey RK, Majumdar S, Sigh N, Behera TK, Gogi S, Jha A, Battacharya T, Deo C, Mahopatra P, Bhutia SP, Vanlalneihi B. (2023) ICAR-IIVR technologies: A step to reach the North Eastern Region of India. *Indian Horticulture*. 68: 2. 30-32

100. Duddukur Rajasekhar, K. L. Naveen Kumar, Pramod Kumar Pandey and Devyani Sen (2022).Analysis of Morphological Variation, Grouping and Path Coefficient Studies in a Set of Maize Inbred Lines Local to North East Hill Region of India. *International Journal of Plant & Soil Science* 34(17): 105-113

101. Dudkiewicz, Agnieszka, Dutta, Pranab and Kołożyn-Krajewska, Danuta (2022) Ethylene oxide in foods: current approach to the risk assessment and practical considerations based on the European food business operator perspective. *European Food Research and Technology* doi: https://doi.org/10.1007/s00217-022-04018-7

102. Dutta P, Deb, L and Pandey AK (2022) *Trichoderma*-From lab bench to field application: Looking back over 50 years, *Frontiers in Agronomy* 4:932839. DOI 10.3389/fagro.2022.932839

103. Dutta P, Kumari A, Mahanta M, Biswas KK, Dudkiewicz A, Thakuria D, Abdelrhim AS, Singh SB, Muthukrishnan G, Sabarinathan KG, Mandal MK and Mazumdar N (2022) Advances in Nanotechnology as a Potential Alternative for Plant Viral Disease Management. *Frontiers in Microbiology* 13:935193 doi: 10.3389/fmicb.2022.935193.

104. Dutta P, Mahanta M., Singh S.B., Thakuria D., Deb Lipa, Kumari A., Upamanya G.K., Boruah S., Dey U., Mishra A.K., Vanlaltani L., Vijyreddi D., Heisnam P., Pandey A.K. (2023) Molecular interaction between plants and *Trichoderma* species against soil borne plant pathogens. *Frontiers in Plant Science* DOI: 10.3389/fpls.2023.1145715. NAAS Score/ID – 10.21

105. Dutta Pranab, Kumari A, Mahanta M, Biswas KK, Dudikiewicz A, Thakuria D, Addelrhim A, Singh BS, Muthukrishnan G, Sabarinathan GK, Mandal MK and Mazumdar N (2022) Advances in nanotechnology as a potential alternative for plant viral disease management. *Frontiers in Microbiology*: *Microbes and Virus Interaction with plants* :13 DOI: 10.3389/fmicb.2022.935193

106. Dutta, Pranab, Gomathy M., Sabarinathan KG, Rajakumar D, Ananth K, Karthiba L, Kalaiselvi P, Pillai MA, Upamanya GK, Boruah S, Deb L., Kumari A, Mahanta M, Heisnam P, Mishra AK (2022). Mechanisms of plant growth promoting rhizobacteria (PGPR) to combat plant diseases for better productivity. *Biocell* 46(8) : 1843-1859

107. Easton Lourembam, Pranabjyoti Sarma, L. Wangchu, Siddhartha Singh, Chandra Deo, Bapsila Loitongbam, B.N Hazarika, P. Debnath, Punabati Jeisnam and Oinam Bidyalaxmi (2022). Assessment of morphological characters of faba bean (*Vicia faba* L.) genotypes in Manipur. *The Pharma Innovation Journal 11(8): 2036-2040.*(NAAS 2022 rating: 5.23)

108. Elone Lucy, JB Rajesh, Bedanga Konwar, Rahul Singh Arya, H Prasad, Kalyan Sarma, Ankita Debnath, Dilip Nama, Kaushik Poran Bordoloi and Champak Deka (2022). Clinico-pathological and haemato-biochemical changes associated with immune mediated haemolytic anaemia in dogs. *The Pharma Innovation*, 11(3): 04-06.

109. Erniec Lyngdoh Nongbri, Sudip Das, Karma Landup Bhutia, Aleimo, G. Momin, Mayank Rai, Wricha Tyagi (2023). Differential Expression of Iron Deficiency Responsive Rice Genes under Low Phosphorus and Iron Toxicity Conditions and Association of OsIRO3 with Yield in Acidic Soils *Rice Science* 30(1): 58-69.NAAS Score/ID – 5.58/T023

110. Feroze S. M, Laitonjam N, Singh R & Devi A. A

(2022) Production of Lage Cardamom under Climate Change Scenario- Findings from Sikkim. *Economic Affairs*, Vol. 67 (04):385-392.NAAS Score/ID – 5.13/ I229

111. Feroze S.M., Laitonjam N, Singh R and Devi AA.(2022). Production of Large Cardamom under Climate Change Scenario- Findings from Sikkim, *Economic Affairs*, 67(04): 385-392, DOI: 10.46852/0424-2513.4.2022.2
112. Feroze, SM; Baba, SH; Laitonjam, N, Singh, R. and Thangjam, D (2022). Saffron production depends on rainfall: Empirical evidence from Jammu & Kashmir, *Journal of Research* 23(2): 160-165
113. Fullmoon Puwein, Bikram Singh and TantulungTatan (2022). Influence of pre-Sowing treatments on germination of *Canarium strictum*Roxb. *International Journal of Current Microbiology and Applied Sciences*, 11(01): 301-307.
114. G. E. Chethan, Kalyan Sarma, Nikitasha Bora, H. V. Manjunathachar, Neeraj Thakur, Snehil Gupta, Champak Deka, S. N. Chaithra, Vijayakumar Jawalagatti, J. B. Rajesh , Kuldeep Dhama. (2022). *Leptotrombidium deliense* infestation in domestic dogs from India, a vector of scrub typhus: a case report. *Explor Anim Med Res*, 12(1):118-123 DOI: 10.52635/eamr/12.1.118-123.NAAS Score/ID – 7.44/A031
115. Ganjare Rupesh, J. Lhungdim, N. Okendro Singh and S. Mounika (2023). Effect of levels of potassium on yield and economics of different blackgram varieties in Manipur sub-tropical condition. *Journal of Eco-friendly Agriculture,* 18(1):32-36.
116. GeyingTamuk and Bikram Singh (2022). Enhancing seed germination in *Altingiaexcelsa* Noronha. pre-treated by natural plant extracts under laboratory conditions at Pasighat in Arunachal Pradesh, India. *The Pharma Innovation Journal*, SP-11(12): 357-362
117. Ghosh, M., Upadhyay, R., Raigar, R. K. and Mishra, H. N. (2022) Fabrication of spray dried microcapsules of omega–3, 6 fatty acids rich plant oil blend using wall mix of maltodextrin+ proteins. *Journal of Food Processing and Preservation*: https://doi.org/10.1111/jfpp.17103NAAS Score/ID – 6.44/I040
118. Gogoi J, Singh R, Baruah G and Tyngkan H (2022) Value Chain Analysis of Traditional bamboo products in Meghalaya. *E-planet* 20 (2): 115-120.
119. Gogoi J, Singh, R. S. Basanta Singh, Feroze, S. M.Choudhury, A., Hemochandra L. and Tyngkan H. (2022) Utilization Pattern of Bamboo in North Eastern Region of India. *Indian Journal of Extension Education*, 58(2): 115-119.
120. Gogoi, J; Singh, R, Feroze, SM; Singh, SB and Tyngkan, H. (2022) Export and import of bamboo and bamboo products: Markov chain analysis. *Agricultural Economics Research Review* 35 (2), 151-158
121. Gogoi, J; Singh, Ram; Singh, SB; Feroze, SM; Choudhury, A. Hemochandra, L. and Tyngkan, H. (2022) Utilization Pattern of Bamboo in North Eastern Region of India, Indian Journal of Extension Education, Vol 58 (2) pp 115-119, , ISSN 0537-1996NAAS Score/ID – 5.23/T050
122. Gokulraj, S., Bayan, H., Konwar, B., Mayengbam, P and Rajesh J B (2022). A Study on Intra operative and Post-operative Analgesia with Intraperitoneal Ropivacaine and Dexmedetomidine in Pigs. *Indian Journal of Animal Research,* DOI: 10.18805/ IJAR.B-4785. (1-5).NAAS Score/ID – 4.13/J434
123. Gora JS, Chet Ram, Poonia PK, Choudhary M and Haldhar SM. 2022. Polyploid rootstocks in citrus for mitigation of biotic and abiotic stresses: A review. *Journal of Agriculture and Ecology*, 13: 1-19.
124. Goswami AK, Maurya NK, Goswami S, Bardhan K, Singh SK, Prakash J,Pradhan S, Kumar A, Chinnusamy V, Kumar P, Sharma RM, Sharma S,Bisht DS and Kumar C (2022) Physiobiochemical and molecular stressregulators and their crosstalk for lowtemperature stress responses in fruit crops: A review. *Front. Plant Sci.* 13:1022167. doi: 10.3389/ fpls.2022.1022167(NAAS rating: 11.75)
125. Gupta, R., Sanjay-Swami, Kumar, R., Sharma, P.K. and Jamwal, S. (2022). Impact of row ratio and soil fertility management strategies on performance of wheat + linseed intercropping system. *Agricultural Science Digest*, DOI: 10.18805/ag.D-5446.
126. Gurjar, G.N., Ram, V., Thakuria, D.,Singh, A.K., Ray, L.I.P. and Singh, R. 2022. Impact of different sowing dates and mulching practices on economics of potato (K. Himalini) crop. *The Pharma Innovation Journal* 11(1): 198-200 NAAS Score/ID – 5.57/J195
127. H Lalrinkima, SS Jacob, OK Raina, D Chandra, K Lalawmpuii, C Lalchhandama, P Behera, TC Tolenkhomba (2022). Superoxide dismutase inhibits cytotoxic killing of Fasciola gigantica newly excysted juveniles expressed by sheep in vitro. *Experimental Parasitology*, 242:108369. doi: 10.1016/j. exppara.2022.108369. Epub 2022 Sep 1. PMID: 36058254.NAAS Score/ID – 5.11/B084
128. H. Yadii, M. Deepa Devi, Daya Ram and Anil D. Upadhyay (2022). Training Needs of Kiwi Growers in Subansiri District of Arunachal Pradesh. *Indian Res. J. Ext. Edu.*, 22 (5) Special e-Issue: 132-136
129. H. Yadii; M. Deepa Devi; Daya Ram and A.D. Upadhyay (2022) Training Needs of Kiwi Growers

in Subansiri District of Arunachal Pradesh. *Indian Research Journal of Extension Education* 22 (5), 132-136

130. Haldar, A., Pal, P., Ghosh, S., Pan, S.(2022). Body Weight Prediction using Recursive Partitioning and Regression Trees (RPART) Model in Indian Black Bengal Goat Breed: A Machine Learning Approach. *Indian Journal of Animal Research*. 10.18805/IJAR.B-4894. [NAAS rating: 6.43]
131. Haldhar SM, Berwal MK, Bhargava R, Saroj PL, Kumar R, Gora JS, Samadia DK, Singh D, El-Nakhel C, Rouphael Y and Kumar P. 2022. Bitter melon novel bioformulation "Thar Jaivik 41 EC": characterization and bio-efficacy assessment as a biopesticide on horticulture crops. *Agriculture* 2023, 13, 19. https://doi.org/10.3390/agriculture13010019
132. Haldhar SM, Kumar R, Corrado G, Berwal MK, Gora JS, Thaochan N, Samadia DK, Hussain T, Rouphael Y, Kumar P and Basile B. 2022. A field screening of a pomegranate (*Punica granatum*) ex-situ germplasm collection for resistance against the false spider mite (Tenuipalpuspunicae). *Agriculture*, 12, 1686. https:// doi.org/10.3390/agriculture12101686
133. Haldhar SM, Singh AK, Singh D, Berwal MK, Gora JS, Kumar R and Sarolia DK 2022. Endogenous effect of Syzygiumcumini genotypes on incidence of fruit borers, Meridarchisscyrodes and Duduaaprobola. *J. Environ. Biol*., 43, 585-592.
134. Haobijam Sanjita, D., Rajiv, C., Mondal, G., Khan, Z. A., Devi, S. D., Bharali, R. and Chattoraj, A. (2022). Influence of photoperiod variations on the mRNA Expression Pattern of Melatonin Bio-synthesizing Enzyme Genes in Pineal and Retina: A Study in Relation to the Serum Melatonin Profile in the Tropical Carp Catla catla. *Journal of Fish Biology*. (NAAS rating :8.05)
135. Harigovind P, Singh, R. Dutta, P and Choudhary, R. (2022) Economic Scrutiny of bio-pesticide use in potato cultivation in Meghalaya. *Indian Journal of Hill* Farming, 35: 164-168, ISSN: 0970-6429.
136. Hatai, Lakshmi Dhar (2022), Production and Marketing of Arunachal Orange- An Economic Evaluation, *Economic Affairs*, , Vol. 67, No. 04, pp. 423-431 NAAS Score/ID – 4.36/J026a
137. Hatai, Lakshmi Dhar (2022), Profitability, Resource Use Efficiency and Marketing of Potato in East Siang Districts of Arunachal Pradesh, India, *International Journal of Bio- resource and Stress Management,* Vol.13, No. 7, pp.702-708.
138. Hazarika, D Thakuria, T Sakthivel (2022) Combined effect of land use change, long-term soil management and orchard age on variability of soil quality of fruit orchards under monsoon climate. *Environmental Progress & Sustainable Energy* 42 (2), e14003.doi.org/10.1002/ep.14003 NAAS Score/ID – 5.23/T050
139. Hehlangki Tyngkan, S. B. Singh, B. Nongbri, D. R. Lyngkhoi & J. Gogoi (2022) A comparative Analysis of Pre and Post Watershed Development Programme: A case Study of Umngoh Watershed in Ri- Bhoi District of Meghalaya. *Indian journal of Economics and Development,* Vol. 17 (3): 584-590. NAAS Score/ID – 5.11/B084
140. Hehlangki Tyngkan, S. B. Singh, Singh R, Choudhury A and Hemochandra L (2022) Determinants of adoption of soil conservation measures in the hilly state of Meghalaya. *Indian journal of Hill Farming,* Vol. 35 (1): 155-161.NAAS Score/ID – 5.11/B084
141. HehlangkiTyngkan, S. Basanta Singh, Ram Singh, S.M Feroze, A. Choudhury and L. Hemochandra (2022) Determinants of adoption of soil conservation measures in the hilly state of Meghalaya, *Indian Journal of Hill Farming*, 35(1): 155-161
142. Hemen Das, M. Ayub Ali, ProbalJyotiDoley, Biren Kumar Das, KekungwiNewmai, AshmitaDebnath, R. ZapawAzy (2022) Effect of Lactation on Haematological and Metabolic Profile in Zobawng Cattle. *Asian Journal of Dairy and Food Research.* 10.18805/ajdfr.DR-1976NAAS Score/ID – 8.70/J248
143. Huirem Chandrajini, Ph. Sobita, Bireswar Sinha, L NongdrenKhomba (2022). Molecular characterization of Chilli veinal mottle virus infecting king chilli (*Capsicum chinense* J.) in north eastern region of India, *The Pharma Innovation Journal*, 11(7): 707-710.
144. Irom Rati Chanu, M. Deepa Devi, Daya Ram, N. Okendro Singh and Th. Anupama Devi (2022). Constraints Faced by the CAU-R1 Rice Growers in Adoption of Rice Variety CAU-R1. *Int. Journal of Current Microbiology and Applied Sciences*. Vol.11. No.1 : 46-49
145. J.S. Khukhodziinai., M. Ayub Ali., M.C. Lallianchh-unga., T.C. Tolenkhomb., Ranjana Goswami., and Prava Mayengbam (2022). Alleviation of cold stress induced oxidative stress in white leghorn chicken by chromium and Vitamin C supplementation. *Indian Journal of Animal Sciences*, 92 (5): 641-644
146. Jacob SS, Sengupta PP, Krishnamoorthy P, Suresh KP, Patil SS, Chandu AGS, Chamuah JK, Lalrinkima H, Shome BR (2022). Bovine babesiosis in India: Estimation of prevalence by systematic review and meta analysis. *Experimental Parasitology*,

239:108318NAAS Score/ID – 4.75/C071

147. Jenifa Ahmed, Y. Damodar Singh, T.K. Rajkhowa, R.S. Arya, P. Roychoudhury and A. Kalita (2022). Molecular diagnosis of infectious bursal disease outbreak in chickens in and around Aizawl district of Mizoram, India. *Indian J. Vet. Pathol.,* 46(4): 333-270.NAAS Score/ID – 4.50/R036

148. Jidung L, Haldhar SM, Singh KI, Ushasri B, Saravanan S and Singh LNK. 2022. Biological parameters and thermal requirements of Trichogrammachilonis reared on *Corcyra cephalonica* and Plutellaxylostella eggs. *Journal of Agriculture and Ecology*, 13: 160-170.

149. Jitendra Kumar Chauhan, B.S. Meena, H.R. Meena, Champak Bhaka, A.D. Upadhyay, Biswajit Lahiri, Prasenjit Pal, M.B. Tengli, Sachin Kumar, Abhay Kumar Chandegara and Khawabi Koreti (2022) Assessment of Livelihood Security and Diversification of Tribal Dairy Farmers in NEH Region of India. *Indian Res. J. Ext. Edu*. 22 (3), July-September, 2022. Pp 182-187

150. Joshi, A., Gowda, P.S., Vastrad, J.V., Gogoi, N. and Edacherian, A. (2022). Crack suspension by natural fibre integration for improved interlaminar fracture toughnewss in fibre hybrid composites. *Fratturaed Integrita Strutturale* 60: 158-173NAAS Score/ID – 5.08/J282

151. Joshi, C., Kumar, M., Bennett, M., Thakur, J., David, J. L., Sharma, S., Neil, M. and S. K. Massakapalli (2022). Synthetic microbial consortia bioprocessing integrated with pyrolysis for efficient conversion of cellulose to valuables. *Biresource Technology reports*, 21, 101316.

152. Jyothi KS, Ray LIP, Swetha K, Devi T, Singh AK, Swami S, Pandey PK. 2022. Maize cultivars performance and estimation of effective rainfall during rainy season under mid hills of Meghalaya. Indian Journal of Hill Farming, 35(2): 184-191. (NAAS 2022 rating: 5.04)

153. Jyothi, K.S., Ray, L.I.P., Swetha, K., Devi, T.I., Singh, A.K., Swami, S. and Pandey, P.K. 2022. Maize cultivars performance and estimation of effective rainfall during rainy season under mid hills of Meghalaya. *Indian Journal of Hill Farming* 35(2): 184-191 NAAS Score/ID – 5.23/T050

154. K. Ch. Momin, N. Lyngdoh, K. Upadhyaya and B. D. Mongjam(2022). Teee Diversity and Timber Resources Richness of Reserve Forests under Pasighat Forest Division, Arunachal Pradesh, India. DOI No.: http://doi.org/10.53550/EEC.2022. v28i03.060 28(3): 1526–1535

155. K. Ibetmbi Chanu, Ak. Bijaya Devi, U. Chaoba Singh, N. Surbala Deviand N. Gopimohan Singh. (2022). Effect of different levels of nitrogen and spacing on growth and yield of common onion (*Allium cepa* L.) cv. Prema 178 under Manipur condition. *The Pharma Innovation Journal*. 11(4): 1268-1274.

156. K. Kuotsu, M.G. Jayathangaraj, S. Ozukum, Laltlankimi, N. Bhumapatidevi, N. Kuotsu and G. Das. (2022). Obstipation in a Pig - A Case Report from Nagaland. *Indian Vet. J*ournal, 99 (08): 64 – 66.

157. K. M.Devi, T.G.Devi, A.Singh and Iluheibe (2022). Therapeutic management of contagious Ecthyma (Orf) in Black Bengal goat; A case report, *Indian Journal of Animal Health*, DOI: https://doi.org/10.36062/ ijah.2022.06422 .pp:1-5.NAAS Score/ID – 5.23/T050

158. Kakati L.J., Kalita G., Talukdar D.J. and Borah B. (2022). Growth performance of Large White Yorkshire piglets through dietary supplementation of Shatavari (*Asparagus racemosus*) root powder. *Indian Journal of Animal Sciences,* 92 (1): 78–81.

159. Kalita A, Talukdar M, Kalita PC, Barman NN, Roychoudhury P, Choudhary OP and Doley PJ. (2022). Expression profiling of cytokine-related genes in the small intestine of healthy pre and post-weaned piglets administered orally with probiotic and zinc. *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4688.NAAS Score/ID – 10.24/A263

160. Kalita Hia, Pathak Mahesh, Sahoo Bimal Kumar.; Haritha Sikha, Dutta Pranab, Kennedy Ningthoujam, Patidar Raghubir K. and Thakur N.S. Azad. (2022). Effects of Nanoparticles on Morpho-histology of Eri silkworm, *Samia cynthia ricini* (Boisduval). *Indian Journal of Hill Farming* 35 (2).NAAS Score/ID – 5.23/ T050

161. Kalita K, Deka Devajani, Hazarika P, Motina E, Lalmuanpuia J and Kumar S (2022). Detection of *Lactobacillus* in pork and traditional pork products of Mizoram, India and evaluation of its probiotic properties. *Asian Journal of Dairy and Food Research* doi: 10. 18805/ajdfr/ dr-1865.NAAS Score/ID – 10.24/A263

162. Kalita PC, Kalita A, Choudhary OP, Doley PJ, Debroy S and Sarkar R. (2022). Gross morphological and light microscopic studies of the spleen of Malayan Sun bear (*Helarctos malayanus*). *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4390.

163. Kalkame Ch Momin, Sunil Kumar, T S Mehra &ArunkumarPhurailatpam. (2022). Drying and dehydration of native ornamental plants of Arunachal Pradesh and its value addition. *Indian*

Journal of Traditional Knowledge 21(2): 383-388

164. Kaman PK, Dutta Pranab and Bhattacharyya, A (2022) "Synthesis of gold nanoparticles from Metarhizium anisopliae for management of blast disease of rice and its effect on soil biological index and physicochemical properties" *Plant and Soil* DOI: https://doi.org/10.21203/rs.3.rs-2080559/v1NAAS Score/ID – 4.69/ T050
165. Kamilya, D., Devi, W.M. (2022).*Bacillus* Probiotics and Bioremediation: *An Aquaculture Perspective*. Pages-335-347
166. Kamilya, D., Singh, M.(2022). Probiotics as Vaccine Adjuvants, *Probiotics in Aquaculture,* Pages-203-212.
167. Karthik Ramappa, Kennedy Ningthoujam, Mahesh Pathak, Subhash S., Abhishek, T.S., Suresh, K.M. and B.J. Raju. (2022). Effects of semi-synthetic diet on biology of Fall army worm, *Spodoptera frugiperda* (Smith).*Indian Journal of Hill Farming* 35 (2): 163-167.NAAS Score/ID – 5.15/I057
168. Kasinam Doruk, Indira Sarangthem, N. Surbala Devi, Edwin Luikham and N. Gopimohan Singh (2022). Status and distribution of sulphur in acid soils of Imphal East district, Manipur. *International Journal of Plant and Soil Science*, 2022, 34(20): 492-503
169. Kasinam Doruk, Indira Sarangthem, N. Surbala Devi, Edwin Luikham and N. Gopimohan Singh. (2022). Sulphur transformation in acid soils under closed incubation studies. *Biological Forum-An International Journal*. 14(2a): 131-136.
170. Kayina A.K., Kalita, G., Goswami, R., Talukdar, D.J., Das, H. and Hmar, L. (2022). Study of some blood biochemical parameters of orphan piglets reared under intensive system. *Haryana Vet.* 61(SI-2): 86-89.
171. KH. Anush Sheikh,Barun Singh, Songthat William Haokip, L. Wangchu, Chandra Deo, P. Debnath and Amit Kumar Singh (2023). Impact of exogeneous foliar application of micronutrients on leaf nutrient status of lemon [*Citrus limon* (L.) Burm.] cv. Assam lemon. *Journal of the Indian Society of Soil Science.* 71(1): 99-104NAAS Score/ID – 4.36/J026a
172. Khan, M.I.R., Choudhury, T.G., Kamilya, D.,(2022). In vitro assessment of probiotic properties of Pseudomonas entomophila COFCAU_PEP4 isolated from *Labeo rohita* intestine. *Journal of the World Aquaculture Society*. https://doi.org/10.1111/jwas.12924. [NAAS rating: 9.40]
173. Khan,MIR., Kamilya,D., Choudhury,T.G., Rathore.,G. (2022).Dietary administration of a host-gut derived probiotic Bacillus amyloliquefaciens COFCAU_P1 modulates immune-biochemical response, immune-related gene expression, and resistance of *Labeo rohita* to *Aeromonas hydrophila* infection. *Aquaculture* (546), 737390. [NAAS rating: 11.14]
174. Kharumnuid, P., Devarani, L and Singh, R. (2022). Assessment of Varietal Replacement Rate of Potato in India: Constraints and Extension Strategies for Improvement. *Ecology, Environment and Conservation* 28:472-480. DOI: 10.53550/EEC.2022.v28i07s.078NAAS Score – 5.37
175. Kharumnuid, P., Devarani, L and Singh, R. (2023) Growth Performance of Potato in India vis-à-vis North East India. *Journal of Extension Education.* 59(1):37-41 DOI: 10.48165/IJEE.2023
176. Kharumnuid, P., Devarani, L., Singh, R. J., Singh, R and Hemochandra, L. (2022) Extent of Adoption of Recommended Potato Production Technologies in Meghalaya. *International Journal of Plant & Soil Science* Vol. 34 (23): 594-600.NAAS Score/ID – 5.13/I229
177. Khukhodziinai JS, Ali MA, Lallianchhunga MC, Tolenkhomba TC and Mayengbam P. 2022. Alleviation of cold stress induced oxidative stress in White Leghorn Chicken by chromium and vitamin C supplementation. *Indian Journal of Animal Sciences*92 (5): 641-644.
178. KP Chaudhary, Michelle C L, Carolyn Z, P Adhiguru and D.K.Pandey (2023). Exploring ethnic foodscape in food desert: the case of Kolasib, Northeast India. Indian Journal of Traditional Knowledge. 22(1): 92-98
179. Kripa Shankar and S. R. Singh (2022). Morphological and biochemical characterization of *Passiflora quadrangularis* L.- A source of vegetable from East Siang district, Arunachal Pradesh, India. *Journal of Horticultural Science*, 17 (2):307-315.
180. Kshetri, P., Singh, P. L., Chanu, S. B., Singh, T. S., Rajiv, C., Tamreihao, K., Singh, H. N., Chongtham, T., Devi, A. K., Sharma, S. K., Chongtham, S., Singh, M. N., Devi, Y. P., Devi, H. S. and Roy, S. S. (2022). Biological activity of peptides isolated from feather keratin waste through microbial and enzymatic hydrolysis. Electronic Journal of Biotechnology 60, 11-18.(NAAS rating: 8.80)
181. Kumam Munidita Devi, Dr. RK.Dilip Singh, Dr.U Chaoba Singh, Gopimohan Singh and Dr. NG Joykumar Singh. (2023): Effect of Different source of nitrogen on growth, yield and quality of strawberry (fragaria x ananassa Duch) cv. Chandler under poly house condition. *The Pharma Innovation Journal* 2023; 12(3):581-584.
182. Kumar M, Debnath J, Debbarma A, Lalrinkima

H (2023). Molecular prevalence of tick-borne haemoprotozoan diseases in cattle of North Eastern state of Tripura, India. *Journal of Parasitic Diseases*, 47: 68-72NAAS Score/ID – 5.57/J195

183. Kumar, S., Samanta, A.K., Roychoudhury, P., Das.,H., Sarma, K. Sarkar., R.,Akter, F., Subudhi, P.K. and Dutta, T.K. (2022). Antimicrobial, Antibiofilm Activity of methanol leaf extract of Citrus maxima against Clinical Isolates of Multi drug resistant Staphylococcus aureus. *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4559.
184. L. Devarishi Sharma and Indira Sarangthem. (2022). Soil Fertility and Plant Nutrition in Khasi Mandarin: Major Developments. *Journal of Crop Science and Technology*, 11(2): 8-21.
185. Lal, J., Biswas, P., Singh, S.K., Debbarma, R., Mehta, N.K., Deb, S., Sharma, S., Waikhom, G., Patel, A.B. (2023). Moving towards Gel for Fish Feeding: Focus on Functional Properties and Its Acceptance. *Gels*, 9(4), 305.
186. Lalrinkima H, Jacob SS, Raina OK, Chandra D, Lalawmpuii K, Lalchhandama C, Behera P, Tolenkhomba TC (2022). Superoxide dismutase inhibits cytotoxic killing of *Fasciola gigantica* newly excysted juveniles expressed by sheep *in vitro*. *Experimental Parasitology*, 242: 108369
187. Lalthlengliana, M S Seveda, Kharpude S N, Narale P.D, R.K. Raigar and S M Kamaruzzaman. (2022). Experiential Investigation of Solar Photovoltaic Module Using Portable Test Setup for Indoor and Outdoor Conditions in NEH Region of Sikkim. *Multilogic in Science,* 12 (45):473-477.
188. Lalthlengliana, M S Seveda, Kharpude S N, Narale P.D, R.K. Raigar and S M Kamaruzzaman. (2022). Design and Development of Portable Test Setup for Evaluating Performance Characteristics of Solar Photovoltaic Modules. *Multilogic in Science.*12 (45):461-465.NAAS Score/ID – 5.23/T050
189. Loitongbam, B., Singh, P.K., Sah, R.P., Verma, O.P., Singh, B., Bisen, P., Kulhari, S., Rathi, S. R., Upadhyay, S., Singh, N.K., Sahu, R. and R.K. Singh (2022). Identification of QTLs for zinc deficiency tolerance in a recombinant inbred population of rice (*Oryza sativa* L.) *Journal of the Science of Food and Agriculture*, DOI 10.1002/jsfa.11981.
190. Longkumer, L., Rai, M., & Tyagi, W. (2022). Response of rice variety Nagina 22 (N22) and its putative mutants to aluminium toxicity conditions in north-east India. *International Journal of Bio-resource and Stress Management* 13(6), 543-549.NAAS rating: 5.71
191. Lourembam, E., Sarma, P., Wangchu, L., Debnath, P., Loitongbam,B., Hazarika,BN., Heisnam,P., and Bidyalami, O(2022): Assessment of Morphological Character of Faba Bean (Vicia faba L.) genetypes grown in Manipur. The Pharma Innovation 2022; 11(8):2036-2040.. NAAS Score/ID – 5.58/T023
192. Lourembam, E., Sarma, P., Wangchu, L., Singh, S., Deo, C., Loitongbam, B., Hazarika, B. N., Debnath, P., Heisnam, P. and O. Bidyalami (2022). Assessment of morphological characters of faba bean (*Vicia faba* L.) genotypes grown in Manipur; *The Pharma innovation Journal;* 11(8): 2036-2040.
193. Lyngkhoi, DR; Singh, SB; Singh, R and Tyngkan, H. (2022) Trend analysis of milk production in India, Asian Jr of dairy and food Research, online published 10.18805/ajdfr.DR-1789, ISSN: 0971-445, https://arccjournals.com/journal/asian-journal-of-dairy-and-food-research/DR-1789. NAAS Score/ID – 5.20/I031
194. M Srilakshmi, D Jhajharia, S Gupta, GS Yurembam and GT Patle. (2022). Analysis of spatio-temporal variations and change point detection in pan coefficients in the northeastern region of India. Theoretical and Applied Climatology, 147, pages1545–1559. NAAS Score: 9.41
195. M. Shanmukh Raju1, M. Rama Devy and P. V. Sathya Gopal (2022). Farmers' Perceived Effectiveness of e-NAM. *Indian Res. J. Ext. Edu. Vol:* 22 (3): 43-48. NAAS Score/ID – 6.44/I040
196. M. Shanmukh Raju1, M. Rama Devy and P. V. Sathya Gopal (2022). Profile characteristics of farmers of e-NAM. *The Pharma Innovation Journal.* SP-11(8): 40-44.NAAS Score/ID – 5.08/E026
197. M. Shanmukh Raju1, M. Rama Devy and P. V. Sathya Gopal (2022). Knowledge of Farmers on Functioning of e-NAM. *Indian Journal of Extension Education*, Vol-58, (2): 26-29.NAAS Score/ID – 5.79/I056
198. M. Srilakshmi, D. Jhajharia, S. Gupta, GS Yurembam and GT Patle (2022). Analysis of spatio-temporal variations and change point detection in pan coefficients in the north-eastern region of India. *Theoretical and Applied Climatology*, 147 (3), 1545-1559.
199. M. Victoria Devi and R.J. Singh. (2022). Assessment of factors on Assimilation of Climate Smart Agricultural Practices in the North Eastern Hill Region of India: SWOT-AHP Analysis. *International Journal of Environment and Climate Change*, 12(11):2581-8627,NAAS: 5.13
200. M. Victoria Devi, R.J. Singh, J.K. Chauhan and E.K.

Marbaniang. (2022). Farmers' Resilience to Climate Change in the North Eastern Hill Region of India. *Indian Research Journal of Extension Education*, 22 (5),NAAS: 5.22

201. M.G. Jayathangaraj, K. Kuotsu, S. Ozukum, Laltlankimi, N. Bhumapati Devi, N. Kuotsu and G. Das. (2022). Therapeutic Management of Colic in a Captive Asian Elephant (Elephasmaximus). *Indian Vet. Journal*, 99 (07): 84 – 86.NAAS Score/ID – 5.23/ T050
202. M.Premi Devi, H.G. Kencharaddi and U.K.Behera (2022) Characterisation of wild fagaceous nut species for morphometric traits from sub-tropical forest area of Kyrdemkulai, Meghalaya. *J. Andaman Sci. Assoc. 27 (Special Issue)* (27): 22-30 (NAAS 2022 rating: 4.15)
203. Mahanand, S.S., Sahoo, D. (2022). Biofloc the Nutritional Enriched Feed for IMC Culture in India. *Indian Research Journal of Extension Education*: 22 (5), 271-274. [NAAS rating: 5.22]
204. Maheshwari SK, Choudhary BR, Haldhar SM and Berwal MK. 2022. Effectiveness of botanicals, inorganic salts and fungicide against Fusarium wilt of muskmelon under hot arid region of Rajasthan. *Journal of Agriculture and Ecology*, 14: 21-25.http://doi.org/10.53911/JAE.2022.14203
205. Majhi, S.S., Singh, S.K., Biswas, P., Debbarma, R., Parhi, J., Ngasotter, S., Waikhom, G., Meena, D.K., Devi,A.G., Mahanand, S.S.,Xavier, K.A.M., Patel, A.B. (2023). Effect of Stocking Density on Growth, Water Quality Changes and Cost Efficiency of Butter Catfish (*Ompok bimaculatus*) during Seed Rearing in a Biofloc System ***.Fishes*** 2023, ***8***(2), 61; https://doi.org/10.3390/fishes8020061. [NAAS rating: 9.17]
206. Majumder S, Ali M A, Lallianchhunga M C, Behera P, Tolenkhomba T C , Singh N S. and Mayengbam P. (2022).Stress and antioxidative status of Zovawk piglets at different intervals of weaning.*Indian Journal of Animal Sciences.*92 (3): 283–288.
207. Mallick M and Mondal HA. (2022) Vascular dodecanoic acid of Arabidopsis mediates an insect resistance against Myzus persicae. *Archives of Insect Biochemistry and Physiology*,Volume 112, Issue 3, e21986. https://doi.org/10.1002/arch.21986
208. Manchikatla Saisri, Kennedy Ningthoujam, Mahesh Pathak and Akoijam Ratankumar Singh (2023). Baseline susceptibility of cabbage butterfly, *Pieris brassicae* (Linnaeus) (Lepidoptera: Pieridae) to *Bacillus thuringiensis* (Berliner) Cry toxins in Meghalaya. *Egyptian Journal of Biological Pest Control* 33 (13): 1-6.
209. Mandal, M., Maitra, S., Devi, K.L., Paramanik, B., Sinha, T. and A. Sarkar (2023). Application of Benzyladenine on quality production and post-harvest life of African marigold (*Tagetes erecta* L.) cv. Pusa NarangiGainda. *The Pharma Innovation Journal*, 12(1): 2245-2250.
210. Mandru Srilakshmi, Deepak Jhajharia, Shivam Gupta, Ghanashyam Singh Yurembam, Ghanshyam T Patle (2022). Analysis of spatio-temporal variations and change point detection in pan coefficients in the northeastern region of India. *Theoretical and Applied Climatology*. 147 (3), 1545-1559, 2022. NAAS Score/ID – 5.23/T050
211. Manish Dhawan, Abhilasha Sharma, Priyanka, Nanamika Thakur, Tridib Kumar Rajkhowa & Om Prakash Choudhary (2022): Delta variant (B.1.617.2) of SARS-CoV-2: Mutations, impact, challenges and possible solutions, Human Vaccines & Immunotherapeutics, DOI: 10.1080/21645515.2022.2068883 Impact Factor: 3.452 (2020)Publisher: Taylor & FrancisISSN: 2164-5515 (print); 2164-554X (web)
212. Manish Pradhan, J. Lhungdim, Edwin Luikham, A. Herojit Singh, Pawan Kumar and N. Okendro Singh (2022). Effect of different application methods of nitrogen at seedling stage and different top dressing methods on yield of rice (*Oryza sativa* L.). *Journal of Soils and Crops*, 32(1):64-70
213. Marak B. R., Rajkhowa, T.K., J. Kiran, Singh Y. D. and Arya R. S., (2022). Pathology and molecular diagnosis of first African swine fever outbreak in Meghalaya. *Indian J. Vet. Pathol., 46(4) : 261-270, 2022: DOI: 10.5958/0973-970X.2022.00046.3*NAAS Score/ID – 5.23/T050
214. Marak, B. R., Watt, H. J., Lahiri, B., Syiem, R., Bandyopadhyay, A. K. (2023). Cross-cultural comparative analysis of technological gap between tribal pineapple growers of Meghalaya, India. *Indian Journal of Extension Education*, 59(1), 154-157. (DOI: http://doi.org/10.48165/IJEE.2023.59133). [NAAS rating: 5.95]
215. Marak, Cassandra R and Marak, Natasha R. (2022). Food habits of adolescents residing in tura town. *The Pharma Innovation Journal* 2022; SP-11(12): 750-754NAAS Score/ID – 5.23/T050
216. Marak, N. R and Marak, C.N.M. (2022). The role of vitamins in prevention of non communicable diseases (NCDs): A review. *The Pharma Innovation J.*;11(9): 1662-1665NAAS Score/ID – 5.23/I040
217. Maring, Th. O, Devarani, L, Singh, R. J., Singh, N. A and Hemochandra, L. (January-March, 2023)

Situation Analysis of Small-scale Mushroom Enterprises of Meghalaya in the Wake of COVID-19 Pandemic. *Indian Journal of Extension Education* 59(1):70-74

218. Martina Meinam, Yumlembam Jackie Singh, A.D. Upadhyay, Velumani Thangavel(2023) Students' Perception Towards e-Learning in Manipur.*Indian Research Journal of Extension Education* 23 (1), 51-54
219. Mary HCJ, Rajesh J B, Prasad H, Sarma K, Roychoudhury, Ali A, Deka Devajani, Bayan H and Ravindran R (2022). Prevalence and characteristics of haemoprotozoan infections of cattle in Mizoram. *Indian Journal of Animal* sciences. 92 (4): 417-421. NAAS Score/ID – 4.86/A308
220. Maurya, A. and Sanjay-Swami (2023). Yield and nutrient uptake of rapeseed (*Brassica campestris* var. *toria*) as influenced by phosphorus sources and levels in acidic soils of Meghalaya. *Agricultural Science Digest*, 43(1): 46-50. DOI: 10.18805/ag.D-5420.
221. Mayurakshee Mahanta, Noren Singh Konjengbam, Andrean Allwin Lyngdoh and Reginah Pheirim (2022). Aluminium Stress Tolerance in Legumes under Acidic Soils: Mechanisms and Methods – A Review *Biological Forum – An International Journal*14(1): 1538- NAAS Score/ID – 6.32/I041
222. Megha Raghavan, SR Singh, BN Hazarika, L Wangchu and Amit Kumar (2022). Genetic diversity of Mandarins from Northeast India along with three other wild species using morphological markers. *The Pharma Innovation Journal*,, SP-11(2):1762-1771.
223. Megha Raghavan, SR Singh, BN Hazarika, L Wangchu and Amit Kumar (2022). Phenotypic and genotypic correlation studies of Mandarins from Northeast India. *The Pharma Innovation Journal*, SP-11(4):1355-1359
224. Mehta, N.K., Rout,B., Balange, A.K., Nayak, B.B. (2023). Dynamic viscoelastic behaviour, gelling properties of myofibrillar proteins and histological changes in shrimp (L. vannamei) muscles during ice storage. Aquaculture and Fisheries 8(2), 180-189 https://doi.org/10.1016/j.aaf.2021.08.011.
225. Meinam, M., Singh, Y.J., Upadhyay, A.D., Thangavel,V. (2023). Students' Perception Towards e-Learning in Manipur.*Indian Research Journal of Extension Education* 23 (1), 51-54
226. Meitei, M.M., Singh, S.K., Mangang, Y.A., Meena, K., Debbarma, R., Biswas, P., Waikhom, G., Patel, A.B., Ngasotter, S., Newmei, T. (2022). Effective valorization of precision output of algaquaculture towards eco-sustainability and bioeconomy concomitant with biotechnological advances: An innovative concept. *Cleaner Waste Systems*, Volume 3,100026, https://doi.org/10.1016/j.clwas.2022.100026.
227. Mili, B., Buragohain, L., Ralte, L., Chutia, T., Gogoi, A., Barman U (2022). Application of mesenchymal stem cells for treating spinal cord injury in dogs: Mechanisms and their therapeutic efficacy. *Indian Journal of Animal Sciences*92(7): 806–813.
228. Mohanty A, Chaudhuri S.D. and Das P. (2023). A study on Laxmi Purana: Visual Mythological Folklore of Odisha. Journal of Data Acquisition and Processing: DOI. 10.5281/zenodo.776798
229. Mohd. Talha Ansari, P. Sarma, Sandeep Kumar and Kripa Shankar (2023). Rapid screening of pea (Pisum sativum) genotypes against aluminium toxicity. *Indian journal of Agricultural Sciences. 93(2): 221-224.* (NAAS rating: 6.37)
230. Mondal HA. (2023). Myzus persicae herbivore mediated vascular microbiota is correlated with Arabidopsis thaliana's perception to aphid infestation. *J. Plant Biochem. Biotechnol*.(2023). https://doi.org/10.1007/s13562-023-00841-5.
231. Mondal, H.A. 2022. An unconventional exploration of axillary buds in Yacon (*Smallanthus sonchifolius*) for planting material production. *Journal of Crop and Weed*, 18(1): 01-08.NAAS Score/ID – 5.23/T050
232. Mondal, H.A. 2022. Lower Altitude 'Memorized' Nodal Explant Mediated Emergence Orchestrated Above Ground and Below Ground Characters in Valeriana Jatamansi, a Higher Altitude-Specific Endangered Medicinal Plant. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.* https://doi.org/10.1007/s40011-021-01287-2.NAAS Score/ID – 3.05/A109
233. Monika A, Singh R, Feroze S. M and Chiphang S (2023) Food Security through crop diversification in Manipur: Application of Heckman Sample Selection Model, *Indian Journal of Agricultural Sciences*, 93 (1): 89-93.
234. Monsang, S.J., Acharya, A.,Choudhury,T.G.,Kamilya,D. (2022).Dietary Asparagus racemosus ethanolic root extract modulates immune-biochemical response, immune gene expression and provides protection against *Aeromonas hydrophila* in *Labeo rohita* fingerlings. *Aquaculture Research*, *53*(13), pp.4795-4804. https://doi.org/10.1111/are.15971. [NAAS rating: 8.18]
235. Mukherjee, D.,Saha, S.,Chukwuka,A.V.,Ghosh,B., Dhara,K.,Saha,N.C., Pal,P.,Faggio,C.(2022). Antioxidant enzyme activity and pathophysiological

responses in the freshwater walking catfish, Clarias batrachus Linn under sub-chronic and chronic exposures to the neonicotinoid, Thiamethoxam®, *Science of The Total Environment*, Volume 836,155716. [NAAS rating: 16.75]

236. N. Bhumapati Devi, Laltlankimi, SashitolaOzukum, KeneisezoKuotsu, NeithonoKuotsu, Gunjan Das, K. Merina Devi, T. Gyaneshori Devi, TukheswarChutia and M.G. Jayathangaraj (2022). Cytological diagnosis and therapeutic management of canineTransmissible venereal tumor (ctvt) -a case report. *Veterinary Practitioner*, 23(1): 90-92NAAS Score/ID – 5.23/T050

237. N. Bhumapati Devi, T. Gyaneshori Devi, K. Merina Devi and K. Kuotsu. A complicated case of orchitis and epididymitis in a dog associated with maggot infestation. Short Communication. *Indian Journal of Animal Health*: https://doi.org/10.36062/ijah.2022.09822

238. N. Devachandra, L. Wangchu, B. Singh, S.R. Singh, B.N. Hazarika and M. Kumar (2022). Vegetative growth performance of three tea cultivars in the foothills of Arunachal Pradesh, India. *Journal of Plantation Crops* 50(1): 42-45

239. N. Devachandra, L. Wangchu, B. Singh, S.R. Singh, B.N. Hazarika and M. Kumar (2022*).* Vegetative growth performance of three tea cultivars in the foothills of Arunachal Pradesh, India.*Journal of Plantation Crops*, 50(1): 42-45

240. N. Kuotsu, KeneisezoKuotsu, S. Ozukum, L. Ralte, M. G. Jayathangaraj, Gunjan Das and R. Vijayashanti. (2022). Thelaziasis and theileriosis in a cow-a clinical report from Nagaland., *The Indian Veterinary Journal*, 99 (5): 45-47

241. N. Sanatomba Singh, L. Nabachandra Singh, Jamkhogin Lhungdim, Herojit Singh A. and N. Okendro Singh (2022). Effect of different sowing dates on growth, yield parameters and yield of local glutinous maize (*Zea mays* L.): Cultivars, *The Pharma Innovation Journal*, 11(9): 305-310.

242. N. Suraj Singh, Gunjan Das, ChamniugongliuGonmei, Rebecca Lalmuanpuii and Nirali Shah. (2022). Incidence of Canine atopic dermatitis (CAD) in Mizoram., *Journal of Animal Research*, 12(1): 111

243. Nabakishor Nongmaithem, Dayananda Sanjenbam, Jeti Konsam, LNK Singh and Thiyam Rebika Devi (2022). A report survey and surveillance of maize diseases in Manipur. *The Pharma Innovation Journal*, 11(5): 557-560.

244. Nath S, Rahaman S, Hazarika P, Kulkarni VV, Debnath K, Kalita K and Ghosh A (2022). A Comparative quality evaluation study on traditional and modified Wahan Mosdeng (Pork Vorta): An ethnic pork product of Tripura. *Journal of Entomology and Zoology Studies* 2022; 10(1): 201-211NAAS Score/ID – 7.10/J023

245. Nath S, Rahaman S, Hazarika P,, Kulkarni V.V., Majumdar S, Belore B, Fanai J, Tallapudi S and Pal D (2022). Development and Analysis of proximate Compositionand Anti-oxidant activity in traditional and Modified Pork Vorta (Wahan Mosdeng). *Agricultural Science Digest*. 10.16605/ajdfr.DR-1850: 1-5 (NAAS 4.75)

246. Nayak, B.B., Mallik, A., Bhushan,S., Chakraborty, P., Ramteke, K.K., Pal,P., Jaiswar,A.K., Sreekanth, G.B. (2023). Study of feeding biology and diet-associated microplastic contamination in selected creek fishes of northeastern Arabian Sea: A multi-species approach.*Marine Pollution Bulletin*, 190(114875). [NAAS rating: 13.00]

247. Neelam Sharma, Atul Kumar, Siddhartha Singh, Suresh Kumar and Robin Joshi. (2022). Multi-residue determination of pesticides in vegetables and assessment of human health risks in Western Himalayan region of India. *Environmental Monitoring and Assessment*. 194: 332. https://doi.org/10.1007/s10661-022-09992-9

248. Neelam Sharma, Atul Kumar, Siddhartha Singh, Suresh Kumar and Robin Joshi. (2022). Multi-residue determination of pesticides in vegetables and assessment of human health risks in Western Himalayan region of India. *Environmental Monitoring and Assessment.* 194: 332.https://doi.org/10.1007/s10661-022-09992-9

249. Nepuni Rinaldi, Bikram Singh and AthikhoKayia Alice (2022). Influence of pre-sowing treatments on seed germination of *Micheliachampaca* Linn. Under Eastern Himalayas, India. *The Pharma Innovation Journal*, SP-11(9): 173-176

250. Ngasotter, S., Mukherjee, S., Singh, S.K., Bharti, D., Haque, R., Varshney, S.(2022). Prevalence, Virulence, and Antibiotic Resistance of Vibrio parahaemolyticus from Seafood and its Environment: An Updated Review: Mediterranean Journal of Infection, Microbes and Antimicrobials, vol. 11.

251. Ngheta L, Patra G, Borthakur SK (2023). Molecular detection of *Rhipicephalus* (*Boophilus*) *microplus* and *Haemaphysalis* species infesting cattle from different agro climatic zones of Mizoram. *Journal of Entomology and Zoology Studies*, 11(1): 131-134. NAAS Score/ID – 5.23/T050

252. Nikhil K.C., Laxmi Noatia, Swagatika Priyadarsini, Pashupathi M., Jagan Mohanarao Gali, M. Ayub Ali, S.K. Behera, Bhaskar Sharma, Parimal Roychoudhury, Ajay Kumar, Parthasarathi Behera. (2022). Recoding anaerobic regulator fnr of *Salmonella* Typhimurium attenuates its pathogenicity. *Microbial Pathogenesis*, 168(2022). https://doi.org/10.1016/j.micpath.2022.105591NAAS Score/ID – 6.32/I041

253. Nikhil K.C., NoatiaL, Priyadarsini S, Pashupathi M., Gali J M, Ali M. A, Behera S.K., SharmaB, RoychoudhuryP, Kumar A, Behera P*(2022) Recoding anaerobic regulator *fnr* of *Salmonella* Typhimurium attenuates its pathogenicity. *Microbial Pathogenesis*168: 105591. IF: 3.848

254. Nilay Kumar, S. Chandel, D.K. Pandey, P.K. Singh, K.C. Momin, 2023: Usage of Wild Edible Plants Among Upland Indigenous Communities of Northeastern States of India. In: Wild Food Plants for Zero Hunger and Resilient Agriculture: Springer nature pp 125–147

255. Ningthoujam Babulu, N. Surbala Devi, Athokpam Herojit Singh, K. Nandini Devi, N. Gopimohan Singh and Ralte Lalmalsawma. (2022).Effect of Rock Phosphate, Single Super Phosphate and Phosphorus Solubilizing Bacteria on Phosphorus Concentration and Dry Matter Yield of Paddy. *International Journal of Plant & Soil Science*. 34(23): 1771-1776.

256. Ningthoujam, R., Singh, Y. D., Babu, P. J., Tirkey, A., Pradhan, S., &Sarma, M. (2022). Nanocatalyst in remediating environmental pollutants. *Chemical Physics Impact*, *4*, 100064.NAAS Score/ID – 6.44/I040

257. Nirmalkar, C., Lahiri, B., Ghsoh, A., Pal, P., Baidya, S., Shil, B., Kurmi, R. K. (2022). Perceived knowledge and attitude of fisheries extension professionals on usage of ICTs in Tripura. *Indian Journal of Extension Education*, 58(2), 58-64. (DOI: http://doi.org/10.48165/IJEE.2022.58211). [NAAS rating: 5.95]

258. P.J. Doley, Kabita Sarma., P.C.Kalita., Ranjana Goswami., A. Kalita., R. Sarkar, C.G. Eregowda., P. Roychoudhury and O.P.Choudhary. (2022). Ultrastructural characteristics of the blood cells of chickens commonly reared under backyard poultry farming in Mizoram, India. *Anat Histol Embryol*. DOI: 10.1111/ahe. 12874NAAS Score/ID – 5.23/T050

259. Pallabi Devi, Abhijit Deka, Mousumi Hazorika , Bhaben Chandra Baishya , Sushanta Goswami , Utpal Barman , Jakir Hussain and Kalyan Sarma (2022). Clinico-hematological and Biochemical Studies on Naturally Infected Buffaloes with Trypanosomiasis in Deepor Beel Area of Assam. *Indian Journal of Animal Research,* 10.18805/IJAR.B-4837.NAAS Score/ID – 6.76/I100

260. Paluru Pavani, L. Nongdrenkhomba Singh, Nabakishor Nongmaithem, Pooja Bathula and Gopimohan Singh (2022). Curtailing effects of fungicides against *Rhizoctonia solani*f.sp. sasakii inciting Banded leaf and sheath blight of maize in Manipur. *Environment and Ecology*.

261. Pandey AK, Hubbali M, Vandana, M, Dutta Pranab, Babu A. (2023) Characterization and Identification of Fungicide Insensitive Pestalotiopsis-Like Species Pathogenic to Tea Crop in North Bengal Province, India. *World Journal Microbiology and Biotechnology*. 39: 9(4)

262. Pandey AK, Kumar A, Kamari D, Varshney R and Dutta P (2022) The hunt for beneficial fungi for tomato crop improvement – advantages and perspective. *Plant Stress* https://doi.org/10.1016/j.stress.2022.100110

263. Pandey, D. K., Dubey, S.K., Tripathi, A.K., Singh, B. and B. N. Hazarika (2022). Economic gain apropos socio-ecological pain: expension of plantation crops in biocultural Jhum Scape of North East India. *Current Science*, 123(6):768-771.

264. Pashel A, Das P, Boruah M and Mishra B.K. (2023). Contraints faced by the beneficiaries of the training programmes organized by KVK: a study in Manipur. *The Pharma Innovation*.12(4):1043-1046 NAAS Score/ID – 4.63/A096

265. Pashel A, Das P, Kumar P and Nath M. (2023). Attitude of the farmers towards KVK training programmes: A study in Manipur. *The Pharma Innovation Journal*,12(2):3234-3236

266. Patra G, Ghosh S, Polley S, Priyanka, Borthakur SK, Choudhary OP, Arya RS (2022). Molecular detection and genetic characterization of *Coxiella*-like endosymbionts in dogs and ticks infesting dogs in Northeast India. *Experimental and Applied Acarology*, 86: 549–566. NAAS Score/ID – 5.25/I037

267. Paul D, Motina E, Deka Devajani and Das R (2022). Enterotoxigenic genes of *Staphylococcus aureus* isolated from raw milk and milk products in Mizoram, India. *Asian Journal of Dairy and Food Research*. doi:10. 18805/ajdfr.dr-1957.

268. Paul, A. and Rajkhowa, T.K. (2022). Molecular Diagnosis of Porcine Reproductive and Respiratory Syndrome Outbreaks in Pigs of Mizoram State. Indian Journal of Animal Research. doi: 10.18805/IJAR.B-4986.NAAS Score/ID – 5.08/I059

269. Paul, D.R., Talukdar, D. and Deori, S. (2022). The impact of selenium nanoparticles on sperm quality.

Review article. Emer. Life Sci. Res., 8(2): 156-161. DOI: https://doi.org/10.31783/elsr.2022.82156161

270. Pavankumar, S. T., Lahiri, B., Alvarado, R. (2022). Multiple change point estimation of trends in Covid-19 infections and deaths in India as compared with WHO regions. *Spatial Statistics,* 49: 100538. DOI: https://doi.org/10.1016/j.spasta.2021.100538 [NAAS rating: 8.13, JCR Impact Factor: 2.125]

271. Phawa, R., Kusre, B. C. and Gupta, S. (2022). Analysis of a Long-Term IMD Gridded Rainfall Data for Dry Period in Meghalaya. *Journal of the Indian Society of Remote Sensing*, 50(10), 1959-1977.NAAS Score/ID – 8.70/J248

272. Pieniazek, F.; Dasgupta, M.; Messina, V.; Devi, M.P.; Devi, Y.I.; Mohanty, S.; Singh, S.; Sahoo, B.B.; Nongdam, P.; Acharya, G.C.; *et al*. (2022) Differential Occurrence of Cuticular Wax and Its Role in Leaf Physiological Mechanisms of Three Edible Aroids of Northeast India. *Agriculture*, 12, 724. https://doi.org/10.3390/ agriculture12050724 (NAAS 2022 rating: 9.41)

273. Posiba M, Daya Ram and S.M. Feroze (2022). Adaptation strategies of Climate Change Effect and Factors Affecting the Adaptation Choices of Large Cardamom in Sikkim, *Indian Res. J. Ext. Edu.,* 22 (5) Special e-Issue: 155-159

274. Posibia M., Daya Ram and S.M. Feroze Adaptation Strategies of Climate Change Effect and Factors Affecting the Adaptation Choices of Large Cardamom in Sikkim, Indian Journal of Extension Education, 22 (5):155-159.

275. Pradhan, S. K., Devi, R., Khan, M. I. R., Kamilya, D., Choudhury, T. G., & Parhi, J. (2023). Isolation of Aeromonas salmonicida subspecies salmonicida from aquaculture environment in India: Polyphasic identification, virulence characterization, and antibiotic susceptibility. *Microbial Pathogenesis*, 106100

276. Prakash, N. B., Sandhya, K. and Majumdar Sabyasachi, 2022, Recycling of plant silicon from crop residues in Indian Agriculture. *Indian Journal of Fertilizers*, 18(5): 464-475.(NAAS 2022 rating: 4.76)

277. Pranab Chandra Kalita and Swarup Debroy (2022). Anatomy of the pancreas of mizoram local Pig (Zovawk) *Indian Journal of Clinical Anatomy and Physiology*. 9(1):3–8, NAAS Score/ID – 5.08/E026

278. Pranab Hazra, Soham Hazra, Brati Acharya, Subhramalya Dutta, Shubhrajyoti Saha, Priyadarshini Mahapatra, Pamoti Pradeepkumar, Harshata Pal, Arup Chattopadhyay, Ivi Chakraborty, Sanjay Jambhulkar, Suchandra Chatterjee, Sunil K. Ghosh (2022).Diversity of nutrients and nutraceutical contents in the fruits and its relationship to morphological traits in bitter gourd. *J. Scientia Horticulturae*. 305, 111414 NAAS Score/ID – 5.04/I073

279. Praveen Kumar, G., Xavier, K.A.M., Nayak, B.B., Kumar, H.S., Venkateshwarlu, G., Benerjee, K., Priyadarshini, M.B., Balange, A.K.(2022). Quality evaluation of vacuum-pack ready-to-eat hot smoked pangasius fillets during refrigerated storage. *Journal of Food Processing and Preservation*, *46*(7), e16636. https://doi.org/10.1111/jfpp.16636. [NAAS rating: 8.61]

280. Primiya R Lyngkhoi, Kennedy Ningthoujam, Mahesh Pathak, T. Rajesh and Veronica Kadam. (2022). Biology of potato tuber moth, *Phthorimaea operculella* (Zeller) on three solanaceous host plants. *Indian Journal of Hill Farming* 35 (2): 147-151NAAS Score/ID – 5.04/I073

281. Priyadarshi, H. (2022). Effects of a Popular Aquatic Pest Control Agent among Carp Aqua-culturists on Aquatic Microfauna Dynamics. *International Journal of Agriculture, Environment and Biotechnology*. 15. 10.30954/0974-1712.01.2022.15. [NAAS rating: 4.54]

282. Priyadarshi, H., Yumnam ,J.D., Singh ,A.A., Pal,P., Das, R., Yemin, T., Zomuan, S., Vanlalfela, F., Tesia, S., Mog ,M., Pandey, P.K. (2022). Effects of a Popular Aquatic Pest Control Agent among Carp Aqua-culturists on Aquatic Microfauna Dynamics. *International Journal of Agriculture, Environment and Biotechnology*; 15(1): 119-126. 119-126. [NAAS rating: 4.54]

283. Priyadarshini, M. B., Majumder, R. K., Maurya, P. (2022). Effect of vacuum packaging on the shelf-life of shrimp analog prepared from *Pangasionodon hypophthalmus* surimi during refrigerated storage. *Journal of Food Processing and Preservation*, 46(3), e16369. https://doi.org/10.1111/jfpp.16369. [NAAS rating: 8.61]

284. Priyadarshini,M.B, Balange,A.,Xavier,M., Nayak, B.B.(2022).Effect of spray-dried cluster bean seed protein extract on the gel properties of single washed Nile tilapia surimi. *Journal of Food Processing and Preservation*: 46(11), e17104. e17104. https://doi.org/10.1111/jfpp.17104. [NAAS rating: 8.61]

285. Priyadarsinee, S., Basu, D., Ghosh, A. and Guha, S. (2023). Stakeholders' Analysis in Agricultural Insurance Service System: A Special Focus on Farmer's Knowledge and Attitude. *Indian Research*

Journal of Extension Education 23(2):86-90, DOI: 10.54986/irjee/2023/apr_jun/86-90 [NAAS rating: 5.25]

286. Priyanka, P. S and Devarani, L (2022). Capturing Community Participation in Rural Tourism through PRA: A Study in Meghalaya. *Indian Journal of Extension Education* 58 (2):35-41 DOI: 10.48165/IJEE.2022.58207
287. PS Aprilhrin, P Das, Pavan Kumar ST, M Nath (2023) Attitude of farmers towards KVK training programmes: A study in Manipur. *The Pharma Innovation Journal*, 12(2): 3234-3236
288. PS Mariam Anal, Arwankie Shadap and Chandra Deo. (2023). Performance of different varieties of turmeric under the influence of micro nutrient management at the foot hills of Eastern Himalayas. *The Pharma Innovation Journa*l, 12(3): 1942-1945
289. PS Mariam Anal, Arwankie Shadap and Chandra Deo. 2023. Performance of different varieties of Turmeric under the influence of micronutrient management at the foot hills of eastern Himalayas. *The Pharma Innovation Journal*. 12(3):1942-1945.
290. Punabati Heisnam, Priyanka Irungbam, T Matouleibi Chanu, M Bishwapati Devi, Arunkumar Phurailatpam, BN Hazarika and AsishSingha R. 2022. Integrated sources of nitrogen on the growth, yield, quality and economics of aromatic rice and their residual effect on succeeding lentil under rice-lentil crop sequence. The Pharma Innovation Journal. 11(9S): 529-534.
291. R. Buragohain (2022). A study on nutritional status and performance of broilers under backyard management for nutritional intervention and profitable farming in Mizoram. *Biological Forum*. 14(4): 562-566.NAAS Score/ID – 5.04/I073
292. R. Buragohain and B.N. Saikia (2022). Effect of fermented liquid feed (FLF) on performance and feed efficiency of Large White Yorkshire (LWY) pigs under tropical climate of North-East India. *Asian Journal of Dairy and Food Research*.41 (2):205-212. NAAS Score/ID – 5.04/I073
293. R. Buragohain and K. Upadhyaya (2022). Economic feeding of pigs in Mizoram: A field study for assessment of nutritional constraints and identifying the useful local feed resources for economic feeding. *International Journal of Bio-resource and Stress Management*. 13(4): 357-364.NAAS Score/ID – 5.95/I061
294. R. Buragohain, B.N. Saikia and A. Bora (2022). Effect of fermented liquid feed on blood biochemical parameters of Large White Yorkshire grower-finisher pigs. *Veterinary Practitioner*. 23(2): 405-409.NAAS Score/ID – 5.04/I073
295. R. Choudhury, I. Sarangthem, A.H. Singh, K.N. Devi, N.O. Singh (2022). Studies on the yield of broccoli (*Brassica oleracea* var. *italica*) as influenced by boron application in acid soil. *The Pharma Innovation Journal* 11(4): 595-601
296. R. Joseph Koireng, Diana Shamurailatpam, T. Sunanda Devi, S. Dayananda Singh, Pushparani Senjam, Sonika Yumnam, Nilima Karam, L. Sophia Devi and Kholu Mary (2022). Impact of Mineral and Organic Fertilizer Management on the Performance of Oat-Chickpea Cropping Systems. Sustainability, 14 (22), 15431 https://doi.org/10.3390/su142215431
297. Rafael Alvarado, Lizeth Cuesta, Pavan Kumar, Abdul Rehman, Muntasir Murshed, Cem Işık, Nora Vega, Santiago Ochoa-Moreno, Brayan Tillaguango, (2022) Impact of natural resources on economic progress: Evidence for trading blocs in Latin America using non-linear econometric methods, Volume 79, 102908. Resources Policy (Impact Factor-8.22). https://doi.org/10.1016/j.resourpol.2022.102908
298. Rafiya Choudhury, Indira Sarangthem, A Herojit Singh, K Nandini Devi and N. Okendro Singh (2022). Studies on the yield of broccoli (*Brassica oleracea* var. *italica*) as influenced by boron application in acid soil, *The Pharma Innovation Journal*, 11(4): 595-601.
299. Rahul Sadhukhan, Dinesh Kumar, Suman Sen, Seema Sepat, Avijit Ghosh, Yashbir Singh Shivay,Mahesh Chand Meena, Anjali Anand, Rajesh Kumar, Laimayum Devarishi Sharma, Kiranmoy Patra, Vijay Pratap, Amnah Mohammed Alsuhaibani, Ahmed Gaber and Akbar Hossain. (2023). *Precision Nutrient Management in Zero-Till Direct-Seeded Rice Influences the Productivity, Profitability, Nutrient, and Water Use Efficiency as Well as the Environmental Footprint in the Indo Gangetic Plain of India*. Agriculture, 13, 784. https://doi.org/10.3390/agriculture13040784
300. Rahul Sadhukhan, L. Devarishi Sharma, Pritam Saha, Lalhmingsanga, C.G. Sawant, Amarjeet Kumar, Liman C Konyak, Loino K Chishi and SijiKathManagement of morphological attributes of local landraces of maize (*Vaimim*) by the *Lushei*and*Paihte*communities of Mizoram, North East India *Ann. Agric. Res. New Series Vol. 43 (3) : 51-55 (2022)*(NAAS 2022 rating: 4.78)
301. Rahul Sadhukhan, L. Devarishi Sharma, Pritam Saha, Lalhmingsanga, C.G. Sawant, Amarjeet Kumar, Liman C Konyak, Loino K Chishi and Siji Kath.2022.

Management of morphological attributes of local landraces of maize (Vaimim) by the Lushei and Paihte communities of Mizoram, North East India. *Ann. Agric. Res*. New Series 43 (4): 404-408.

302. Rai, M., and Tyagi, W. (2022). Haplotype breeding for unlocking and utilizing plant genomics data. *Frontiers in Genetics* 13. doi: 10.3389/fgene.2022.1006288. eCollection 2022.NAAS Score/ID – 5.84/A090

303. Raigar, R. K. and Mishra, H. N. (2022). Ready-to-eat high-energy food paste stability and shelf life prediction in different packaging materials. *Applied Food Research*, https://doi.org/10.1016/j.afres.2022.100230

304. Raja Debnath, Amitava Ghosh, Biswajit Lahiri, Yumlembam Jackie Singh, A.D. Upadhyay and Sampa Baidya (2022).Advisories on Fish Farming in Tripura for Coping with COVID 19: An Outlook, Fishery Technology 59 (2022), 303-310

305. Rajasekhar D, Naveenkumar KL, Pandey PK and Sen D. 2022. Analysis of morphological variation, grouping and path coefficient studies in a set of maize inbred lines local to North East Hill Region of India. International Journal of Plant & Soil Science, 34(17): 105-113.(NAAS 2022 rating: 5.07)

306. Rajkhowa T. K., Zodinpui D., Bhutia L. D., Islam S.J., Gogoi A., Hauhnar L., Kiran, J., Choudhury O. P.. (2023).Emergence of a novel genotypeof class II New Castle Disease virusin North Eastern States of India. *Gene 864 (2023) 147315* NAAS rating=10

307. Rakkannan, G.,Kashyap, S., Debnath, B.,Sahoo,D., Singh,Y.S.,Patel,A.B.,Priyadarshi ,H.(2023). Microsatellite maker analysis reveals the low genetic diversity in an endangered fish, Osteobrama belangeri in the Indo-Myanmar region. *Research Square*. DOI: https://doi.org/10.21203/rs.3.rs-2680847/v1.

308. Ralte Lalmalsawma, N. Surbala Devi, A Herojit Singh, Jamkhogin Lhungdim, Gopimohan Singh and Ningthoujam Babulu. (2022). Effect of rock phosphate, farm yard manure and phosphorus solubilizing bacteria on phosphorus concentration and dry matter yield of pea. *The Pharma Innovation Journal*. SP-11(11): 164-167.

309. Ralte V, Ali MA, Gail J, Tolenkhomba TC and Mayengbam P. 2022. Cold stress elevates HSP70, TLR2 and TLR4 of indigenous chicken *Indian Journal of Animal Sciences* 92(2): 187-188.

310. Rambabu Dasi, Nabakishor Nongmaithem, L Nondrenkhomba Singh and RimamayKonjengbam (2022). Morphological characterization of *Exserohilumturcicum* on different isolates causing turcicum leaf blight of maize in Manipur. *The Pharma Innovation*. 11(9): 3151-3155.

311. Rather MA, Gupta K, Gupta AK, Mishra P, Qureshi A, Dutta TK, Joardar SN and Mandal M (2022). Phytochemical analysis and demonstration of antioxidant, antibacterial, and antibiofilm activities of ethnomedical plants of North East India. *Applied Biochemistry and Biotechnology*. https://doi.org/10.1007/s12010-022-04273-0.

312. Ray, L.I.P., Swetha, K., Singh, A.K., and Singh, N.J. 2023. Water Productivity of Major Pulses- A Review. *Agricultural Water Management* (281):108249 doi.org/10.1016/j.agwat.2023.108249

313. Reginah Pheirim, Noren Singh Konjengbam and Mayurakshee Mahanta (2022) Simple sequence repeat markers association study of powdery mildew resistance in field pea (*Pisum sativum* L.) *Indian Phytopathology* https://doi.org/10.1007/s42360-002-00572-yNAAS Score/ID – 3.51/J079

314. Rojeet Thangjam, Veronica Kadam, P D. Nath and R K Borah. 2022. Insect Vectors Associated With Viral Diseases of King Chilli (*Capsicum Chinense* Jacq.) in North East India. *Indian Journal of Entomology* Online published Ref. No. e22227

315. Rout, B., Mehta, N. K., Tripathi, H. H., Sharma, S., Majumdar, R. K., Priyadarshini, M. B. (2022). Preliminary investigations on antimicrobial, antioxidant and nutritional properties of freshwater snail *Brotia costula* (Rafinesque, 1833). *Indian Journal of Fisheries*, *69*(2), 100-110. DOI: 10.21077/ijf.2022.69.2.116838-12. [NAAS rating: 6.59]

316. Roy, S., Kumar, V., Behera, B. K., Parhi, J., Mohapatra, S., Chakraborty, T., & Das, B. K. (2022). CRISPR / Cas Genome Editing - Can It Become a Game Changer in Future Fisheries Sector? *Frontiers in Marine Science*, *9*, 924475.

317. Rubyta Chanam, Girin Kalita, Ranjana Goswami, Hemen Das, Biren Das (2022). Comparative study on performance of young pigs fed with diet containing skimmed milk & milk replacer during pre and post weaning periods. *Asian Journal of Dairy and Food Research.* June, 2022.NAAS Score/ID – 4.75/A097

318. RubytaChanam, GirinKalita, RanjanaGoswami, Hemen Das, Biren Das (2022).Comparative Study on Performance of Young Pigs Fed with Diet Containing Skimmed Milk and Milk Replacer during Pre and Post Weaning Periods.*Asian Journal of Dairy and Food Research*. 10.18805/ajdfr.DR-1888

319. Ruchika Pukhram, Dr. U Chaoba Singh, N. Gopimohan Singh, Dr. A. Herojit Singh and Dr. AK.

Bijaya Devi (2023). Effect of farm yard manure in conjunction with biofertilizers on growth, flowering and yield of gladiolus (*Gladiolus grandifloras* L.) cv. Oasis in acidic soil condition of Manipur. *The Pharma Innovation Journal,*12 (3): 576-580

320. Ruhiwanse Lamare, Indira Sarangthem, A Herojit Singh, Edwin Luikham, Gopimohan Singh, N Surbala Devi, L Devarishi Sharma, Nevidita Oinam and Ralte Lalmalsawma (2022). Distribution and characterization of boron in soils of Imphal-West district. *The Pharma Innovation Journal* 12(1): 1597-1601

321. S. Kumar, I. Sarangthem, N.S. Devi, Kn Devi, Ng. Singh (2022). Effect of zinc nutrition on economic productivity of rice (*Oryza sativa*) and soil biological properties. *The Indian Journal of Agricultural Sciences* 92(3), 420–423.

322. S. Sivasankar and Singh, R. (2022) Price spread of cultured fish in Meghalaya: A case study in East Khasi Hills district, *Indian Journal of Agricultural Marketing*, ISSN: 0971-8664, 35 (3), page 21-3. NAAS Score/ID – 8.06/J396

323. Sabyasachi Majumdar and Nagabovanalli B. Prakash, 2022, Relationship of properties of rice and sugarcane soils and plant available silicon in Karnataka, South India. *Silicon*, 14(2): 5647-5660. (NAAS 2022 rating: 8.94)

324. Sabyasachi Majumdar, Laxmanarayanan, M., Kapudeep Karmakar and Prakash, N. B., 2022, Book Review on Soil Analysis, *European Journal of Soil Science*: DOI: 10.1111/ejss.13259.(NAAS rating: 10.98)

325. Sadhan Debnath, Ng. Tombisana Meetei, Mayank Rai (2022). Advancement in Genomics and Molecular Marker Technologies for Breeding of Faba Bean with Low Vicine- Convicine Content - A Review. *Legume Research* doi.org/10.18805/LR-5041 NAAS Score/ID – 4.99/J106

326. Saha, S., Dhara, K,. Pal, P., Saha, N.C., Faggio, C.,Chukwuka,A.V.(2022) .A.V Longer-Term Adverse Effects of Selenate Exposures on Hematological and Serum Biochemical Variables in Air-Breathing Fish *Channa punctata* (Bloch, 1973) and Non-air Breathing Fish *Ctenopharyngodon Idella* (Cuvier, 1844): an Integrated Biomarker Response Approach (2022).: *Biological Trace Element Research* .https://doi.org/10.1007/s12011-022-03449-3. [NAAS rating: 10.08]

327. Saha,S., Dhara,K., Chukwuka, A.V.,Pal,P., Saha, N.C., Faggio, C.(2023). Sub-lethal acute effects of environmental concentrations of inorganic mercury on hematological and biochemical parameters in walking catfish, *Clarias batrachus*. *Comparative Biochemistry and Physiology C-Toxicology & Pharmacology*. 264(109511). [NAAS rating: 10.52]

328. SahooBimal Kumar, Pathak Mahesh, Kalita Hia, Haritha Sikha, Dutta Pranab, Kennedy Ningthoujam, PatidarR.K., Thakur N.S.A. (2022). Evaluation of Synergistic Effect of Insecticides and *Metarhizium anisopliae* (Metchnikoff) Sorokin for the Management of Sucking Pests of Rice. *Indian Journal of Hill Farming* 35 (2).

329. Saikia B., Paul R.,Sarma K., Das H., Lalmuanthanga C., Lallianchhunga M.C. and Chaudhary J.K.(2022). Haemato-biochemical profile in glycopyrrolate premedicated dogs maintained with isoflurane anaesthesia with induction of propofol, ketofol and etomidate. *Haryana Vet.,* 61(SI):60-63.

330. Samal P, Sinha B, Singh LNK, Devi PS, Haldhar SM, Singh NGM, Chakrapani K and Pati S. 2022. Optimization of pH, temperature, and sugar concentration for the growth of *Rhizoctonia solani* incitant of sheath blight of rice. *The Pharma Innovation Journal*, 11 (7): 37-42

331. Sanjay-Swami (2022). Water-energy-food nexus: A way forward for food security and sustainable agriculture. Editorial. *Acta Scientific Agricultural*, 6(7): 1-2.

332. Sarkar R, Kalita A, Choudhary OP, Kalita PC, Doley PJ and Debroy S. (2022). Observations on the cytomorphology and ultrastructure of the peripheral blood cells of native cattle (Zobawng) of Mizoram, India. *Microscopy Research & Technique*. DOI: 10.1002/jemt.24197.NAAS Score/ID – 5.23/T050

333. Sarkar R, Roychoudhury P, Kumar S, Dutta S, Konwar N, Subudhi PK and Dutta TK (2022). Rapid detection of *Actinobacillus pleuropneumoniae* targeting the *apxIVA* gene for diagnosis of contagious porcine pleuropneumonia in pigs by Polymerase Spiral Reaction. *Letters in Applied Microbiology*. doi:10.1111/lam.13749NAAS Score/ID – 5.58/T023

334. Sarkar S, Borthakur SK, Patra G, Lalrinkima H (2023). Surveillance of ectoparasite of dogs in the State of Tripura. *Journal of Entomology and Zoology Studies*, 11(1): 143-148.NAAS Score/ID : 5.66/E070

335. Sarkar, M. R., Dana, S. S., Ghosh, A. and Maity, A. (2022). Knowledge Level of the Fishers on Sustainable Development Measures of Rasik Beel Fisheries: An Exploratory Study. *Indian Journal of Extension Education*. 57(4): 41-45, DOI: 10.5958/2454-552X.2021.00141.9 [NAAS rating: 5.95]

336. Satya, M.S.S.C. and Sanjay-Swami (2022). Interactive effect of phosphorus and boron on their temporal soil availability under black gram [*Vigna mungo* (L.) Hepper] cultivation and nodulation in acid Inceptisol. *Legume Research: An International Journal,* DOI: 10.18805/LR-4877.

337. Saurav Debnath, Hitesh Bayan, Bedanga Konwar, Prava Mayengbam1and Kalyan Sarma (2022). Haematobiochemical Changes during Pain Management with Intraperitoneal Bupivacaine and Bupivacaine-dexmedetomidine in Dogs. *Indian Journal of Animal Research* DOI: 10.18805/IJAR.B-4848

338. Sawarkar A, Pradhan A, Yumnam S, Raman RB, Ghosh SC and Mukherjee S (2022). Principal component analysis, euclidean clustering of tossa jute (*Corchorus olitorius* L) Genotypes for the drought stress tolerance. *International Journal of Agriculture Sciences*, 14(12): 12126-12133

339. Seema Chettri and Bikram Singh (2022). Germination of pre-treated *Morus laevigata* Wall. seed under laboratory conditions at Pasighat in Arunachal Pradesh, India. *The Pharma Innovation Journal*, 11(9): 136-141.

340. Shailendra Kumar, Meinam Chanchan, AK Bijaya Devi, N Surbala Devi and N Gopimohan Singh (2022). Influence of graded levels of inorganic with organics and biofertilizers on growth and yield of turmeric (*Curcuma longa* L.) *The Pharma Innovation Journal* 2022; 11(9): 2086-2090

341. Shandhini J, K Nandini Devi, Diana Shamurailatpam, A Herojit Singh, N Gopimohan Singh, Saithala Mounika and Ganjare Rupesh (2023). Effect of foliar application of potassium nitrate on yield and energy of garden pea (*Pisum sativum* L.). *International Journal of Chemical Research and Development* 2022; 4(1): 15-20

342. Sharma Rohit, Chaudhary J.K., Kumar Sanjeev, Rewar Ranjit and Kumar Sandeep (2022) "Forecasting of milk production of crossbred dairy cattle by Autoregressive Integrated Moving Average (ARIMA) model", *Indian Journal of Dairy Science.* 75(4): 376-380.NAAS Score/ID – 5.23/T050

343. Sharma S. S., Mondal H. A. 2022. Optimization of aerial node mediated emergence and field performance in lower altitude of a higher altitude specific endangered medicinal plant, Valeriana jatamansi Jones. *Indian J. Genet*., 82(1): 81-88.

344. Sharma, P.B. and Devi, H.S. (2023) Regeneration characteristics of *Garcinia pedunculata*: utilization of adventitious embryony for mass multiplication. *Plant Cell Tiss Organ Cult* 152: 555–567. https://doi.org/10.1007/s11240-022-02430-1NAAS Score/ID – 5.23/T050

345. Sharma, S., Majumdar, R. K., Mehta, N. K. (2023). Bioactive compounds from the mosambi (*Citrus limetta*) peel and their fortification into tilapia surimi improve gelling and textural properties. *Biomass Conversion and Biorefinery*, 1-13. https://doi.org/10.1007/s13399-023-04142-8. [NAAS rating: 10.05]

346. Sharma, S., Majumdar, R.K. and Mehta, N.K.(2022). Gelling properties and microstructure of the silver carp surimi treated with pomegranate (*Punica granatum* L.) peel extract. *Journal of Food Science and Technology*:59(11), 4210-4220. [NAAS rating: 9.12]

347. Sharma,S., Majumdar, R.K.,Mehta,N.K., Nirmal, N.P. (2022). Effects of pineapple peel ethanolic extract on the physicochemical and Textural properties of surimi prepared from Silver Carp (*Hypophthalmicthys molitrix*):*Foods*, *11*(20), 3223; https://doi.org/10.3390/foods11203223,1-21. [NAAS rating: 11.56]

348. Shashidhar Viraktamath and Rojeet Thangjam. 2022. Description of four new species of *Lepidotrigona* (Hymenoptera: Apidae: Meliponini) from north-east India. *Zootaxa* 5175 (1): 001–030.

349. Sheikh, A., Singh, B., Haokip, S W., Wanchu, L., Deo, Chandra., Debnath, P., and Singh, A K. (2023). Impact of Exogenous Foliar Application of Micronutrients on Leaf Nutrient Status of Lemon [*Citrus lemon* (L.) Burm.]cv. Assam Lemon. *Journal of the Indian Society of Soil Science.*71 (1): 99-104. NAAS Score/ID – 5.57/J195

350. Sheileja T, Singh KM, Shantibala T, Haldhar SM & Singh KI. 2022. Nutritional aspects of edible insect, Coridiussp. (Hemiptera: Dinidoridae) of Manipur. *Journal of Agriculture and Ecology*, 14: 158-163; https://doi.org/10.53911/ JAE.2022.14223

351. Sher Singh, S., Josmee Singh, R., Devarani, L., Hemochandra, L., Singh, R. & Choudhury, A. (Feb, 2023). Construction of a Knowledge Test to Assess Rubber Growers' Knowledge of Rubber Plantation Development and Extension Schemes in North East India. *International Journal of Environment and Climate Change* 13(1), 42–47. NAAS Score/ID – 3.51/J079

352. Sherpa, K., Priyadarshini, M.B., Mehta, N.K., Waikhom, G., Surasani, V.K.R., Raju, D., Vaishnav, A., Sharma, S. and Debbarma, S., Blue Agave Inulin-soluble dietary fiber: Effect on technological

quality properties of pangasius mince emulsion-type sausage. *Journal of the Science of Food and Agriculture*. https://doi.org/10.1002/jsfa.12594

353. Shil, B., Lahiri, B., Pal, P., Ghosh, A., Biswas, P., Singh, Y. J. (2022). Determinants of adoption behaviour of the fish farmers of Pabda fish culture (*Ompok bimaculatus* Bloch, 1794) in Tripura, Northeast India. *Aquaculture International*, 30(4), 2017-2041. https://doi.org/10.1007/s10499-022-00885-9 [NAAS rating: 8.95, JCR Impact Factor: 2.953]

354. Shukla N., Kumar R., Upadhyay AK, Tiwari A, Singh NK, Mishra A., and Bhatt, P.(2022). Antimicrobial resistance pattern of E.coli (STEC) and enteropathogenic E. coli (EPEC). *The Pharma Innovation Journal.* SP-11(6): 1082-1085.NAAS Score/ID – 5.23/T050

355. Siddhartha Singh and Neelam Sharma. (2022). Biochemical and in silico molecular study of caffeic acid-O-methyltransferase enzyme associated with lignin deposition in tall fescue. *Amino Acids.* https://doi.org/10.1007/s00726-022-03225-6

356. Siddhartha Singh and Neelam Sharma. (2022). Biochemical and in silico molecular study of caffeic acid-O-methyltransferase enzyme associated with lignin deposition in tall fescue. *Amino Acids*. https://doi.org/10.1007/s00726-022-03225-6

357. Siddhartha Singh, Neelam Sharma, Anudeep B. Malannavar, Anila Badiyal and Prem Nath Sharma. (2022). Cloning and in silico characterization of cinnamyl alcohol dehydrogenase gene involved in lignification of Tall fescue (*Festuca arundinacea* Schreb.) *Molecular Genetics and Genomics* , 297: 437–447. https://doi.org/10.1007/s00438-022-01858-6

358. Siddhartha Singh, Neelam Sharma, Anudeep B. Malannavar, Anila Badiyal and Prem Nath Sharma. (2022). Cloning and in silico characterization of cinnamyl alcohol dehydrogenase gene involved in lignification of Tall fescue (*Festuca arundinacea* Schreb.) *Molecular Genetics and Genomics* , 297: 437–447. https://doi.org/10.1007/s00438-022-01858-6

359. Sindoora Nalajala, N. Brajendra Singh, M. Samuel Jeberson, E. V. D. Sastry, Sonika Yumnam, Bireshwar Sinha and Okendro Singh (2022). Genetic Variability, Correlation and Path Analysis in Mung Bean Genotype (*Vigna radiata* L. Wilczek): An Experimental Investigation. *International Journal of Environment and Climate Change* 12(11): 1846-1854

360. Singh KI, Devi KL, Singh TR, Singh CN, Devi CS, Haldhar SM and Singh TR. 2022. Insect pest complex of *Flemengia* species: a common host plant of lac insect. *J. Appl. Zool. Res*., 33(2):137-143.

361. Singh KI, Saravanan S, Singh TR, Devi CS, Haldhar SM, Singh TR and Devi KL. 2022. Effect of planting dates and certain microbial insecticides on the incidence of Plutellaxylostella (Linnaeus) in cabbage – crop-ecosystem. *J. Appl. Zool. Res*., 33(2):124-136.

362. Singh KI, Sekar GC, Singh Th R, Haldhar SM, Singh TR, Devi KL, Devi PS & Devi CS. 2022. Eco-friendly organic management of rust red flour beetle, Triboliumcastaneum (Herbst) under stored conditions. *Journal of Agriculture and Ecology*, 14: 113-124; http://doi.org/10.53911/JAE.2022.14216

363. Singh Mahak, Mollier R Talimoa, Pongener Nungshitula, Bordoloi L.J., Kumar Rakesh Chaudhary J. K., Katiyar Rahul, Khan M.H., Rajkhowa DJ and Mishra VK (2022) Linseed oil in boar's diet during high temperature humidity index (THI) period improves sperm quality characteristics, antioxidant status and fatty acid composition of sperm under hot humid sub-tropical climate, *Theriogenology:* Vol 189:127-136 ISSN: 0093-691X, [NAAS RATING – 8.74/ ID: T059].

364. Singh Mahak, Mollier R Talimoa, Pongener Nungshitula, Paton RN, Yadav Rekha, Chaudhary JK, Katiyar Rahul, Babu Subhash, Rajkhowa DJ and Mishra VK (2022) Effect of Artificial Insemination in comparison to natural mating on the reproductive performance and profitability of smallholder pig production system in Indian Himalaya, Frontiers in Sustainable Food Systems*:* doi: 10.3389/fsufs. 2022. 1067878 [NAAS JOURNAL RATING – 11].

365. Singh S D, Nongmaithem N, Konsam J, Senjam P and Shamurailatpam D (2022). Influence of planting density and nutrient level on sweet corn genotypes in north eastern Himalayan region*. Journal of Soils and crops.* 32 (1): 102-105.

366. Singh S D, Nongmaithem N, Konsam J, Senjam P and Singh N A (2022). Evaluation of soybean and green gram as intercrops with maize underdifferent row proportions in the north-eastern hill region, India. *Legume Research*. Online publication. DOI 10.1805/LR-4791

367. Singh S D, Ram V and Khoisnam N (2018). Effect of urine application on system efficiency and economics under Maize (*Zea mays*) and Toria (*Brassica campestris*) cropping system. International *Journal of current microbiology and applied sciences.* 7(2): 3008-3015.

368. Singh, R, Chiphang, S and Shivlal, AS (2023) Scenario of dairy sector in Ri-bhoi district of Meghalaya:

Stakeholders' perspective. Indi. Jour. Agril. Mktg., Conf Sl. 36(3), 2022, page 235-244, ISSN: 0971-8664.

369. Singh, R., Hehlangki Tyngkan, H; Manish Sharma, M and Chand, P (2023) Efficiency of Pineapple Production and its Determinants: A Case Study of Manipur. Indian Journal of Extension Education, Vol 59 (2) (April-June), pp 98-102, ISSN 0537-1996.
370. Singh, R; Chiphang, S; Feroze, SM; Devi, AA and Kumar, S (2022) Estimation of producer's surplus of large cardamom in Sikkim: A value chain mapping, *Indian Journal of Hill Farming*, Special Issue, 2021, Vol. 34, Page 257-263, 0970-6429NAAS Score/ID – 5.11/B084
371. Singh, R; Kumar, S;Passah, S and Feroze, SM (2022) Determinants of organic turmeric (*Curcuma longa*) cultivation in hill states of India: A logit approach, *Indian Journal of Agricultural Sciences* 92 (2): 240–244, ISSN: 0019-5022NAAS Score/ID – 6.44/I040
372. Singh, R; Kumar, S;Passah, S and Feroze, SM (2022) Determinants of organic turmeric (*Curcuma longa*) cultivation in hill states of India: A logit approach, *Indian Journal of Agricultural Sciences* 92 (2): 240–244, ISSN: 0019-5022NAAS Score/ID – 6.59/L014
373. Singh, R; Passah, S Singh, NA; Feroze, SM; Larinsangpuii, Devi, AA; Kumar, S. and Jhahjria, A (2022). Organic chilli production in the North Eastern Hill Region, India: value chain analysis for doubling farmers' income, *Agricultural Economics Research Review* 2021, 34 (2), 243-252, ISSN: 11092580NAAS Score/ID – 7.10/C203
374. Singh, Ram; Singh, NA; Chiphang, S.; Devi, LG and Kumar, S. (2022) Determinants of Organic Large Cardamom Production in North Eastern Sates of India: Logit Regression Analysis, *Economic Affairs*, Vol. 67 (2) (Spl.), pp. 81-86, March, 2022, ISSN : 0424-2513NAAS Score/ID – 5.15/I005
375. Singh, S.K., Meitei, M.M., Choudhury, T.G., Soibam, N., Biswas, P., Waikhom, G. (2022). Bacterial diseases in cultured fishes: an update of advances in control measures. *Bacterial Fish Diseases*, 307-335.
376. Singh, S.S., Singh, R.J., Devarani, L., Hemochandra, L., & Singh, R. (January-March, 2023). Development of Reliability and Validity of Social Cohesiveness Rating Scale (SCRS). *Indian Journal of Extension Education* 59(1), 139–141NAAS Score/ID – 5.11/I111
377. Singh, SB; Singh, Ram; Chiphang, S; Nongbri, B; Bey, BS; Singh, KJ and Hemochandra, L (July-September, 2022). Livelihood assessment of households in wetland of Manipur: A micro level study, *Indian Journal of Agricultural economics*, 77 (3): 508-520, ISSN: ***00195014*** NAAS Score/ID – 5.08/E026
378. Singh, Y. D., Das, D., Das, S., Swain, K. D., Pradhan, S., &Babu, P. J. (2022). Pharmacological activities of limonin from Khasi Mandarin as therapeutic applications. *Pharmacological Research-Modern Chinese Medicine*, 100181.
379. Singh,M.,Saha, H.,Saha,R.K., Singh,P.(2023). Comparative evaluation of anti-oxidant activity of ethanolic and aqueous extracts of different medicinal plants to be used as therapeutics in aquaculture.*The Pharma Innovation Journal* ; 12(1): 2291-2295. [NAAS rating: 5.23]
380. Sneha Adhikari· Anjali Joshi· Amarjeet Kumar· Narendra Kumar Singh· Rajesh Pratap Singh Response of teosinte derived maize lines towards banded leaf and sheath blight (BLSB) disease caused by *Rhizoctonia solani*. *Indian Phytopathology*. https://doi.org/10.1007/s42360-022-00523-7(NAAS 2022 rating: 5.95)
381. Soibam, H., Chanu, N. Y., Lego, N., Nyodu, T., Pandey, D.K., Begum, T., Lal, M. and T.S. Mehra (2022). Influence of organic Nutrients on Growth, Yield and Essential Oil Composition of Patchouli (*Pogostemon cablin* Benth.) Under Foothill Conditions of Arunachal Pradesh, India. *Journal of Essential Oil Bearing Plants*. 25 (3): 657-665.
382. Sonali Nakambam, P.P Singh, Neeraj Kumar, Mohammad Abbas Ahmad, Kennedy Ningthoujam, Debanand Biswas, Irom Sangjukta and Yogesh Kumar Patel. (2022). Estimation of grain damage and weight loss by *Callosobruchus chinensis* L. in pigeon pea in storage. *The Pharma Innovation Journal* 11(8): 1758-1762NAAS Score/ID – 5.55/I036
383. Songthat William Haokip, Barun Singh, L Wangchu, P Debnath, P Sarma, Ng Piloo, TS Mehra, KH Anush Sheikh (2022). Significance of Organic and Inorganic nutrients application on Fruit and Quality of Lemon cv. Assam Lemon under the foothills of Arunachal Pradesh. *The Pharma Innovation Journal,* 11(3): 881-884
384. Songthat William Haokip, Barun Singh, L. Wangchu, P. Debnath, P. Sarma, Ng. Piloo, T.S. Mehra and KH. Anush Sheikh. 2022. Significance of Organic and Inorganic nutrients application on Fruit and Quality of Lemon cv. Assam Lemon under the foothills of Arunachal Pradesh. *The Pharma Innovation Journal*, 11(3): 881-884
385. Songthat William Haokip, Barun Singh, L. Wangchu, P. Debnath, P. Sarma, Ng. Piloo, T.S. Mehra and Kh. Anush Sheikh (2022). Significance of organic and inorganic nutrients application on fruit and quality

of lemon cv. Assam Lemon under the foothills of Arunachal Pradesh. *The Pharma Innovation Journal 11(3):881-884.* (NAAS rating: 5.23)

386. Soumen Pati, Nabakishor Nongmaithem, PH Sobita Devi and Prajna Samal (2022). Effect of different sugar solutions, temperature and time interval on germination of uredospores of *Puccinia polysoara*Underw. Causing Polysora rust in maize (*Zea mays* L.). *The Pharma Innovation*. 11(7): 295-299.

387. Stevenson J.L., Kalita G., Goswami R., Das H., Sarma K., Ali M.A., Mayengbam P. and Tolenkhomba T.C.(2022). Effect Dietery Supplementation of Turmeric (Curcuma longa) On Performance of Young Pigs During Pre and Post Weaning Periods. *International Journal of Agriculture Sciences*, 14(4): 11228-11231.

388. Stevenson J.L., Kalita G., Goswami R., Das H., Sarma K., Ali M.A., Mayengbam P. and Tolenkhomba T.C. (2022). Effect of dietery supplementation of turmeric (*Curcuma longa*) on performance of young pigs during pre and post weaning periods. *International Journal of Agriculture Sciences*:14(4):11228-11231NAAS Score/ID – 5.23/ T050

389. Sunita Chetry, Kennedy Ningthoujam and Mahesh Pathak (2022). Effect of para-pheromones and food baits on capture of fruit flies (Diptera: Tephritidae) in Ri-Bhoi district of Meghalaya. *Indian Journal of Hill Farming* 35 (2): 142-146.NAAS Score/ID – 5.95/ I061

390. Swetha, K., Ray, L.I.P., Jyothi, K.S., Devi, T.I., Singh, A.K. and Singh, N.J. (2022). Development of water production functions for garden pea (*Pisum sativum* L.) under mid hills of Meghalaya. *Indian Journal of Hill Farming* 35(2): 209-217

391. Talamarla Yeswanth Mahidar Gowd, Chandra Deo, Dalasanuru Chandregowda Manjunathagowda, Vijay Mahajan, Nangsol Dolma Bhutia, Barun Singh (2023). Allelic variability and transferability of *atp6* gene among *Allium* species. *Genetic Resources and Crop Evolution,* 70(1) : 281-287

392. Talukdar D. , Sarma K., Konwa B., Tolenkhomba T.C., Talukdar P., Islam S. J., Deka A. and Garg A.(2022). Clinico-haemato-biochemical and Pathological Alteration of Pyometra in Canines. *Indian Journal of Animal Research,* DOI. 10.18805/IJAR.B-4684.

393. Talukdar D., Sarma, K., Konwar, B., Tolenkhomba, T.C., Talukdar, P., Islam, S.J., Deka, A. and Garg A. (2022). Clinico-haemato-biochemical and Pathological Alteration of Pyometra in Canines. *Indian Journal of Animal Research*. DOI: 10.18805/ IJAR.B-4684.

394. Talukdar, D., Luwang, A.D., Lalrintluanga, K., Tolenkhomba, T.C., Das, H., Kalita, G. and Sarma, K. (2023). Assessment of Libido and Semen Quality of Boar by using low cost Portable Wooden Dummy Sow. *Indian Journal of Animal Research*. doi: 10.18805/IJAR.B-5022.

395. Talukdar, D., Luwang, A.D., Lalrintluanga, K., Tolenkhomba, T.C., Das, H., Kalita, G. and Sarma, K. (2023). Assessment of Libido and Semen Quality of Boar by using Lowcost Portable Wooden Dummy Sow. *Indian Journal of Animal Research*. doi: 10.18805/IJAR.B-5022.NAAS Score/ID – 7.19

396. Talukdar, D., Sarma, K., Kalita, G., Rahman, S., Goswami, R., Chethan, G.E., Das, H. and Konwar, B. (2022). Role of Animal Husbandry Practice in Upliftment of Socioeconomic Status of Mizo Farmer: A Review. *Bhartiya Krishi Anusandhan Patrika*. doi: 10.18805/BKAP572.

397. Talukdar, D., Sarma, K., Kalita, G., Rahman, S., Goswami, R., Chethan, G.E., Das, H. and Konwar, B. (2023). Role of Animal Husbandry Practice in Upliftment of Socioeconomic Status of Mizo Farmer: A Review. *Bhartiya Krishi Anusandhan Patrika*. doi: 10.18805/BKAP572.

398. Talukdar, D., Sarma, K., Konwar, B., Talukdar, P. and Deka, A. (2022). Clinico-pathological alterations of pyometra in cat. *Indian Journal of Animal Research.*

399. Talukdar, D., Sarma, K., Konwar, B., Talukdar, P. and Deka, A. (2022). Clinico-pathological Alterations of Pyometra in Cat. *Indian Journal of Animal Research*. DOI: 10.18805/ IJAR.B-4723

400. Talukdar, D., Sarma, K., Konwar, B., Talukdar, P. and Deka, A. (2022). Clinico-pathological Alterations of Pyometra in Cat. *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4723. (1-6). NAAS Score/ ID – 6.44/I040

401. Talukdar, D., Sarma, K., Konwar, B., Tolenkhomba, T. C., Talukdar P., Islam, S. J., Deka, A. and Garg A. (2022). Clinico-haemato-biochemical and Pathological Alteration of Pyometra in Canines. *Indian Journal of Animal Research.* DOI: 10.18805/ IJAR.B-4684.NAAS Score/ID – 9.25

402. Th.Nepolian Singh, N. B. Singh, Th.Renuka Devi, Kh.Pramesh, S Bhuvaneswari, B Sinha (2022). Molecular identification of blast resistant genes in rice germplasm from the North-eastern region of India, *Agricultural Mechanization in Asia*, *Africa and Latin America,* 2022/11, 53(11):10491

403. Thakuria, Dwipendra, Chayanika Chaliha, Pranab

Dutta, Sakshi Sinha, Panchali Uzir, S. Basanta Singh, Samarendra Hazarika, Lingaraj Sahoo, L. L. Kharbikar, and Dinesh Singh (2023). Citrus Huanglongbing (HLB): Diagnostic and management options. *Physiological and Molecular Plant Pathology*: 102016.

404. Thounaojam Sheileja, Tourangbam Shantibala and K Mamocha Singh (2022) Nutritive value of bamboo worm Omphisa fuscidentalis (Lepidoptera: Crambidae): An edible insect as protein rich food. *The Pharma Innovation Journal 2022*; 11(7): 2229-2233.NAAS Score/ID – 5.04/I073

405. Tridip Kumar Hazarika, Basik Tayeng, Rody Ngurthankhumi, Esther Lalruatsangi, Kalidas Upadhyaya and Nicolee Lyngdoh, (2022). Unlocking wild edible fruits of Indo-Burma biodiversity hotspot, Arunachal Pradesh, India, to support food security and sustainable rural livelihood. *Sustainability*. 14(16088). 1-14 pp.

406. Tridip Kumar Hazarika, Lalnunpuia Varte, Vabeiryureilai Mathipi, Lalrinzuali Khawlhring, Esther Lalruatsangi, Panthor Debbarma and Nachimuthu Senthil Kumar. (2023). Phytochemical constituents, antioxidant activities and cytotoxicity assays of few wild edible fruits of North East India. *International Journal of Food properties*. 26(1). 1020-1035.

407. Tumula Rushi Kumar, N. Devachandra, P.K. Nimbolkar, A.S. Mailappa, Arwankie Shadap,N.T. Chanu and L. Wangchu. (2023). Influence of Media, VAM (Vesicular Arbuscular Mycorrhizae) and Supplementary Nutrients on Growth of Khasi Mandarin Seedlings (*Citrus reticulata* Blanco). *Biological Forum – An International Journal*. 15(1): 294-301.NAAS Score/ID – 5.57/J195

408. Tyngkan, H; Singh, SB; Singh, R.; Nongbri, B. and Gogoi, J (2023) The adoption and impact of soil conservation in the hilly region of Meghalaya. Indian Journal of Agricultural Economics, 78 (1), pp 108-125.

409. Tyngkan, H; Singh, SB; Singh, Ram; Lyngkhoi, D; Nongbri, B; Jeemoni Gogoi, J.and Raja, B. (2022) An Economic Analysis of Soil Conservation in Meghalaya, *Economic Affairs*, Vol. 67 (1) (Spl.), pp. 101-106, ISSN : 0424-2513NAAS Score/ID – 5.23/T050

410. U. Boro, D. Talukdar, F.A. Ahmed, K. Lalrintluanga, G. Kalita, K. Sarma and S. Thakuria.(2022). Assessment of Suitable Fixed Timed Artificial Insemination Protocols for Therapeutic Management of Post-Partum Anestrous Cow in the Foothill of Eastern Himalaya. *Iranian Journal of Applied Animal Science,* 12(3), 461-469.NAAS Score/ID – 4.85/J239

411. Upadhyay, A., Pal, P., Pandey, P.K., Singh, Y.J. (2022). Impact of COVID-19 on Consumption of Fish and Other Meats in NE Region of India. Economic Affairs. 67. 37-42. 10.46852/0424-2513.2.2022.7. [NAAS rating: 5.08]

412. Upadhyay, S., S., Choudhary, M., Singh, P.K., Loitongbam, B., Bisen, P., Verma, O.P., Behara, S., Singh, N. and R. K. Singh (2022). Genetic Architecture and Association Studies for Grain Yield and its attributing Traits in Recombinant Inbred Lines for Sodicity Tolerance in Rice (*Oryza sativa* L.); *International journal of bioresource and stress management*, 13(5):519-526

413. Ushasri B, Singh KI, Haldhar SM, Devi TB, Jidung Lakshmi, Gokulnath R and Singh LNK. 2022. Bio-efficacy of ground plant powders on the population of Triboliumcastaneum(Herbst) in stored green gram.*Journal of Agriculture and Ecology*, 14: 37-43. http://doi.org/10.53911/JAE.2022.14206

414. Utpal Boro, Dibyajyoti Talukdar, Fazal Ali Ahmed, K. Lalrintluanga, Girin Kalita, Kalyan Sarma and Sunita Thakuria. (2022). Assessment of Suitable Fixed Timed AI Protocols for Therapeutic Management of Post-Partum Anestrous Cow in the Foothill of Eastern Himalaya. *Iranian Journal of Applied Animal Science*, 12(3): 461-469.

415. V.A. Aneesha, AsifQayoom, S. Anagha, Shah Ayub Almas, V.K. Naresh, Sanjay Kumawat, W. Ramdas Singh, Abdul Sadam, M. Dinesh, T.S. Shyamkumar, MonalisaSahoo, Madhu C. Lingaraju, T.U. Singh, Dinesh Kumar (2022). Topical bilirubin-deferoxamine hastens excisional wound healing by modulating inflammation, oxidative stress, angiogenesis, and collagen deposition in diabetic rats. *Journal of Tissue Viability*. 31(3), pp.474-484.NAAS Score/ID – 5.46/J170

416. Vastrad, J.V. and Kotur, R.S. (2022). Performance of protective hand gloves for vegetable plucking. *The Pharma Innovation Journal* 11(12):686-691NAAS Score/ID – 5.20/I031

417. Venkatesh K, Lallawmzuali Ralte*, Devajani Deka, JK Chaudhary and Michael V Lalrinzuala (2023) Survey on Socio-demographic profile of pet owners in Mizoram. *The Pharma Innovation Journal* 2023; 12(3): 1390-1393NAAS Score/ID – 5.11/B084

418. W. Ramdas Singh, Anshuk Sharma, Hijam Shila Devi, Anjali Bhatia, MadhuribahenRatishkumar Patel, Dinesh Kumar (2022). Icariin improves cutaneous

wound healing in streptozotocin-induced diabetic rats. *Journal of Tissue Viability.*Vol 31(1): 197-206. NAAS Score/ID – 7.10/C203

419. Y. Prabhabati Devi, P. Kshetri, I. Bhupenchandra, N. G. Piloo, H. N. Singh, A. K. Devi, R. Khangembam, P. Langamba, T. S. Singh, S. S. Roy and Y. J. Devi. 2022. Proximate and in-vitro bioactivity analysis of fruit tea infusions prepared with locally available fruits of Manipur, India. *Journal of Crop and Weed*, 18(1): 104-110.

420. Yadii, H., Devi, M.D., Ram, D., Upadhyay, A.D. (2022) Training Needs of Kiwi Growers in Subansiri District of Arunachal Pradesh. *Indian Research Journal of Extension Education* 22 (5), 132-136[NAAS rating: 5.95]

421. YS Devi, A Pandey, A Kumar, M Rai, W Tyagi (2022) Genetic Variability and Population Structure Analysis in Rice bean (*Vigna umbellata*) Genotypes from Northeast India. *Indian Journal of Genetics and Plant Breeding* 82: 04.NAAS Score/ID – 6.76/J195

422. Yumnam Rajlakshmi Devi, Deepak Singh Lourembam, Rahul Modak, Tourangbam Shantibala, Sinam Subharani, Yallappa Rajashekar (2022) Comparison of Gut Microbiota between Midgut of Healthy and Tiger Band Disease Infected Oak Tasar Silkworm, Antheraea proylei J. *Entomology and Applied Science Letters*. 9 (3): 1-11.NAAS Score/ ID – 5.04/I073

423. Yumnam, V. and Sanjay-Swami (2022). Performance of Lakadong turmeric (*Curcuma longa* L.) under integrated application of farm yard manure, vermicompost and chemical fertilizers. *Biological Forum – An International Journal,* 14(3): 515-520. ISSN: 0975-1130 (P), 2249-3239

424. Ziljia Moirangthem, Kennedy Ningthoujam, Mahesh Pathak, R. K. Tombisana Devi and R. K. Patidar. (2022). Efficacy of *Trichogramma pretiosum* and *Trichogramma japonicum* reared on two different factitious hosts and its response to different colours of Trichocard. *Indian Journal of Hill Farming* 35 (2): 138-146.

8.2. Books Published

1. Angad Prasad, Daya Ram, M. Deepa Devi, Indira Sarangthem (2022). Extension Education Research At a Glance. Delhi. Manish Publications. 467 pages.
2. Ankan De, J M Gali, Parthasarathi Behera, Sani Nandi. Practical Handbook on Veterinary Biochemistry & Biotechnology. ISBN: 978-93-94023-21-5. Satish Serial Publishing House, Delhi-110033
3. BhabeshMili (2023) "Multiple Choice Questions in Animal Physiology". India, Brillion Publishing, New Delhi, Page no.: 206. ISBN No: 978-93-92725-42-5
4. Bireswar Sinha (2022). Fusarium Diseases in Plants-Pathogenomics and Management, AGROBIOS RESEARCH, An Imprint of AGROBIOS (INDIA), Behind Nasrani Cinema, Chopasani Road, Jodhpur – 342003, p-390. (ISBN-978-93-94380-24-0)
5. Bora, P. K and Kusre, B C. (2022) Crop Environmental Engineering, Scientific Publisher, Jodhpur. 215 pp. ISBN 978-93-90749-46-1
6. C.G. Sawant. 2022. Pesticide Residues-Concerns, Regulations and Management. Narendra Publication House, New Delhi. 01-261 (ISBN:-978-9392-8519-02)
7. Chaudhary K.P., Chaudhary J. K., Hmar L., Sharma Ranjit, Ram Daya (2022) "Entrepreneurship in Livestock and Fisheries". [ISBN-978-93-92725-34-0, e-ISBN-978-93-92725-39-5]. Brillion Publishing, New Delhi.
8. Dutta T.K., Roychoudhury P., S. K. Behera, Gali J. M. and Chaudhary J. K. (2022) "Practical Handbook on Advanced Techniques in Veterinary Sciences". [ISBN-978-93-5620-571-0]. College of Veterinary Sciences and AH, Central Agricultural University (I), Aizawl, Mizoram.
9. Goyal, M.R. and Ray, L.I.P. 2022. Fertigation Technologies in Micro-irrigation Requirements, Efficiency, and Crop Performance. (Series: Vol-10: Innovations and Challenges in Micro Irrigation). Academic Press, CRC press-a Taylor and Francis group. 342 pages. [ISBN No. 978-1-77188-943-8(hbk); 978-1-77463-789-0(pbk); 978-1-00308-413-6(ebk)]
10. Gunjan Das and Dr. M.G. Jayathangaraj, Clinico-Pathological Techniques for Animal Disease Diagnosis, Edn-1st, LAMBERT Academic Publishing (ISBN No. 978-620-4-74596-1), (2022).
11. Haldhar SM, Sharma PT, Indira Sarangthem and Singh SB. 2022. Entrepreneurship Opportunities in Agriculture. Bhavya Books, New Delhi, pp-251; ISBN: 978-93-83992-70-6.
12. Heisnam, P., Singh, Y.D., Dutta, P., Chanu, T.M., Devi, M. B., Ngomle, S. and A. Moirangthem (20230. Organic farming practices in Hills. Published by CHF-Pasighat. Pp. 1-260. ISBN: 978-81-955225-0-7
13. Indira Sarangthem, L.K. Mishra, N. Surbala Devi and A. Herojit Singh. (2022). A Glance of Soil Science Research in Manipur North –East India. Daya Publishing House, A Division of Astral International Pvt. Ltd., New Delhi-110002. ISBN-978-93-5222-

155-4

14. Indira Sarangthem, S H Haldhar, Bireswar Sinha and L DevarishiSharma (2022). Determination of Soil & Plant Health for Agricultural Crops, p-136. (ISBN-978-81-947184-8-2)
15. Kripa Shankar, L. Wangchu, S. Romen Singh, Barun Singh and Dheeraj Singh (2022). The Passiflora. Published by Integrated Publication, New Delhi. ISBN No.978-93-93562-69-8
16. Kumar, A., Singh, J., Nigam, R., Sanjay-Swami, Agarwal, Y.K. and Lal, H. (2022). *Integrated Farming Systems and Sustainable Agriculture,* Biotech Books, New Delhi, India. pp. ix+264. ISBN: 978-81-7622-506-3
17. M. G. Jayathangaraj and Gunjan Das. (2022). A Text Book on Wildlife Medicine and Health Management, Edn-1st, NIPA GENX ELECTRONIC RESOURCES AND SOLUTIONS PVT LTD, India (ISBN No. 978-93-94490-53-6).
18. Mandal, S. C., Singh,Y. J., Ghosh, A., Saha, H. and Saha, R. K. (2022). Students' Innovations in Fisheries and Aquaculture, College of Fisheries, Central Agricultural University (Imphal) Lembucherra, Tripura (W)-799210, INDIA, ISBN : 978-93-5777-773-5
19. Narmada Hidangmayum and M.C. Arunkumar (2022), Behavioural Problem among Institutionalized Orphan Children in Manipur. In Mental Health Psycho-Social, Cognitive, Developmental and Interdisciplinary Approach, , Global Vision Publishing House, New Delhi
20. Ngomle, S., Eko, R., Singh, Y.D. and P. Heisnam (2023). A guide to mushroom Farming, Brillion Publishing. Pp 1-160. ISBN: 978-93-93980-75-5
21. Nigam, R., Singh, J., Sanjay-Swami, Husain, M., Kumar, H. and Jatav, R. (2022). *Practices and Techniques of Climate Smart Agriculture,* Biotech Books, New Delhi, India. pp. viii+227. ISBN: 978-81-7622-506-9
22. Pranab Dutta and Bahadur, A(2022) Diseases of Pulses crops and their management approaches. Published by Biotica, ISBN no. 9788194773931.
23. Rout, R K, Hatai, L D and Mishra, SN (2022) Horti-Business Management, Brillion Publishing, New Delhi, Pages: 482, ISBN-978-93-92725-61-6
24. S.K. Singh, A. S. Barman, H. Saha, R. K. Saha and J. Parhi (2022). Fish Processing and Value Addition in the Perspective of N. E. India". In: (eds.). Souvenir of International Conference RASHI-2022. Published by College of Fisheries, CAU (I), Lembucherra, Tripura. ISBN: 978-93-5780-069-3. pp. 91-96
25. Samares Kumar Das. 2022. Textbook on Livestock Marketing. Puspa Publishing House, Kolkata. ISBN: 978-93-84553-08-1. 127+vii
26. Sanjay-Swami (2022). *Advances in Hill Agriculture,* Vol. 5, AkiNik Books, New Delhi, India. pp. 95. ISBN: 978-93-5570-243-2. Book DOI: https://doi.org/10.22271/ed.book.1973
27. Sanjay-Swami (2022). *Advancing Innovations in Sustainable Agriculture,* Vol. 2, Vital Biotech Publication, Kota, India. pp. 304. ISBN: 978-93-92953-42-2.
28. Sanjay-Swami (2022). *Advancing Innovations in Sustainable Agriculture,* Vol. I, Vital Biotech Publication, Kota, India. pp. 291. ISBN: 978-93-92953-01-9.
29. Sanjay-Swami (2022). *Managing Hill Resources and Diversities for Sustainable Farming,* Biotech Books, New Delhi, India. pp. viii+203. ISBN: 978-81-7622-515-1
30. Sanjay-Swami and Hasan, W. (2022). *Advances in Climate-Smart Agriculture,* Vital Biotech Publication, Kota, India. pp. 270. ISBN: 978-93-92953-19-4
31. Sanjay-Swami and Singh, S. (2022). *Agro-technological Options for Resource Conservation and Management,* Biotech Books, New Delhi, India. pp. viii+187. ISBN: 978-81-7622-516-8
32. Sanjembam Sher Singh and Kishalayee Gogoi (2023) Natural Rubber Cultivation with special reference to North East India. Notion Publication, ISBN: 9798889751427, pg-1-155
33. Sanjembam Sher Singh, Anindita Saha and Singh R. J. (2023) Indigenous Farming system of Manipur in North East India. Lambert Academic, ISBN: 9786205640951, pg-1-64,
34. Seveda MS, Digambar NP and Kharpude SN (2021). Advances in Renewable Energy Engineering, Narendra Publishing House, Delhi, ISBN: 978-93-91063-93-1, Pages: 396.
35. Seveda MS, Digambar NP and Kharpude SN (2021). Bienergy Engineering, CRC Press, Taylor & Francis Group, England, UK.
36. Sharma Pratibha, Dutta P, Pandey KK, Rao GP, Singh D, Sharma S,Tarafdar, J, Dutta, Pranab, Jhambulkar, P, Sagar V,Kumar R, Tiwrai, R and Bairwa, A (2022) Compendium of vegetable crop diseases Published by Indian Phytopathological Society, ICAR-IARI, New Delhi, ISBN: 978-81-953723-2-4. Pp. 1
37. Singh KI, Haldhar SM and Maheshwari K. 2022. Scientific cares and management of *Apis cerana*

himalaya. Pub: College of Agriculture, CAU, Imphal pp-93; ISBN: 978-81-947184-6-8.

38. SM Feroze, Bireswar Sinha, Indira Sarangthem and SoibamBasanta Singh 2022Entrepreneurship in Agribusiness: Fundamentals and recent advances, 978-81-7622-528-1, Page 69, Biotech Books, New Delhi
39. Swaminathan, R. and N.Y. Chanu (2022). Ground Beetles in Agro-ecosystems of Southern Rajasthan (India). Apex Publishing House, Udaipur. Pp. 1-121. ISBN (10): 81-301-00-93-2, ISBN (13): 978-81-301-0093-7

8.3. Technical Bulletins/Training manuals Published

1. A Jolly Devi (2022). Training Manual on Incense sticks/Agarbatti Making (Natural Dhoop Fragrance & Mosquito Repellent), Panthi Offset Printers, Tura, Meghalaya/ College of Community Science, 15
2. A Study Manual on Economics and Marketing (BSH 350) for B.Sc (Hons.) Community Science by Lalrinsangpuii
3. A Study Manual on Economics and Marketing (SSC 111) for B.Sc (Hons.) Horticulture by Lalrinsangpuii
4. A.D. Upadhyay: Rajbhasha Hindi Magazine " Minakshi-2023" Issue 3 published by the Dean College of Fisheries, CAU (I), Lembucherra Tripura
5. Aimol, Kh.R.. 2022. Early Childhood Care and Education Training Manual, (Training manual)
6. Aimol, Kh.R.. 2022" Marriage and Family Dynamics"(Laboratory manual)
7. Ajaykumara K.M, S.M Hussain, Denisha, B.N. Hazarika, Toge Riba and Premaradhya N.2023. Insect pest of Paddy and their IPM.. (CHF/CAU/Extension Bulletin 08/2023.)pp-25
8. Ajaykumara K.M, S.M Hussain, N.Y.Chanu, B.N. Hazarika, Toge Riba and Premaradhya N.2023. Insect pest of Paddy and their IPM. (CHF/CAU/Extension Bulletin 05/2023.)pp-25
9. Ajaykumara K.M, S.M Hussain, R.C.Shakywar, B.N. Hazarika, N.Sumina Devi and T.Yatung.2023. Integrated Pest Management in Crucifers. (CHF/CAU/Extension Bulletin 06/2023.)pp-25
10. Ajaykumara K.M, S.M Hussain, S. Ngomle, B.N. Hazarika, P.K. Nimbolkar, T.Shantibala. 2023. Integrated pest management in khasi mandarin. (CHF/CAU/Extension Bulletin 07/2023.) pp-25
11. Ajaykumara, K.M., Hussain, S.M. Ngomle, S. and B.N Hazarika (2023). Integrated pest management in Khasi Mandarin. (CHF/CAU/Extension Bulletin/07/2023).
12. Ajaykumara, K.M., Shakywar, R.C. and S. Ngomle (2023). Technical bulletin on Integrated Pest and Disease management in Large Cardamom(ICARNCIPM/neh-tsp/PIC-GUIDE/2021-22/1)
13. Bahni Dhar (2022). Article on "Production of sheedal: a fermented fish product of N.E India" published in the training manual of 6 days non-residential training program on "Hands on Breeding and Seed Production of Carps and Catfishes" w.e.f. 12-17 Sept.
14. Bahni Dhar (2022). Article on "Traditional fishing gears used for fish harvesting in the water bodies of N.E. region" published in the training manual of the training program on "Design and Construction of Fish Farm for N.E
15. Baidya, S., Lahiri, B., and Debnath, A. (2023). Swadu Jole Mukta Chash. Booklet in Bengali by under Matsya Varta Project with financial assistance of Ministry of Electronics and Information Technology (MeitY), Govt. of India. College of Fisheries, CAU (Imphal), Manipur. (Pp-1-23).
16. Baidya, S., Lahiri, B., Patel, A. B., and Debnath, A. (2022). Samwanita Matsya Chash. Booklet in Bengali by under Matsya Varta Project with financial assistance of Ministry of Electronics and Information Technology (MeitY), Govt. of India. College of Fisheries, CAU (Imphal), Manipur. (Pp-1-16).
17. Behera, U.K., Bhuvana Priya, G., Premi Devi, M., Majumdar, Sabyasachi and Uma Devi, Ngangom. 2022. Natural Farming systems (BharatiyaPrakritik Krishi Paddhati). Technical bulletin No. 05. College of Agriculture, Central Agricultural University (Imphal), Kyrdemkulai, Ri Bhoi, Meghalaya, India, 52p.
18. Booklet- Production manual on Oyster Mushroom (2022) – H. Ramananda, Abhinash M., Punabati H and Jenny Th. Published by College of Agriculture, Iroisemba, CAU, Imphal under Mobile based Agro Advisory Services in Manipur.
19. Breeding and seed production of flower and ornamental crops FLS 322 (COH/SK/FLS -322/5)-Dipika Sarmah
20. C.G. Sawant, R. Lalrinfeli and Shri Dhar. 2023. Commercial Oyster Mushroom Cultivation. MTTC&VTC, College of Horticulture, Thenzawl.62 pages
21. Chand, G., Ngomle, S. and R. C. Shakywar (2022). Mushroom Production, College of Agriculture,

Pasigjat. Pp.12.

22. Choudhary RL, Mahanta D, Devi MP and Bhuvana Priya G (2022) Souvenir of National Conference on Natural Farming Systems and Biodiversity Conservation under Changing Climate Scenario. The NAAS Regional Chapter-Barapani, Meghalaya, International Union of Organic Agriculture, Shillong, Central Agricultural University (Imphal), Kyrdemkulai pp 1-354.
23. Das G, Mili B, Ralte, L and Saxena G (2022) College Profile, Published by the Dean, COVSc&AH, CAU (I), Jalukie, Peren, Nagaland-797110.
24. Das G, Mili B, Ralte, L and Saxena G (2023) College Profile, Published by the Dean, COVSc&AH, CAU (I), Jalukie, Peren, Nagaland-797110.
25. Determination of soil and plant health for agricultural crops. By Indira Sarangthem, S.M. Halder, B. Sinha and L. Devarishi Sharma (2022). Publisher: College of Agriculture, CAU, Imphal (Manipur)
26. Dipika Sarmah and A.K. Pandey (2023) Training manual Recent advances and value addition in Horticultural crops, 19-21st January, CAU/COH/Bermiok/2023/TM-01
27. Dutta Pranab, Sehgal M, Malik M, Gogoi J, Siyem R., Deb L, Mahanta M, Pathak M and Chander S. (2022). Bio- Intensive Pest Management: Adoption in Tribal Regions of Meghalaya. ICAR- National Research Centre for IPM, L.B.S. Building, Pusa Campus, New Delhi -110012 andCPGSAS, CAU(I), Umiam, Meghalaya-793103; pp. 37.
28. Feroze, SM; Chiphang, C and Singh, Ram (2022) Teaching-cum-practical manual on 'Agricultural Finance and Cooperation' AGECON-233
29. Fundamental Horticulture FSC 111 (COH/SK/FSC-111/1)- Yamuna Pandey and S. Vinodh.
30. Fundamental of Entomology PPS 122 (COH/SK/PPS-122/2) – Pukhram Bhumita
31. Fundamentals of extension education SSC- 323 - Mayanglambam Victoria Devi
32. G. T. Patle (2022). Drip irrigation and Maintenance manual for vegetable growers of Sikkim. Published by Digital India Corporation, Govt. of India, Pp. 1-10.
33. Ghosh, A. and Singh, Y. J. (2022). Communication Skills and Personality Development (FES 312), Department of Fisheries Extension, Economics & Statistics, College of Fisheries, Central Agricultural University (Imphal), Lembucherra, Tripura (W)-799210, INDIA
34. Goudar, P., and M. Kumar (2022). Millets (The ancient grains of India), College of Agriculture, Pasigjat. Pp.20.
35. Goudar, P., and M. Kumar (2022). Techniques and practices of Vermicomposting, College of Agriculture, Pasigjat. Pp.20.
36. H. Lalrinkima, Saidur Rahman, Lalhumliana Tochhawng, K. Lalawmpuii and Lalnuntluangi Hmar (2022). Common parasitic diseases of livestock and poultry in Mizoram. Published by: College of Veterinary Sciences & Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram. Page=22
37. H. Lalrinkima, Saidur Rahman, Lalhumliana Tochhawng, K. Lalawmpuii and Lalnuntluangi Hmar (2022). Mizorama rulhut leh a kaihhnawih natna tlangpui. Published by: College of Veterinary Sciences & Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram. Page=24
38. Haldhar SM, Devi YR and Singh SB. 2022. Status of agriculture in North Eastern Hill (NEH) region of India.*https://doi.org/10.5281/zenodo.6802618*
39. I. Shakuntala, M.G Jayathangaraj. (17 Jan 2023) Wildlife Bulletin, CoVSc& AH, Jalukie, Nagaland,12.
40. Kalkame Ch. Momin,Veluru Bhargav, Sunil Kumar and B.N. Hazarika. 2022-23. Cultivation of tuberose (*Polianthes tuberosa* L.) Publication no. 01/2023
41. Kencharaddi HG, Majumdar S, Devi MP, Mohapatra PP, Wanniang SK, Singh, LS and Das T (2022) Farmers Innovation Expo 2022 (A Mega Krishi Unnati Mela for NEH Region) on Integrated Agriculture for Rural Bio-Entrepreneurship and Livelihood Security. College of Agriculture, Central Agricultural University (Imphal), Kyrdemkulai, Ri Bhoi, Meghalaya, India, 103 pp
42. KeneisezoKuotsu, Laltlankimi, SashitolaOzukum, N. Bhumapati Devi and NeithonoKuotsu, Dr. M.G Jayathangaraj. (2022). Infectious Bursal disease, CoVSc & AH, Jalukie, Nagaland,8
43. KeneisezoKuotsu,SashitolaOzukum, Laltlankimi, LalchawimawiaRalte, N. Bhumapati Devi, and M.G Jayathangaraj. (2022). Canine Babesiosis, CoVSc& AH, Jalukie, Nagaland,10
44. Lahiri, B., Ghosh, A., Debnath, A., Debbarma, K., Debabrma, T., and Anurag, T. S., (2022). A ready reckoner on 'Frequently Asked Questions (FAQs)' in English, Bengali, and Kokborok languages under Matsya Varta project. College of Fisheries, CAU (Imphal), Manipur. (Pp-1-22).
45. Laltlankimi, Lalsangpuii, Amrit Gogoi, Bhabesh Mili, Sashitola Ozukum, Keneisezo Kuotsu, N. Bhumapati

Devi, and M.G Jayathangaraj. (2022) Urinalysis, CoVSc& AH, Jalukie, Nagaland,17

46. Laltlankimi, Lalsangpuii, Amrit Gogoi, Bhabesh Mili, Sashitola Ozukum, Keneisezo Kuotsu, N. Bhumapati Devi, and M.G Jayathangaraj. (2022) Kidney function tests in Canine and Feline,CoVSc& AH, Jalukie, Nagaland,13
47. Laltlankimi, Lalsangpuii, Amrit Gogoi, Bhabesh Mili, Sashitola Ozukum, Keneisezo Kuotsu, N. Bhumapati Devi, and M.G Jayathangaraj. (2022) Liver function tests in Canine and Feline, CoVSc& AH, Jalukie, Nagaland,14
48. Laltlankimi, Lalsangpuii, Gogoi, A, Mili, B., Ozukum S., Kuotsu, K., Bhumapati, N., Jayathangaraj, M. G. (2022). Technical Bulletin on Kidney Function Tests in Canine and Feline, PP-1-13. Published by the Dean, COVSc&AH, CAU (I), Jalukie, Peren, Nagaland-797110.
49. Laltlankimi, Lalsangpuii, Gogoi, A, Mili, B., Ozukum S., Kuotsu, K., Bhumapati, N., Jayathangaraj, M. G. (2022). Technical Bulletin on Liver Function Tests in Canine and Feline, PP-1-14. Published by the Dean, COVSc&AH, CAU (I), Jalukie, Peren, Nagaland-797110.
50. Laltlankimi, Lalsangpuii, Gogoi, A, Mili, B., Ozukum S., Kuotsu, K., Bhumapati, N., Jayathangaraj, M. G. (2022). Technical Bulletin on Urinalysis, PP-1-17. Published by the Dean, COVSc&AH, CAU (I), Jalukie, Peren, Nagaland-797110.
51. Leaflet – Nursery management practices of Carps (2022) – M.A.Salam, Abhinash M and A. Rawat. Published by College of Agriculture, Iroisemba, CAU, Imphal under Mobile based Agro Advisory Services in Manipur.
52. Leaflet – Rearing pond management of Carps (2022) – M.A.Salam, Abhinash M and A. Rawat. Published by College of Agriculture, Iroisemba, CAU, Imphal under Mobile based Agro Advisory Services in Manipur.
53. Leaflet – Value addition of King Chilli (*Capsicum chinense Jacq*.) (2022) - Ng. Piloo, Abhinash M. and Kenny Th. Published by College of Agriculture, Iroisemba, CAU, Imphal under Mobile based Agro Advisory Services in Manipur.
54. Leaflet- Covid 19 and the health benefits of small wonder 'The microgreens: The nutritious Superfood'.(2022) – Ch. Victoria Devi, Abhinash M and Punabati H. Published by College of Agriculture, Iroisemba, CAU, Imphal under Mobile based Agro Advisory Services in Manipur.
55. Leaflet on Major insect Pest of Rose and Thier Management, Lalhmingsanga, L.D. Sharma and Rahul Sadhukhan. 2022. (No. CAU/MTTC/Leaflet/13) by C.G.Sawant
56. Leaflet on Popularization and Demonstration of Oyster Mushroom Cultivation Technology 2023. (No. CAU/MTTC/Leaflet/12) by C.G.Sawant, R. Lalrinfeli, L.D. Sharma and Lalhmingsanga.
57. M.G Jayathangaraj, KeneisezoKuotsu, Sashitola Ozukum, N. Bhumapati Devi, Tukheswar Chutia, Neithono Kuotsu, and Laltlankimi. (2022). Constipation in pigs, CoVSc & AH, Jalukie, Nagaland,10
58. M.G Jayathangaraj, Sashitola Ozukum, Gunjan Das, Neithono Kuotsu and Keneisezo Kuotsu. (2022). ECG and its Clinical Application in Pet Animals, CoVSc& AH, Jalukie, Nagaland,24
59. M.G Jayathangaraj, Sashitola Ozukum, Keneisezo Kuotsu, Laltlankimi, Gunjan Das, and Neithono Kuotsu. (2022). Congestive Heart failure in Pet Animals, CoVSc& AH, Jalukie, Nagaland,30
60. Mahanand, S.S. (2022). Fish Pond Design and construction of carp hatchery. Dean College of Fisheries, Central Agricultural University (I), Lembucherra, pages 110.
61. Manual on Livestock Farm Complex (0+2): K.Merian Devi
62. Manual on Livestock Production management (4+2), (Unit-Imtiwati, K.Merina Devi and T.Gyaneshori Devi
63. Mili B (2022) Laboratory manual on Veterinary Physiology paper-II (Excretory and Endocrine Systems and Reproduction, Lactation, Growth and Environmental Physiology).
64. Mili B, (2022-23) Laboratory manual of Veterinary Physiology paper-I (Unit-I: & Unit-II).
65. Mili B, and Maibam U (2022-23) Laboratory manual of Veterinary Physiology paper-II(Unit-III: & Unit-IV).
66. Mishra, A., and Borah, M. 2022. Techniques of Fabric Construction (Laboratory manual)
67. N. BhumapatiDevi, Tukheswar Chutia, Sashitola Ozukumm, Keneisezo Kuotsu, Laltlankimi, M.G Jayathangaraj. (2022) Pyometra in Dogs, CoVSc& AH, Jalukie, Nagaland, 22.
68. N.Surmina Devi, Punabati H, N.Y.Chanu, Ch.Victiria Devi, S.K.Pattanaaik & B.N.Hazarika. 2022. Integrated Disease Management in Paddy. (Leaflet. CHF/M4agri/2022/F08)
69. N.Y.Chanu, Punabati H, N.Surmina Devi, S.K.Pattanaaik & B.N.Hazarika. 2022. Insect Pests of Paddy and their management. (Leaflet. CHF/

M4agri/2022/F09)

70. Nagar, S. 2022. Developmental Assessment of Young Children. (Laboratory manual)
71. Naresh Kumar Mehta, 2022. Transportation of fish, *In: Course manual of winter school on recent advances in fish processing and fish waste management (Editor SS Mahanand) (07/01/2020 to 27/01/2020). Published by* Dean, CAU-COF, Lembucherra, Pp:111-114.
72. Ngomle, S., Rajkhowa, D., Ajaykumara, K.M. and R. Das (2023). Technical Manual on Promotion of Scientific Beekeeping in Arunachal Pradesh (CoA/CAU/PME-Cell/22/01)
73. Niwas, R., Chand, G., Maurya, S. and Dhakar. D. (2022) Ganne ki Nursery, Kheti pp29-30.
74. P Behera, J M Gali, M Ayub Ali, T K Dutta, P Roychoudhury, P K Subudhi, S K Behera, H Lalrinkima. (2022). Training Manual on High end Scientific equipments for research excellence in North Eastern Region. ISBN: 978-93-5659-105-9. Published by: CVSc&AH., CAU (I), Selesih, Aizawl.
75. P. Bhumita and A.K. Pandey (2023). Identification/diagonistic disease and pest management of horticultural crops. (CAU/COH/Bermiok/2023/TM-03)
76. Plantation Crops FSC 221 – Yamuna Pandey and A.K. Pandey
77. Policy Brief on "Organic Cultivation in Strengthening farmer's Income: An Economic Analysis of Chilli" by Lalrinsangpuii
78. Policy Brief on "The Oil Palm dilemma in Mizoram: It's Ecological Impact and Economic benefits" by Lalrinsangpuii
79. Post harvest management of Horticultural crops PHM 311 (COH/SK/PHM-311/2)- S. Vinodh
80. Practical Manual- Determination of Soil & Plant Health For Agricultural Crops. College of Agriculture, Iroisemba, Central Agricultural University, Imphal-795004 by L. Devarishi Sharma
81. Practical Manual for Entrepreneurship Development & Business Management (SSC 322) for B.Sc (Hons.) Horticulture by Lalrinsangpuii
82. Practical manual on Principles of Genetics and Cytogenetics BSH-115 (COH/SK/BSH 115/5)- Rajeshkumar Singh and Diana Sagolsem
83. Practices of Hygiene in Quality Milk Production and Safety Issues ISBN:978-93-5737-311-1; Published by Devajani Deka
84. Principles of Landscape Architecture FLS 11 (COH/SK/FLS-111/1) – Dipika Sarmah and S. Vinodh (2022)
85. Priya, G.B. and Devi, M.P. (2022). Dairy animal wastes: Important ingredients of natural biopesticides and biofertilizers. Extension Folder No. 02. College of Agriculture, Central Agricultural University (Imphal), Kyrdemkulai, Ri Bhoi, Meghalaya, India, pp. 06.
86. Priya, GB and Behera, UK. (2022). Dairy based Integrated Farming Systems for rural bioentrepreneurship. Technical Bulletin No. 06. College of Agriculture, Central Agricultural University (Imphal), Kyrdemkulai, Ri Bhoi, Meghalaya, India, pp.28.
87. Punabati H, N.Surmina Devi, Y.Disco Singh, Priyanka I, S.K.Pattanaaik & B.N.Hazarika. 2022. Azolla. (Leaflet. CHF/M4agri/2022/F06)
88. Rajkhowa, D., Chand, G., Ngomle, S. and N. Y. Chanu (2022). Bee Keeping in Arunchal Pradesh, College of Agriculture, Pasigjat. Pp.16.
89. Rajkhowa, D., Chand, G., Ngomle, S. and N. Y. Chanu (2022). Honey Bee Flora in Arunchal Pradesh, College of Agriculture, Pasigjat. Pp.4.
90. Rajkhowa, D., Chand, G., Ngomle, S. and N. Y. Chanu (2022). IMP of Important Fruit Crops in Arunchal Pradesh, College of Agriculture, Pasigjat. Pp.20.
91. Sarangthem I, Haldhar SM and Sinha B. 2022. Determination of plant health for agriculture crops: practical manual. Pub: College of Agriculture, CAU, Imphal pp-110; ISBN: 978-81-947184-8-2.
92. Sashitola Ozukum, Keneisezo Kuotsu, Laltlankimi, N. Bhumapati Devi, M.G Jayathangaraj and Gunjan Das. (2022) Canine transmissible venereal tumour (CTVT), CoVSc& AH, Jalukie, Nagaland,9.
93. Sashitola Ozukum, Keneisezo Kuotsu. Laltlankimi, Lalchawimawia Ralte, NeithonoKuotsu and M.G Jayathangaraj. (2022) Canine Ehrlichiosis, CoVSc& AH, Jalukie, Nagaland,14.
94. T K Dutta, S K Behera,P Roychoudhury, R S Arya, J M Gali, P Behera, J K Chaudhary, H Lalrinkima. (2022).Training Manual on Emerging, re-emerging and trans-boundary animal diseases in India: Recent advances in diagnosis and control strategies.ISBN: 978-93-5593-870-1.Published by: CVSc&AH., CAU (I), Selesih, Aizawl.
95. Technical Manual on "Epidemiological Investigation of Food Borne Disease Outbreak" ISBN: 978-93-5812-979-3; Published by Devajani Deka and Lalnuntluangi Hmar
96. Technical Manual on "Epidemiological Approach in Disease Investigation ISBN: 978-93-5737-261-9;

Published by Devajani Deka

97. Temperate vegetables crops (COH/SK/VSC-222/3) – Yamuna Pandey, A.K. Pandey and S. Vinodh
98. Tropical & Subtropical fruit crops FSC 211 (COH/SK/FSC-211/3) – Yamuna Pandey and A.K. Pandey
99. Tropical & subtropical vegetables VSC 211 – (COH/SK/VSC 211/1)-S. Rajesh Kumar Singh
100. Veluru Bhargav, Kalkame Ch. Momin, Sunil Kumar and B.N. Hazarika. 2022-2023. Cultivation Of Gerbera (*Gerbera jamesonii).* Publication no. 02/2023
101. Weed management in horticultural crops FSC 213 (COH/SK/FSC- 213/5) – Sunil Kumar Chongtham
102. Yamuna Pandey and A.K. Pandey (2023) Quality transplant production of fruit crops (CAU/COH/Bermiok/2023/TM-02)


International Conference
on
"Natural Farming for
Revitalizing Environment and Resilient Agriculture"
NF – RERA - 2023
17th to 19th March, 2023
Organized by
CENTRAL AGRICULTURAL UNIVERSITY
IMPHAL, MANIPUR
Venue:
College of Agriculture, Iroisemba, CAU, Imphal, Manipur
MILLETS
NHEP
NABARD
GUEST OF HONOUR
PRESIDENT
CHIEF GUEST
COLLEGE
OF
AGRICULTURE
IROISEMBA
IMPHAL

9

VISITORS

VISITORS AT CAU, IMPHAL

The University witnessed the visits of 193 eminent personalities at different college campuses during the year 2022-23. The visitors included eminent administrators, scientists, faculties and progressive farmers of varied experiences.

9.1 College of Post Graduate Studies in Agricultural Sciences, Umiam, Meghalaya

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Shri Conrad K. Sangma	Hon'ble Chief Minister, Meghalaya	Inauguration of National/Zonal KVK Awardees with KVK Scientists of NEH Region (28th to 30th September, 2022)	28.09. 2022
2.	Smt. Mridula T. Pradhan	Chairperson Vikas Foundation Trust, Odisha	Inauguration of 12th Research Council and 8th Extension Education Council Meeting	17.12.2022 -19.12. 2022

9.2 College of Agriculture, Imphal

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Dr. Vinay Prabhakar Sahasrabuddhe	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
2.	Shri T.N. Prathapan	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports College of Agriculture, Iroisemba, Imphal	27th April, 2022
3.	Shri Rajendra Agrawal	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports College of Agriculture, Iroisemba, Imphal	27th April, 2022
4.	Shri Gopal Narayan Singh	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
5.	Shri S. Venkatesan	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
6.	Shri Dharambir Singh	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
7.	Shri Vishambhar Prasad Nishad	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
8.	Shri Asit Kumar Mal	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
9.	Shri Chandreshwar Prasad Singh	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
10.	Dr. Akhilesh Prasad Singh	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
11.	Shri K. C. Ramamurthy	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
12.	Shri Sangam Lal Gupta	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
13.	Shri Ratansinh Magansinh Rathod	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
14.	Shri Jagannath Sarkar	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
15.	Shri D.M. Kathir Anand	Member of Parliament, Govt. of India	Visit of Parliamentary Standing Committee on Education, Women, Children, Youth & Sports at College of Agriculture, Iroisemba, Imphal	27th April, 2022
16.	Dr. R.C. Agrawal	DDG (Education) and National Director, NAHEP, KAB-II, ICAR, New Delhi	Inauguration of Virtual Classroom, Incubation Centre and Language Laboratory	24th June, 2022
17.	Dr. R.C. Aggarwal	DDG (Education), ICAR, New Delhi	Attending National Level Meeting for developing Syllabus and curricula on Natural Farming at Undergraduate and Post Graduste level as per ICAR and NEP – 2020 gidelines	24th – 25th June, 2022
18.	Dr. P.S. Pandey	ADG (EQR), Education Division, ICAR, New Delhi	Attending National Level Meeting for developing Syllabus and curricula on Natural Farming at Undergraduate and Post Graduste level as per ICAR and NEP – 2020 gidelines	24th – 25th June, 2022

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
19.	Dr. A.R. Pathak	Ex-VC, JAU, Jungagadh, Gujarat	Attending National Level Meeting for developing Syllabus and curricula on Natural Farming at Undergraduate and Post Graduste level as per ICAR and NEP – 2020 gidelines	24th – 25th June, 2022
20.	Dr. V.S. Tomar	Ex-Vice Chancellor, JNKVV, Jabalpur, MP	Attending National Level Meeting for developing Syllabus and curricula on Natural Farming at Undergraduate and Post Graduste level as per ICAR and NEP – 2020 gidelines	24th – 25th June, 2022
21.	Dr. V.K. Mishra	Director, ICAR, Barapani	Attending National Level Meeting for developing Syllabus and curricula on Natural Farming at Undergraduate and Post Graduste level as per ICAR and NEP – 2020 gidelines	24th – 25th June, 2022
22.	His Grace Ramanuj Das	Vice President, ISKCON, Manipur	To participate in the Regional Seminar on Sustainable Development of North East India through nurturing BHUMI (soil): an Important Pancha Mahabhoot.	3 – 4 November, 2022
23.	Shri Gajendra Singh Shekhawat	Hon'ble Minister of Jal Shakti, Govt. of India	Attending the inauguration of 82nd Annual Conference of the Indian society of Agricultural Economics, Mumbai and Attending Interface Programme with farmers and NGOs on Climate change and wetland based livelihood in NE Region of India for achieving Sustainable Development Goals (SDG)	11th November, 2022
24.	Shri Awangbow Newmai	Hon'ble Minister of Water Resource, Govt. of Manipur	Attending the inauguration of 82nd Annual Conference of the Indian society of Agricultural Economics, Mumbai and Attending Interface Programme with farmers and NGOs on Climate change and wetland based livelihood in NE Region of India for achieving Sustainable Development Goals (SDG)	11th November, 2022
25.	Dr. K.M. Bujarbaruah	Former Vice Chancellor, AAU, Jorhat, Assam	Attending the 82nd Annual Conference of the Indian society of Agricultural Economics, Mumbai.	11th November, 2022
26.	Dr. Dinesh Kumar Marothia	President, ISAE, Mumbai	Attending the 82nd Annual Conference of the Indian society of Agricultural Economics, Mumbai.	11th November, 2022
27.	Dr. Suresh Pal	Former Director, ICAR-NIAP, ICAR, New Delhi,	Attending the 82nd Annual Conference of the Indian society of Agricultural Economics, Mumbai.	11th November, 2022
28.	Sushri Anusiuya Uikye ji.	Hon'ble Governor of Manipur, Govt. of Manipur	For attending the inaugural function of the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA- 2023)	17th March, 2023

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
29.	Shri Govindas Konthoujam	Hon'ble Works Minister, Govt. of Manipur	For attending the inaugural function of the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA – 2023)	17th March, 2023
30.	Shri Nishikanta Singh Sapam	Hon'ble MLA, Govt. of Manipur	For attending the inaugural function of the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA – 2023)	17th March, 2023
31.	Dr. P.S. Pandey	Vice Chancellor, RPCAU, Pusa, Bihar	For attending the the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA – 2023)	17th – 19th March, 2023
32.	Dr. A.K. Singh	Vice Chancellor, RLBCAU, Jhansi	For attending the the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA – 2023)	
33.	Dr. R.K. Ranjan Singh	Hon'ble Union Minister of State for Education and External Affairs, Govt. of India	For attending the Valedictory function of the International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA – 2023)	19th March, 2023

9.3 College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Sh. Kailash Choudhary	Union Minister of State for Agriculture & Farmers' Welfare (GoI)	Review Meeting of KVKs & ICAR Institutes	12th July, 2022
2.	Er. Shri Tage Taki	Minister of Agriculture, Horticulture, Diary & Fishries, Government of Arunachal Pradesh	Review Meeting of KVKs & ICAR Institutes	12th July, 2022
3.	Sh. Tapir Gao	Member of Parliament (East) Arunachal Pradesh	Review Meeting of KVKs & ICAR Institutes	12th July, 2022
4.	Sh. Narendra Singh Tomar	Union Minister of Agriculture & Farmers Welfare	Visit to the Campus and attended cultural event in CHF auditorium	5th January, 2023
5.	Sh. Tapir Gao	Member of Parliament (East) Arunachal Pradesh	Visit to the Campus and attended cultural event in CHF auditorium	5th January, 2023
6.	Sh. Kaling Moyong	MLA Pasighat (East) Constituency, Govt. of Arunachal Pradesh	Visit to the Campus and attended cultural event in CHF auditorium	5th January, 2023
7.	Sh. A.K. Johari	IFS (Retd.) Ex PCCF, Assam	ICFRE Accreditation Team: for accreditation of Forestry Courses	30th January, 2023

9.4 College of Fisheries, Lembucherra, Tripura

S. No.	Visitors' Name	Designation	Organisation/Address	Date of Visit
1.	Shri. Krishnadhan Das	Member of Legislative Assembly	Govt. of Tripura	28.04.2022
2.	Dr. Sheela, MN,	Director	ICAR-CTCRI, Thiruvananthapuram	09.05.2022
3.	Dr. Wangdup Bhutia	Conservator of Forests	Tripura Forest Department	05.06.2022
4.	Dr. Puranjan Das	Former DDG (Agri. Extn.)	ICAR, New Delhi	28.06.2022
5.	Dr. Manas Mohan Adhikary	Former Vice-Chanchellor	BCKV, West Bengal	28.06.2022
6.	D. K. Chakma	Director of Fisheries	Govt. of Tripura	10.07.2022
7.	Shri. Krishnadhan Das	Member of Legislative Assembly,	Govt. of Tripura	10.07.2022
8.	Mr. Shyam Dhar Dubey	AGM	SBI, Agartala	20.07.2022
9.	Dr. R.C Agarwal	DDG	Education	20.07.2022
10.	Sh. Sebastian Joseph	Regional Director	NCDC, Guwahati	20.07.2022
11.	Mr. Loken Das	General Manager	NABARD	12.08.2022
12.	Prof. S.K. Senapati	Director	Eklabya Parishad, CSU, Tripura	01.09.2022
13.	Mr. Surajit Ray	Director	T-SAMETI, Tripura	17.09.2022
14.	Ms Megha Jain	IAS, Govt. of India	Asst. Collector, West Tripura	18.01.2023
15.	Dr. Ganga Prasad Prassain	Vice-Chancellor	Tripura University	23.02.2023
16.	Dr. Sameer Bhattacharjee	Ex Director	Indian Institute of Chemical Biology, Kolkata	09.03.2023
17.	Dr. Manoj M Sharma	Farmer/Director	Mayank AQUACULTURE Pvt. Ltd. Surat, Gujrat	23.03.2023

9.5 College of Agricultural Engineering & P.H.T., Ranipool, Sikkim

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Dr. PS Pandey	ADG (Education), ICAR, New Delhi	To coordinate meeting of National Committee for Developing Syllabus & Curricula on Natural Farming"	05/05/2022
2.	Dr. AK Singh	DDG (Extension), ICAR, New Delhi	To Participate in the Meetings of Directors of different Zones of ATARI	07/05/2022 to 08/05/2022
3.	Dr. Randhir Singh,	ADG (Extension) PUSA, ICAR New Delh	To Participate in the Meetings of Directors of different Zones of ATARI	07/05/2022 to 08/05/2022
4.	Dr. VP Chahal	ADG (Extension) KAB-2, PUSA, ICAR New Delhi	To Participate in the Meetings of Directors of different Zones of ATARI	07/05/2022 to 08/05/2022

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
5.	Ms. Shobha Kayandlaje	Minister of State, Min. of Agriculture and Farmers Welfare, Govt of. India	To inaugurate Building of MTTC VTC, at CAEPHT Ranipool	09/05/2022

9.6 College of Food Technology, Imphal

S. No.	Visitors' Name	Designation	Organisation / Address	Purpose of Visit	Date of Visit
1.	Dr.R. C. Agrawal	Deputy Director General (Agricultural Education) and National Director, NAHEP	ICAR, New Delhi	Official	23 June, 2022

9.7 College of Agriculture, Kyrdemkulai, Meghalaya

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Dr. H.S. Gupta	Former Director (Retd.) ICAR-IARI, New Delhi	Inauguration of College Week	03.05.2023
2.	Prof. Dinabandhu Sahoo	Director Centre for Himalayan Studies, Delhi University, New Delhi	Celebration of World Environment Day	05.05.2022
3.	Smt. Rebecca Suchiang	Chief Secretary, Government of Meghalaya, Shillong	Chief guest of 7th Foundation Day of CoA, Kyrdemkulai	24.02.2022
4.	Mr. W Marbaniang	Director of Agriculture, Department of Agriculture and Farmers Welfare, Meghalaya	College Extension Education Advisory Committee (CEAC) meeting was held on	23.08.2022
5.	Dr. V.K. Mishra	Director, ICAR RC for NEH Region, Umiam, Meghalaya	Orchid Training Centre, Integrated Farming System model, Natural Farming system model, Bio-pesticide and Bio-Fertlizer unit, Biomass Recycling Unit	04.04.2022
6.	Shri. Narendra Singh Tomar	Honourable Union Minister, Agriculture & Farmers Welfare, Govt. of India	Inauguration of Academic cum Administrative building, and Girl's hostel	05.01.2023
7.	Shri K. Moses Chalai	Secretary, North Eastern Council, Shillong		
8.	Shri. Arpit Upadhyaya	Deputy Commissioner, Nongpoh, Govt. of Meghalaya		
9.	Dr. S.K. Choudhary	DDG (NRM), ICAR, New Delhi		
10.	Dr. S.N. Sushil	Director, ICAR-NBAIR, Bengaluru, Karnataka.	TSP Programme and National Conference	5-7 December 2022
11.	Prof. P.S. Shukla	Vice Chancellor. NEHU, Shillong		
12.	Mr. Dinesh Kulkarni	National Secretary, Bharatiya Kisan Sangh, New Delhi		

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
13.	Dr. Jagdish Rane	Director, ICAR–NIASM, Baramati, Pune	National Conference	5-7 December 2022
14.	C. K. Thankamani	Director, ICAR – Indian Institute of Spices Research, Kozhikode		
15.	Dr. Satyanarayan Rao	Dean, University of Agricultural Sciences, Raichur, Karnataka		

9.8 College of Community Sciences, Tura, Meghalaya

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Dr. S.K. Chaudhari	DDG-NRM ICAR, New Delhi	Visited the campus and interacted with faculty	19th July 2023
2.	Dr. V.K. Mishra	Director, ICAR, NEH, Barapani	Visited the campus and interacted with faculty	19th July 2023
3.	Dr. Manash Mohan Adhikari	Former Vice Chancellor, BCKV, West Bengal	Guest lecture series organized by NAHEP-IDP	15th Sept 2022
4.	Dr Puranjan Das	Former DDG (Extension) ICAR, New Delhi	Guest lecture series organized by NAHEP-IDP	15th Sept 2022
5.	Dr. Ginseppe Bertoni	Emiretus Scientist Department of Horticulture, Catholic University, Rome, Italy	Project collaboration and interaction with Agricultural experts	8th November 2022
6.	Mr. Swapnil Temba	DC, WGH	Millet Mela	21st March, 2023
7.	Mr. Prabhu Dutta Sahoo	General Manager NABARD, Shillong	Millet Mela	21st March, 2023
8.	Mr. Mayank Dwivedi	Commandant BSF Tura	Millet Mela	
9.	Dr. Shobha Nagnur	Formal Dean & Head CCS, UAS, Dharwad	Convergence workshop in CCS	22nd March 2023
10.	Dr. V. K. Gupta	Director ICAR-NRC on Pig, Guwahati	Convergence workshop in CCS	22nd March 2023

9.9. College of Agriculture, Pasighat, Arunachal Pradesh

S. No.	Visitors' Name	Designation	Organisation/ Address	Purpose of Visit	Date of Visit
1.	Shri Pema Khandu	Hon'ble Chief Minister	Govt. of Arunachal Pradesh	Chief Guest for Kisan Mela (Agri-Fair) at College of Agriculture, Pasighat.	4th January, 2023
2.	Shri Narendra Singh Tomar	Union Minister for Agriculture and Famers Welfare	Govt. of India	Chief Guest & Inauguration of the Academic & Administrative Buildings of the College of Agriculture, CAU-(I), Pasighat & Kisan Mela, 2023.	4th January, 2023

S. No.	Visitors' Name	Designation	Organisation/ Address	Purpose of Visit	Date of Visit
3.	Shri Tapir Gao	Hon'ble Member of Parliament	Govt. of India	Chief Guest &Inauguration of the Academic & Administrative Buildings of the College of Agriculture, CAU-(I), Pasighat & Kisan Mela, 2023.	4th January, 2023
4.	Shri Kaling Moyong	Hon'ble Member of Legislative Assembly	Govt. of Arunachal Pradesh	Chief Guest for the Flagging of Ceremony for Millet Walkathon at College of Agriculture, Pasighat	15th March, 2023
5.	Shri Tayi Taggu	Deputy Commissioner, Pasighat, East Siang District, (A.P)	Govt. of Arunachal Pradesh	Guest in 02 days regional workshop on millets cum walkathon	15th-16th, March, 2023
6.	Shri Tage Taki	Minister of Agriculture, Horticulture, Animal Husbandry, and Fisheries	Govt. of Arunachal Pradesh	Guest in Inauguration of the Academic & Administrative Buildings of the College of Agriculture, CAU-(I), Pasighat & Kisan Mela , 2023..	15th-16th, March, 2023
7.	Dr. P. Ajith Kumar	Vice chancellor	Apex Professional University	As Guest a in various workshop and other programmes	25th March, 2023

9.10. College of Horticulture Bermiok, Sikkim

S. No.	Visitors' Name	Designation	Purpose of Visit	Date of Visit
1.	Dr. P.S. Pandey	ADG, EPHS & EQR, ICAR, New Delhi	Team of National Committee for Developing Syllabus and Curriculum on Natural Farming	05th May, 2022.
2.	Dr S.K. Sharma	Director Research, MPAUT, Udaipur	Team of National Committee for Developing Syllabus and Curriculum on Natural Farming	05th May, 2022.
3.	Dr Prakash Shastri	Former Dean, RVSKVV, Khandwa	Team of National Committee for Developing Syllabus and Curriculum on Natural Farming	05th May, 2022.
4.	Dr. C.K. Timbadia	Director, Navsari Agricultural University, Navsari	Team of National Committee for Developing Syllabus and Curriculum on Natural Farming	05th May, 2022.

9.11. College of Veterinary Sciences & Animal Husbandry, Aizawl, Mizoram

S. No.	Visitors' Name	Designation	Organisation/Address	Purpose of Visit	Date of Visit
1.	Shri Parshottam Khodabhai Rupala	Hon'ble Union Minister of Fisheries, Animal Husbandry and Dairying	Govt. of India, New Delhi	Inauguration of PG Boys Hostel II; Mobile Veterinary Units (MVU); Farmers Interaction	12th June, 2022
2.	Shri Kailash Chaudhary	Hon'ble Union Minister of State for Agriculture and Farmers' Welfare,	Govt. of India, New Delhi	Inauguration of MTTC and VTC building, Farmers Interaction	31.10. 2022
3	Dr. B.N. Tripathi	DDG (Animal Science)	ICAR, New Delhi	Inauguration of Techno park C.V.Sc & AH, Selesih, Mizoram	
4.	Dr. Umesh Chandra Sharma,	President, VCI	-7/1 Char Imli, Bhopal, Madhya Pradesh – 462016	70th VCI Meeting	
5.	Dr. Abhijit Mitra	Member, VCI & Animal Husbandry Commissioner,	Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying,Government of India, New Delhi.	70th VCI Meeting	
6.	Dr. Sita Prasad Tiwari	Member, VCI & Vice Chancellor,	Nanaji Deshmukh Pashu Chikitisa Vigyan Vishwavidyalaya, I/4-I/4k, Lala Lajpat Rai Ward (Ward 45), South Civil Lines, Jabalpur, M.P.	70th VCI Meeting	
7.	Dr. Pardeep Kumar Yadav	Vice-President, VCI	Senior Veterinary Officer, Central Animal Facility, Ansari Nagar, AIIMS, New Delhi	70th VCI Meeting	
8.	Dr. Falguni Thakar	Member, VCI & Director,	Department of Animal Husbandry, Government of Gujarat. Block - B, Krishi Bhawan, Sector - 10/A, Gandhinagar, Gujarat	70th VCI Meeting	
9.	Dr. Amit Nain	Member, VCI	Village - Bodiwala Pitha, P.O.KhulKhera, Tehsil Fazlika, Ferozpur, Punjab	70th VCI Meeting	
10.	Dr. Ingale Sandip Vinayakrao	Member, VCI	Mauli House, Near Shankar Nagar, Balaji Nagar, Amravati, Maharashtra	70th VCI Meeting	

S. No.	Visitors' Name	Designation	Organisation/Address	Purpose of Visit	Date of Visit
11.	Dr. Arun T.R.	Member, VCI	Thachappully House, P.O. Vatanappally, Thrissur, Kerala	70th VCI Meeting	
12.	Dr. Ramesh R.	Member, VCI	No. 4E Krishnasamy Street 1st Cross New PET, Krishnagiri, Tamil Nadu	70th VCI Meeting	
13.	Dr. Vijay Kumar Jha	Member, VCI	Flat no 202, Savttri Residency, Road No 10, East Patel Nagar, Patna, Bihar	70th VCI Meeting	
14.	Dr. Gurucharan Datta	Member, VCI	Village Indas (Hajrapara), Bankura, West Bengal	70th VCI Meeting	
15.	Dr. Devi Shankar Rajoria	Member, VCI	42, Usha Vihar, Near Treveni Nagar, Gopalpura by Pass, Jaipur, Rajasthan	70th VCI Meeting	
16.	Dr. Sulekha S.L	Member, VCI & Assistant Commissioner (AH),	Department of Animal Husbandry & Dairying, Ministry of Fisheries, Animal Husbandry & Dairying, Krishi Bhavan, New Delhi	70th VCI Meeting	
17.	Dr. Rakesh Singh	Member, VCI & Director	Department of Animal Husbandry, Govt. of the National Capital Territory of Delhi, Zorawar Sing Marg Near Pul Mithai, Tis Hazari, Delhi	70th VCI Meeting	
18.	Dr. Vinod Bhat,	Secretary, VCI (Addl. charge)	VCI, New Delhi	70th VCI Meeting	

12. College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland

S. No.	Visitors' Name	Designation	Organisation/Address	Purpose of Visit	Date of Visit
1.	Mr. Vineet Kumar, IAS	Deputy Commissioner	State Government	Chief Guest in Job Fair 2023	25.03.2023

Visit of Parliamentary standing committee

APPENDIX.

APPENDIX.

APPENDIX

Board of Management

The list of members of the Board of Management is given below:

Dr. Anupam Mishra
Vice-Chancellor
Ex-Officio Chairman under sub-clause (i)

1. **Principal Secretary (Agriculture & Horticulture)**
   Department of Agriculture
   Government of Tripura, Agartala
   Ex-Officio Member under sub-clause (ii)

2. **Shri. M. Tayeng**
   Secretary (Horticulture)
   State Civil Secretariate
   Government of Arunachal Pradesh, Itanagar
   Ex-Officio Member under sub-clause (ii)

3. **Principal Secretary (Veterinary & Animal Husbandry)**
   Manipur Secretariate, Government of Manipur, Imphal
   Ex-Officio Member under sub-clause (ii)

4. **Dr. Arvind Pathak**
   Ex-Vice-Chancellor,
   Navsari Agricultural University University, Navsari, Gujarat
   Member under sub-clause (iii)

5. **Dr. V.S. Tomar**
   Ex-Vice Chancellor
   JNKVV, Adhartal, Jabalpur, MP
   Member under sub-clause (iii)

6. **Dr. K.R. Dhiman**
   Ex-Vice Chancellor
   Dr YSPUH & F, Nauni
   Solan, Himachal Pradesh
   Member under sub-clause (iii)

7. **Dr. Ravindra Kumar Jaiswal**
   President & Head of Operations Poultry IB Group, Rajnandgaon-491441(CG) India
   Member under sub-clause (iv)

8. **Deputy Director General (Edn)**
   ICAR, Krishi Anusandhan Bhavan-II, Pusa, New Delhi-110 012
   Ex-Officio Member under sub-clause (v)

9. **The Secretary**
   North Eastern Council, Shillong, Meghalaya
   Ex-Officio Member under sub-clause (vi)

10. **Director of Research**
    Central Agricultural University, Imphal
    Member under sub-clause (vii)

11. **Dean**
    College of Agriculture, Imphal, Manipur
    Member under sub-clause (vii)

12. **Smt. Tika Khannal**
    w/o Shri Nanda Kumar Sharma
    Vill- Saureni, Assam Linzey, Gangtok, East Sikkim
    Member under sub-clause (viii)

13. **Ms. Watila Longkumer**
    H.No.282, Indisen Village,

Diphu Road, Dimapur, Nagaland
Member under sub-clause (viii)

14. **Ms. Vanlalpianpuii**
District Road, Farm Veng, Lunglei or
U-2 Laipuitlang, Thirhruiban Kawn, Aizawl
Member under sub-clause (x)

15. **Adviser (Agriculture)**
NITI Aayog, NITI Aayog Bhawan
National Institution for Transforming India, GOI
Parliament Street, New Delhi- 110001
Ex-Officio Member under sub-clause (xi)

16. **Dr. A.K. Joshi, IFS**
PCCF & Head of Forest Force (PCCF& HoFF)
Dept. of Forest, Govt. of Manipur
Sanjenthong, Imphal East, Manipur
Member under sub-clause (xii)

Dr. K. Mamocha Singh
Registrar, Central Agricultural University, Imphal.
Email: registrar.cau@gov.in, regcau@gmail.com
Ex-Officio Secretary under sub-clause (xv)

17. **Dr. O.P. Chaudhary**
Joint Secretary (ANLM)
Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Govt. of India
Krishi Bhavan, New Delhi – 110114
Member under sub-clause (xiii)

18. **Dr. Suresh Kumar Malhotra**
Horticulture Commissioner
Ministry of Agriculture & Farmers' Welfare, Govt. of India, New Delhi- 110001
Member under sub-clause (xiii)

19. **Shri. Sanjay Garg**
Addl. Secretary, (DARE) & Secretary (ICAR),
Krishi Bhawan, New Delhi – 110001
Member under sub-clause (xiv)

Academic Council

The list of the members of the Academic Council of the University is as under:

Dr. Anupam Mishra
Vice-Chancellor,
Central Agricultural University, Imphal
Ex-officio Chairman Under sub-clause (i)

1. **Dean**
College of Agriculture
Iroisemba, Imphal, Manipur
Member under sub-clause (ii)

2. **Dean**
College of Horticulture & Forestry
Pasighat, Arunachal Pradesh
Member under sub-clause (ii)

3. **Dean**
College of Veterinary Sciences & A.H.
Selesih, Aizawl, Mizoram
Member under sub-clause (ii)

4. **Dean**
College of Fisheries
Lembucherra, Agartala, Tripura
Member under sub-clause (ii)

5. **Dean**
College of Community Science
Tura, West Garo Hills, Meghalya
Member under sub-clause (ii)

6. **Dean**
College of Agril. Engineering & P.H. Technology, Marchak, Gangtok, Sikkim
Member under sub-clause (ii)

7. **Dean**
College of Post-graduate Studies in Agricultural Sciences, Barapani, Meghalaya
Member under sub-clause (ii)

8. **Dean**
College of Agriculture
Pasighat, Arunachal Pradesh
Member under sub-clause (ii)

9. **Dean**
College of Agriculture
Kyrdemkulai, Meghalaya
Member under sub-clause (ii)

10. **Dean**
College of Food Technology
Imphal, Manipur
Member under sub-clause (ii)

11. **Dean**
College of Horticulture
Bermiok, South Sikkim
Member under sub-clause (ii)

12. **Dean**
College of Horticulture
Thenzawl, Mizoram
Member under sub-clause (ii)

13. **Dean**
College of Veterinary Sciences & A.H.
Jalukie, Nagaland
Member under sub-clause (ii)

14. **Director of Instruction**
Central Agricultural University, Imphal
Member under sub-clause (v)

15. **Director of Research**
Central Agricultural University, Imphal
Member under sub-clause (iii)

16. **Director of Extension Education**
Central Agricultural University, Imphal
Member under sub-clause (iv)

17. **Librarian**
College of Veterinary Sciences & Animal Husbandry, Aizawl, Mizoram
Member under sub-clause (vi)

18. **Dr. Gaya Prasad**
Ex-Vice-Chancellor
Sardar Vallabhai Patel University of Agriculture & Technology, Meerut
Member under sub clause (vii)

19. **Dr. V.S. Tomar**
Ex-Vice-Chancellor
JNKV, Krishinagar, Adhartal, Jabalpur
Member under sub-clause (vii)

20. **Head**
Department of Floriculture & Landscape Architecture
College of Horticulture & Forestry
Pasighat, Arunachal Pradesh
Member under sub-clause (viii)

21. **Head**
Department of Basic Sciences & Humanities
College of Agriculture
Iroisemba, Imphal, Manipur
Member under sub-clause (viii)

22. **Head**
Department of Animal Breeding & Genetics
College of Veterinary Sciences & A.H.
Selesih, Aizawl, Mizoram
Member under sub-clause (viii)

23. **Head**
Department of Extension & Social Sciences
College of Fisheries
Lembucherra, Agartala, Tripura
Member under sub-clause (viii)

24. **Head**
Department of Extension Education & Communication Management
College of Community Science
Tura, West Garo Hills, Meghalaya
Member under sub-clause (viii)

25. **Head**
Department of Irrigation & Drainage Engineering
College of Agril. Engineering & P.H.T.
Ranipool, Gangtok, Sikkim
Member under sub-clause (viii)

26. **Chairman/In charge**
School of Natural Resource management
College of Post Graduate Studies in Agril. Sc. Barapani, Meghalaya
Member under sub-clause (viii)

27. **Nominee of North-Eastern Council, Shillong, Meghalaya**
Member under sub-clause (ix).

Dr. K. Mamocha Singh.
Registrar, Central Agricultural University, Imphal, Manipur.
Ex-officio Secretary Under sub-clause (x)

Research Council

The members of the Research Council of the University are as follows:

Dr. Anupam Mishra
Vice-Chancellor,
Central Agricultural University, Imphal. Manipur.
Ex-officio Chairman Under sub-clause (i)

1. **Director**
   Directorate of Instruction
   Central Agricultural University, Imphal
   Ex-officio Member under sub-clause (iii)

2. **Director**
   Directorate of Extension Education
   Central Agricultural University, Imphal
   Ex-officio Member under sub-clause (ii)

3. **Dean,**
   College of Agriculture
   Iroisemba, Imphal
   Ex-officio Member under sub-clause (iv)

4. **Dean**
   College of Horticulture & Forestry
   Pasighat, Arunachal Pradesh
   Ex-officio Member under sub-clause (iv)

5. **Dean**
   College of Veterinary Sciences & A.H.
   Aizawl, Mizoram
   Ex-officio Member under sub-clause (iv)

6. **Dean**
   College of Fisheries
   Lembucherra, Tripura
   Ex-officio Member under sub-clause (iv)

7. **Dean**
   College of Community Science
   Tura, Meghalaya
   Ex-officio Member under sub-clause (iv)

8. **Dean**
   College of Agril. Engg. & P.H.T.
   Gangtok, Sikkim
   Ex-officio Member under sub-clause (iv)

9. **Dean**
   College of Post Graduate Studies in Agricultural. Sciences, Barapani, Meghalaya
   Ex-officio Member under sub-clause (iv)

10. **Dean**
    College of Veterinary Sciences & A.H.
    Jalukie, Nagaland
    Ex-officio Member under sub-clause (iv)

11. **Dean**
    College of Agriculture
    Pasighat, Arunachal Pradesh
    Ex-officio Member under sub-clause (iv)

12. **Dean**
    College of Horticulture
    Bermiok, South Sikkim
    Ex-officio Member under sub-clause (iv)

13. **Dean**
College of Agriculture
Kyrdemkulai, Meghalaya
Ex-officio Member under sub-clause (iv)

14. **Dean**
College of Food Technology
Imphal, Manipur
Ex-officio Member under sub-clause (iv)

15. **Dean**
College of Horticulture
Thenzawl, Mizoram
Ex-officio Member under sub-clause (iv)

16. **Director**
Directorate of Agriculture, Government of Manipur, Imphal
Nominee under sub-clause (v)

17. **Director**
Directorate of Horticulture, Government of Arunachal Pradesh, Itanagar
Nominee under sub-clause (v)

18. **Director**
Directorate of Fisheries,
Government of Tripura, Agartala
Nominee under sub-clause (v)

19. **Director**
Directorate of Animal Husbandry & Veterinary, Government of Mizoram, Aizawl
Nominee under sub-clause (v)

20. **Addl. Principal Chief Conservator of Forests (R &T)**
Govt. of Meghalaya, Shillong
Nominee under sub-clause (v)

21. **Director**
Directorate of Food Security & Agriculture Development, Government of Sikkim
Gangtok
Nominee under sub-clause (v)

22. **Research Co-ordinator & Member Secretary,** College Research Advisory Committee (CRAC) of all constituent colleges (Agriculture, Veterinary Sc. & A.H., Fisheries, Horticulture & Forestry, Community Sc., PG Studies & Agricultural Engg. & PHT)
Nominee under sub-clause (vi)

23. **Dr. S.V. Ngachan**
Ex-Director, ICAR Research Complex, NEH Region, Umiam, Meghalaya
Member under sub-clause (vii)

24. **Dr. P.P. Shastri**
Ex-Dean, College of Agriculture
RVSKM, MIG-18, Deendayalpuram
Khandwa (MP)-450001
Member under sub-clause (vii)

25. **Director**
ICAR Research Complex for NEH Region
Umiam, Meghalaya
Special Invitee

26. **Joint Director of ICAR Research Council for NE Region** (Arunachal Pradesh, Manipur, Mizoram, Nagaland, Sikkim & Tripura)
Co-opted Members

Dr. S. Basanta Singh
Director of Research
Central Agricultural University, Imphal. Manipur
Ex-Officio Member Secretary

Extension Education Council

The members of the Extension Education Council of the University are hereunder:

Dr. Anupam Mishra
Vice-Chancellor,
Central Agricultural University, Imphal. Manipur.
Ex-Officio Chairman

1. **Director of Research**
   Central Agricultural University, Imphal
   Ex-Officio Member under sub-clause (ii)

2. **Director of Instruction**
   Central Agricultural University, Imphal
   Ex-Officio Member under sub-clause (iii)

3. **Dean**
   College of Agriculture
   Iroisemba, Imphal, Manipur
   Member under sub-clause (iv)

4. **Dean**
   College of Horticulture & Forestry
   Pasighat, Arunachal Pradesh
   Member under sub-clause (ii)

5. **Dean**
   College of Veterinary Sciences & A.H.
   Selesih, Aizawl, Mizoram
   Member under sub-clause (iv)

6. **Dean**
   College of Fisheries
   Lembucherra, Agartala, Tripura
   Member under sub-clause (iv)

7. **Dean**
   College of Community Science
   Tura, Meghalya
   Member under sub-clause (iv)

8. **Dean**
   College of Agril. Engineering & P.H.T.
   Ranipool, Gangtok, Sikkim
   Member under sub-clause (iv)

9. **Dean**
   College of Post-graduate Studies in Agril. Sc. Barapani, Meghalaya
   Member under sub-clause (iv)

10. **Dean**
    College of Veterinary Sciences & A.H.
    Jalukie, Peren District, Nagaland
    Ex-Officio Member under sub-clause (iv)

11. **Dean**
    College of Agriculture
    Pasighat, Arunachal Pradesh
    Ex-officio Member under sub-clause (iv)

12. **Dean**
    College of Horticulture
    Bermiok, South Sikkim
    Ex-officio Member under sub-clause (iv)

13. **Dean**
    College of Agriculture
    Kyrdemkulai, Meghalaya
    Ex-officio Member under sub-clause (iv)

14. **Dean**
    College of Food Technology
    Imphal, Manipur
    Ex-officio Member under sub-clause (iv)

15. **Dean**
    College of Horticulture
    Thenzawl, Mizoram
    Ex-officio Member under sub-clause (iv)

16. **Director**
    Directorate of Agriculture

Krishi Bhavan, D-Sector, Naharlagun,
Arunachal Pradesh-791110
Member under sub-clause (v)

17. **Director of Horticulture & Soil Conservation**
Directorate of Horticulture & Soil Conservation, Sanjenthong, Imphal, Manipur
Member under sub-clause (v)

18. **Director of Fisheries**
Directorate of Fisheries
New Capital Complex, Khatla, Aizawl, Mizoram
Member under sub-clause (v)

19. **Director of Animal Husbandry & Veterinary**
Directorate of Animal Husbandry & Veterinary
Above Accountant General Office, Kohima, Nagaland
Member under sub-clause (v)

20. **Director of Skill Development**
Skill Development Department
Sokaythang, East Sikkim
Member under sub-clause (v)

21. **Chief Conservator of Forests, Research & Planning**
Office of the Principal Chief Conservator of Forests & Hoff, Lower Lachumiere, Shillong
Member under sub-clause (v)

22. **Director of Rural Development**
Rural Development Department
Civil Secretariat, Agartala
Member under sub-clause (v)

23. **Mr. Leichombam Amumacha Singh**
Leimaram Mamang Leikai, PO - Nambol
Bishnupur, Manipur
Member under sub-clause (vi)

24. **Mr. Bishwajit Datta**
West Bhuban Ban, AMC Ward No. 2
Agartala, Tripura
Member under sub-clause (vi)

25. **Mr. Robin Pradhan**
Village Tarpin, Sub-Division-Rongly,
East Sikkim
Member under sub-clause (vi)

26. **Shri Wefstar D. Shira**
Village-Rongbilbanggre, Block-Gambegre
Dobasipare, West Garo Hills, Meghalaya
Member under sub-clause (vi)

27. **Mr. Talem Tasung**
Boying Village, P.O. Pasighat,
Dist: East Siang, Arunachal Pradesh
Member under sub-clause (vi)

28. **Mr. Datui Zeliang**
N. Samlungbe Co-op Society, Puilwa Village
Peren District, Nagaland
Member under sub-clause (vi)

29. **Smt. Lalrinsangi**
Durtlang Branch, Durtlang, Aizawl, Mizoram
Member under sub-clause (vi)

30. **Dr. P. Das**
Retd. Dy. Director General (Agril. Extension)
ICAR, C-10, Ground Floor, GK, New Delhi
E-mail: pdssicar@gmail.com
Member under sub-clause (vii)

31. **Dr. J.P. Sharma,**
Joint Director (Extension) ICAR-IARI,
Pusa, New Delhi
Member under sub-clause (vii)

Prof. Ph. Ranjit Sharma
Director of Extension Education
Central Agricultural University, Imphal. Manipur
Ex-Officio Member-Secretary under sub-clause (viii)

Finance Committee

The members of the Finance Committee of the University are given below:

Dr. Anupam Mishra
Vice-Chancellor, Central Agricultural University, Imphal
Ex-officio Chairman

1. **Financial Advisor**
   Department of Agricultural Research and Education
   Government of India
   Krishi Bhavan, New Delhi

2. **Dr. Onkar Nath Singh**
   Vice-Chancellor
   Birsa Agricultural University
   Ranchi, Jharkhand

3. **Dr. Pravat Kumar Roul**
   Vice-Chancellor
   Orissa University of Agriculture & Technology
   Bhubaneshwar, Odisha

4. **Dr. Swarup Kumar Chakrabarti**
   Vice-Chancellor
   Uttar Banga Krishi Vishwavidyalaya
   Coochbehar, West Bengal

5. **Dr. V.S. Tomar**
   Ex-Vice Chancellor, JNKVV
   Adhartal, Jabalpur, Madhya Pradesh

6. **Shri Zamthianniang Thomte**
   Deputy Finance Officer
   National Sports University
   Manipur

7. **Prof. Elangbam Nixon Singh**
   Finance Officer
   Manipur University
   Canchipur, Maniur

Shri Ananthashayanam K
Comptroller, Central Agricultural University, Imphal, Manipur.
Ex-Officio Member Secretary

Statutory Officers

The list of Statutory Officers of the university is cited underneath:

Chancellor
Dr. S. Ayyappan
Central Agricultural University, Imphal Manipur

Vice-Chancellor
Dr. Anupam Mishra
Central Agricultural University, Imphal, Manipur

Director of Instruction
Dr. S. Basanta Singh
Central Agricultural University, Imphal, Manipur

Director of Research
Dr. S. Basanta Singh
Central Agricultural University, Imphal, Manipur

Director of Extension Education
Prof. Ph. Ranjit Sharma
Central Agricultural University, Imphal, Manipur

Registrar
Prof. K. Mamocha Singh.
Central Agricultural University, Imphal, Manipur

Comptroller
Shri Ananthashayanam K
Central Agricultural University, Imphal, Manipur

Dean
Prof. Indira Sarangthem
College of Agriculture, Iroisemba,Imphal, Manipur

Dean
Prof. L. Hmar
College of Veterinary Science & Animal Husbandry, Selesih, Aizawl, Mizoram

Dean
Prof. R.K. Saha (I/C)
College of Fisheries, Lembucherra, Agartala, Tripura

Dean
Prof. B.N. Hazarika
College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

Dean
Prof. P.P. Dabral
College of Agricultural Engineering & Post Harvest Technology, Ranipool, Gangtok, Sikkim

Dean
Dr. Shri Dhar
College of Horticulture, Thenzawl, Mizoram

Dean
Prof. Mayank Rai (I/C)
College of Post Graduates Studies in Agricultural Sciences, Umiam (Barapani), Meghalaya

Dean
Dr. Jyoti V.Vastrad
College of Community Science, Tura, Meghalaya

Dean
Dr. A.K. Tripathi
College of Agriculture, Pasighat, Arunachal Pradesh

Dean
Dr. A.K. Pandey
College of Horticulture, Bermiok, South Sikkim

Dean
Dr. U.K. Behera
College of Agriculture, Kyrdemkulai, Meghalaya

Dean
Dr. Ng. Iboyaima Singh
College of Food Technology, Imphal, Manipur

Dean
Dr. Ingudam Shakuntala
College of Veterinary Science & Animal Husbandry, Jalukie, Nagaland

CENTRAL AGRICULTURAL UNIVERSITY, IMPHAL

केन्द्रीय कृषि विश्वविद्यालय, इम्फाल

1993

अन्नाद्भवन्ति भूतानि