



ANNUAL REPORT 2017-18



CENTRAL AGRICULTURAL UNIVERSITY
Iroisemba, Imphal 795 004, Manipur, India



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IROISEMBA, IMPHAL 795 004, MANIPUR, INDIA

Annual Report 2017 - 2018

(April, 2017 to March, 2018)

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Foreword

I feel proud and privileged to present the Annual Report 2017–18 for Central Agricultural University, Imphal, which outlines the considerable achievements and activities of the university during the year. The Central Agricultural University, Imphal has been at the forefront of agricultural education since 1993, contributing to the solving of some of the most important challenges in our society. Education in our university is continuously monitored and updated to mould our students with self-confidence and innovative thinking to meet the national and global needs. During the year, a total of 679 students were admitted in different faculties in the thirteen constituent colleges of the university, located at the seven northeastern states. Four foreign students from Tanzania, Zambia and Afghanistan were admitted in various Masters Degree programme. The University had also started self-financed scheme and reserved 30 seats for open higher fee category for some of the undergraduate degree programmes of the university.

As a result of intensive and continuous effort taken by the faculties and scientists for need based and location specific research, a number of new research recommendations for farmers and scientific communities have emerged during the year. Fifteen externally funded research projects were sanctioned during the year. To make our achievements reach the farming community, the university has made sustained efforts to organize and execute certain important events at constituent colleges to have a technological interaction between scientists, stakeholders and farmers in the form of major events. With the addition of two new KVK's in Meghalaya, during the year our extension functionaries are working for transfer of technologies emanating from our research works to the farming communities, line departments and other extension personnel. Periodically all our activities and achievements are published by way of newsletters, farm magazines and books in hindi, english and other local languages and reached out to all the stakeholders.

I compliment faculties and staff of CAU, Imphal for their untiring efforts and worthy contributions which has resulted in the achievements set out in this report. I would also like to extend our sincere thanks to State and Central Governments, esteemed Indian Council of Agricultural Research (ICAR), National and International Funding Agencies and Local communities for their extended support and providing necessary energy in executing our programmes. The



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cooperation and guidance provided by Hon'ble members of the Board of Management, Finance Committee, Academic Council, Research Council and Extension Education Council are also acknowledged with gratefulness. I wish to acknowledge the editorial team of this annual report for their valuable efforts which is highly appreciated. I hope the information presented in the Annual Report 2017-18 of Central Agricultural University, Imphal will prove to be useful information resource for all those working for development of Indian agriculture.

Dated: 27.02.2019
Imphal

(M. Premjit Singh)
Vice Chancellor

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Executive Summary

Academic

The Central Agricultural University (CAU) 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-Eastern 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, 5 KVKs, 6 multi-technology testing centres and 6 vocational training centres. The Central Agricultural University offered 9 Undergraduate, 38 Masters and 21 Ph. D. Degree Programmes in different subjects/ disciplines through its 13 constituent colleges. On the recommendations of the ICAR Peer Review Team, the National Agricultural Education Accreditation Board, ICAR, New Delhi granted accreditation to various academic programmes (UG/PG/Ph.D's) of the Central Agricultural University, Imphal (Manipur) and its constituent colleges from 28th March, 2016 to 27th March, 2021. From the Year 2017-18, CAU, Imphal had started reserving some seats for open higher fee category for some of the undergraduate degree programmes of the university. These seats are against payment of higher fee and are admissible to Indian Nationals from the North Eastern States excluding Assam.

The university academic session started from 1st July, 2017 for both UG and Master's courses except College of Veterinary Sciences and Animal Husbandry where it started from 1st August, 2017. The Ph. D. Programmes for all the colleges started from 2nd Sept 2017. A total of 481, 177 and 21 students were admitted in various Under-graduates, Masters and Ph.D programmes, respectively during the academic year 2017-18. A total of 255 UG and 141 PG students completed their degrees and 8 students were also awarded Ph.Ds during this period. Out of the total students' strength of 1929 in the university, 324 students belonged to the general category, 135 scheduled castes, 976 scheduled tribes, 490 other backward class and 4 students from foreign national. Out of them, 840 students were male and 1089 were female amounting to Male: Female ratio of 1:1.29.

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. Special coaching programme was arranged in all the constituent colleges to facilitate good performance of students in the national level examinations. The students of the university showed excellent performance at national level competitive examinations and admissions in national/premier institutes of higher studies. A total of 14 students secured JRF, 6 SRF, 54 NET, 5 GATE, 2 CAT and 4 students got selected as ARS scientists during the year. 160 students were admitted to Post Graduate Degree Programmes



in reputed institutes in the country where 87 of the students were admitted through ICAR Entrance exam. Six students were also admitted to Ph.D. degree courses through ICAR Entrance exam. The university has an exemplary record of placement through campus interviews during the last couple of years in a number of private and public sector organizations, government undertakings and 57 of our students were placed in various capacities in different organizations during the year 2017-18.

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 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 4th Annual CAU Inter-Collegiate Youth Festival 2017-18 was organized jointly by Directorate of Instruction and College of Agriculture, CAU, Imphal during 15th -17th January 2018. During the three days programme, 351 participants from 13 constituent colleges of the university participated in 18 (eighteen) different cultural events of the Youth Festival. The winners of the 4th Intercollegiate Youth Festival 2017-18 were selected for representing the university at the 18th All India AGRIFEST,

2018, held at Sri Venkateswara Veterinary University, Tirupati during 12th -16th February 2018 and the University secured 2nd prize in the Quiz event. The 14th National Youth Parliament Competition (Group Level) was held at the College of Agril. Engineering and Post Harvest Technology, Ranipool, Sikkim on 26th August, 2017 as per National Youth Parliament Competition Scheme.

The staff and students of the university also actively participated in implementation of all the major flagship programmes initiated by the Government of India. "International Day of Yoga" was celebrated with great enthusiasm and vigour. Unity Pledge and run for unity were organized as an endeavor to solidify the bond of oneness and unification on "Rashtriya Ekta Diwas". "Hindi Pakhwada-2017" was celebrated with debates, essay writing, poetry competition for creating awareness and promotion of uses of Raj Bhasa- Hindi in the official/everyday works. Cleanliness drive under the "Swachhata Hi Seva" campaign were also conducted along with planting of saplings in the college campus and its premises. After conducting specific programmes such as "Seva Diwas", "Samagra Swachhta Diwas" and "Sarwatra Swachhta" the fortnight was concluded by celebrating the Gandhi Jayanti by remembering his work of sincerity, humbleness, spirituality, cleanliness and sanitation. In the "New India Manthan - Sankalp Se Sidhi programme" the "New India Pledge" was conducted towards a clean India, a poverty free India, a corruption free India, a terrorism free India, a communalism free India and casteism free India.

Research and Development

The University research aims to frame need based research projects through sustainable and eco-friendly scientific and technical approaches for developing agricultural technologies/practices/agricultural machines and equipments

EXECUTIVE SUMMARY

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 up-liftment of the people of North Eastern Hill Region. During the year under report, the university carried out 79 Intramural Research Projects (IRPs) in which 10 IRPs were newly sanctioned, 59 ongoing and 10 completed under University Funded Research Programmes. Out of the 143 Externally Funded Research Projects, 5 were newly sanctioned, 77 ongoing and 61 completed.

Digitized soil fertility map for four subdivision of Imphal West district of Manipur *w.r.t.* N,P,K,Ca,Mg and S has been developed. PL-17-01 strain of mushroom has been identified to be very productive and recommended for cultivation in NEH states. Turmeric variety –NDH-98 exhibits higher productive and curcumin content under Arunchal condition. Out of 300 Khasi mandarin tree samples collected from six states of NEH region, 57.33% was found to be infected with *Citrus tristeza* virus disease. Technology for mass production of *Trichoderma* with locally available agricultural waste materials was standardized. Scientists, for the first time in the country, have reported heavy incidence of an invasive beetle *Aristobia reticulator* (Voet), a stem borer from neighbouring countries infesting litchi plants in the Northeast India. Our Scientists also detected rare bacterial species (*Staphylococcus pettenenkofer*) in animals (cat) for the first time in the world. Four agriculturally important districts of the state Meghalaya *viz.*, the Ri-bhoi district, the East Khasi Hills district, the West Khasi Hills district and the West Jaintia Hills district have been covered under the development and deployment of mobile based agro-advisory system in North East India (m4agriNEI) with registration of 11,400 farmers. 9361 queries pertaining to agriculture and

allied activities raised by farmers have been solved during the period.

A high yielding breed of pig has been evolved by crossing the local pig (*Zovawk*) with Large White Yorkshire breed (LWY). The improved breed maintains 75% blood level of LWY, thereby express better pork quality and higher feed conversion ratio. Two indigenous breed of animals *viz.* Mizo pig *Zovawk* and Manipuri Chicken *Kaunayen* have been registered under accession No. Indian_Pig_2700_Zovawk_09007 and India_Chicken_1200_Kaunayen_12017, respectively. DNA barcode of 16 unique fish species from Mizoram, Manipur, Meghalaya, Nagaland have been generated and COI sequences were submitted in NCBI GenBank Database. Protocol for preparing Protein concentrate from the rubber seed kernel with 60% crude protein has been standardized. In order to reduce the drudgery of farm labour in NEH region, a number of farm tools and implements *viz.* Power operated new small axial flow hold-on thresher for paddy crop, Power tiller operated two row multi-crop seed drill cum planter, Manual transplanter suitable for root washed seedlings, Mechanical operated bamboo shoots, *Citrus macroptera* peeling machine and Makhana harvester, Animal drawn bio fertilizer-applicator cum maize-planter have been developed.

Extension Education

In an effort for popularization of modern innovative and sustainable agriculture and agro based allied activities in the hill states, farmers' education is being extended to the farming communities and extension education to line departments from time to time. The Directorate of Extension Education organized 9 Capacity building training programmes for extension functionaries which benefitted 258 persons. The directorate organized 39 training programmes for farmers and farm women during the year



which benefitted 2187 individuals.

In an effort for greater outreach among the rural farmers, the Directorate also organized CAU Regional Agriculture Fair-2017 at College of Fisheries, CAU, Agartala, Tripura with a participation of 5050 farmers from different states of the region. The university also participated in 5 national/regional/state level Farmers' Fair/Exhibition. The University Stall was adjudged as "First Runner-Up" in the N.E. Regional Agriculture Fair organized by ICAR Research Complex, Umiam, Barapani and First Prize at the State Level Agri Fair 2017-18 organised by Agriculture Department, Government of Manipur. Two progressive farmers under CAU, Imphal viz. Mr. H. Zirsangliana, Village & P.O. Siphir, District – Aizawl, Mizoram and Mr. Pumto Perme, Village – Ayeng, P.O. Mebo, District East Siang, Arunachal Pradesh were awarded with prestigious "IARI Innovative Farmer Award-2018" at the Unnat Krishi Mela held at IARI, New Delhi. 2480 kg seed of rapeseed-mustard produced in the farms of the university were distributed to the farmers and different agencies covering 248 ha. A total of 64 On Campus and 133 Off Campus trainings for farmers were organized under the three KVKs where 6408 farmers were benefitted from the trainings. 23 trainings were also organized for extension functionaries in which 614 personals have been trained for furthering the cause of outreaching the farmers in remote places, including male, female and youths belonging to SC/ST/OBC categories. Further, 34 On Farm Trials (OFT) and 48 Front Line Demonstrations (FLD) were undertaken under the three KVK(s). Moreover, the Directorate also published report on CAU Regional Agri-Fair, 2017-18; Souvenir CAU Regional Agri-Fair, 2017-18; CAU Newsletter; 2 Compendia viz. Integrated Farming for Sustainable Income and Integrated Sustainable Duck Farming; CAU Calendar-2018; CAU Kisan Diary 2018 (in

three languages – English, Hindi and Manipuri versions) and CAU Farm Magazine (in different languages-English, Hindi, Manipuri, Mizo, Bengali and Khasi versions).

Special Farmers Welfare Oriented Programmes were also organised by the Directorate. Under *Unnat Bharat Abhiyan/Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojna*, a special, innovative and farmers welfare oriented programme sponsored by Ministry of Agriculture & Farmers' Welfare, Govt. of India, 5 skill oriented trainings were organized in Manipur, Meghalaya, Mizoram and Tripura and benefitted 156 trainees. *Mera Gaon Mera Gaurav (MGMG)* launched in different constituent colleges and KVK's of the university has helped the farmers to increase farm production and supplement their income in the field of agriculture and allied activities. Four externally funded projects were also undertaken during the period viz. (i) Farmers FIRST Programme (ii) Integrated Beekeeping Development Centre under Centre of Excellence (iii) Kisan Business School (iv) Augmenting Rapeseed-Mustard Production by Tribal Farmers of NE State for Sustainable livelihood Security.

Human Resource Development

The University has total staff strength of 1041 including 28 administrative, 269 teaching and 744 non-teaching positions. At the headquarters, there are 15 executive officers in the administrative positions supported by 31 technical and 78 non-technical staffs. In the constituent colleges of the university, there are 9 regular Deans and 4 in-charge Deans, 269 teaching and 635 non-teaching staff. During the year, 3 personals were newly appointed at headquarter and 53 at constituent colleges. 6 staff members were transferred, 9 superannuated, 3 expired and 9 resigned from the service during the year under report. 85

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faculty members were also promoted through CAS. A total of 102 trainings, workshops, conferences, seminars, summer school etc were organized at different constituent colleges of the university. Amongst the teaching staff, 10 teachers were deputed for higher studies. Faculty members were deputed for participation in 19 international, 30 national conferences, 38 seminars, 44 workshops and 18 faculty members were deputed for long term training courses and 31 for short term training programmes. Staff members delivered 60 lectures at various trainings, workshops and other programmes. 42 faculties served as external examiners at various institutes. 4 faculties and 1 staff member were awarded Ph.D degrees during the year. 24 guest lectures were delivered by reputed scientists/faculties from other institutes at different constituent colleges of the university. A total of 24 faculties of the university were also recognized for their excellence in research and developmental works and one MOU was signed with reputed institute during the period for cooperative relationship through mutual assistance in the areas of education, research and extension activities. Moreover, 6 students of the university were rewarded for excellence with young scientist award, best oral paper presentation, best poster presentation etc.

Infrastructure Development

Various civil construction works were

taken up during the year for meeting the required infrastructural facilities of the newly established 6 constituent colleges of the university. It included construction works of college buildings, laboratories, hostels, staff quarters, auditorium, information centres, canteen, post office, bank, security barracks etc. The university is giving special emphasis for speeding up of construction activities of the newly established colleges so that academic classes can be shifted at the permanent campus of the colleges at the earliest.

University Publication

Faculties of constituent colleges of the university have published 733 research articles comprising of 287 full length research and 29 digital object identifier articles published in NAAS rated national and international journals, 36 seminar proceedings, 150 papers presented in seminars, symposia, 84 popular articles, 22 books, 40 book chapters and 85 manuals/pamphlets etc.

Visitors

The university witnessed the visits of 106 visitors in different college campuses located in seven states of the north east hill region of India during the reporting year. The visitors included eminent administrators, scientists, faculties, meritorious students and progressive farmers of varied experiences.





1

The University





CENTRAL Agricultural University (CAU), Imphal 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 in the North-Eastern Hill (NEH) Region of India. The Central Agricultural University, Imphal has thirteen constituent colleges viz., the College of Agriculture (Iroisemba, Imphal, Manipur), College of Fisheries (Lembucherra, Agartala, Tripura), College of Home Science (Tura, Meghalaya), College of Horticulture & Forestry (Pasighat, Arunachal Pradesh), College of Veterinary Science & Animal Husbandry (Selesih, Aizawl, Mizoram), College of Agricultural Engineering & Post Harvest Technology (Ranipool, Gangtok, Sikkim), College of Post Graduate Studies, (Barapani, 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 & Animal Husbandry (Jalukie, Nagaland) to carry out teaching, research and extension education programmes in agriculture and allied disciplines in the NEH region. The University is equipped with well-established laboratories, research and demonstration farms, 5 KVKs, 6 multi-technology testing centres and 6 vocational training centres.

I.I Mandates, Mission, Goals and Objectives

1.1.1 Mandates

The mandate 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 Goals

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.

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- 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.

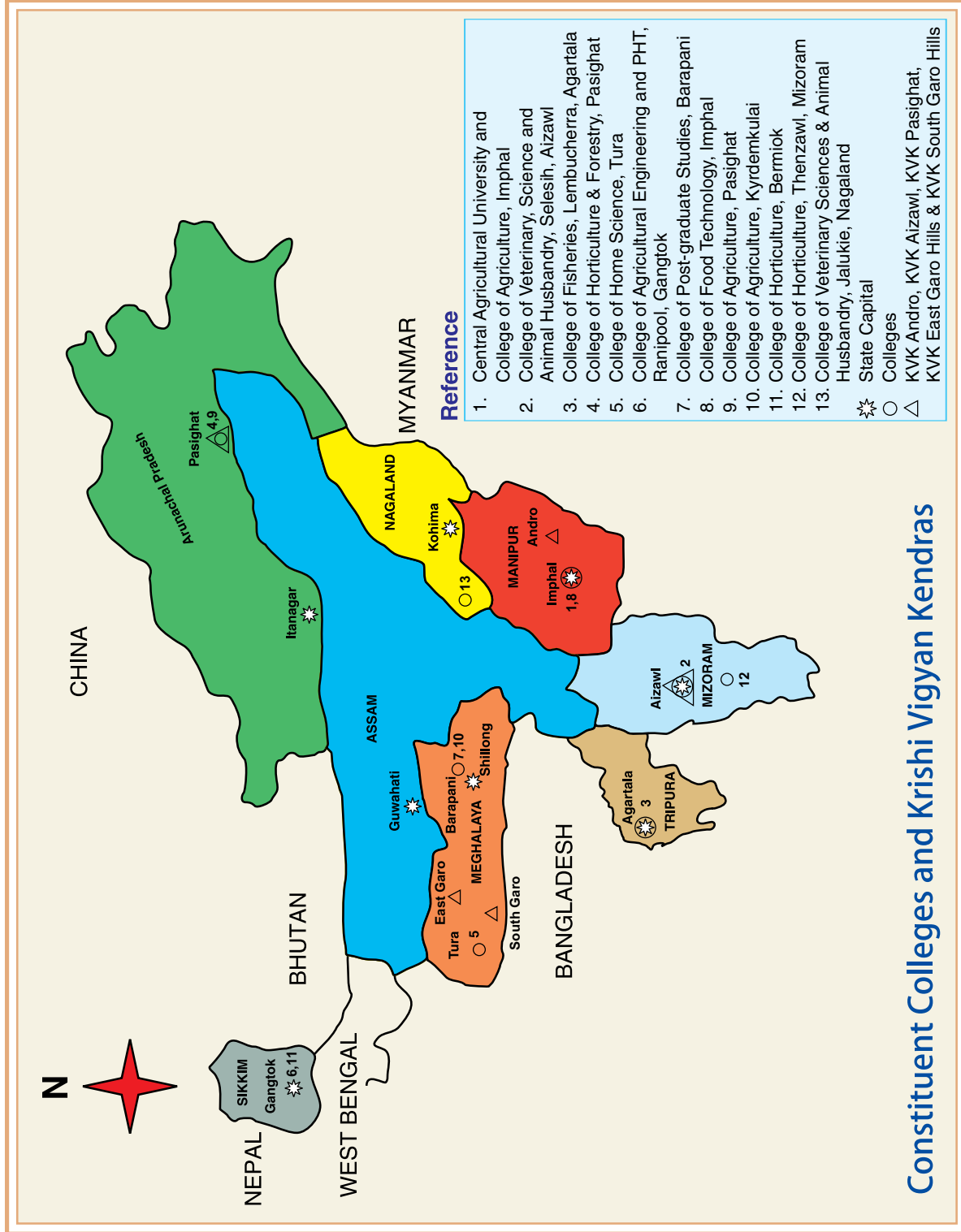
1.1.4 Objectives

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, fisheries, home 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, Sikkim, Tripura and Nagaland. The states of Arunachal Pradesh and Sikkim are located in the Biodiversity Hotspot of Eastern Himalayan region while the states of Manipur, Meghalaya, Mizoram, Tripura and Nagaland are located in the Indo-Burma Biodiversity Hotspot region. There are camp offices of the Hon'ble Vice Chancellor in every constituent college for routine stay at regular intervals. It provides students and employees easy access to the competent authority



THE UNIVERSITY



College of Agriculture, Imphal

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, Imphal was established as first 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 city. 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 & Animal Husbandry, was established through the promulgation of an Ordinance (No. M-2 of 1995; dated 20th February 1995) and became functional with the admission of first batch of 10 students to B.V.Sc. & A.H. degree programme



College of Veterinary Sciences & Animal Husbandry, Aizawl

in the year 1997-98. 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.

1.2.1.3 College of Fisheries, Lembuchera, Tripura

The College of Fisheries, Lembuchera, Tripura was established on 3rd October, 1998 and is located at Lembucherra, at a distance of 12 km north of Agartala, having a total area



College of Fisheries, Lembuchera

of 55.59 acres. The College of Fisheries has been working on generating qualified human resources besides imparting research and training needs to the thurst area of fisheries and aquaculture in the entire NE region.



College of Horticulture & Forestry, Pasighat

1.2.1.4 College of Horticulture & 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 in an area of 143.32 acres which includes research farm, instructional cum demonstration farm, KVK farm, and experimental farm.

1.2.1.5 College of Home Science, Tura, Meghalaya

College of Home Science, Tura, was established with a goal to 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 matrilineal system, was perhaps thought of as the most



College of Home Science, Tura

suitable place to start a college that imparts education in Home Science to girl students by refining their visible roles as home makers and income generators. The college campus is spread over in an area of 50 acres. The College of Home Science started its first academic session from 24th September, 2004.

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

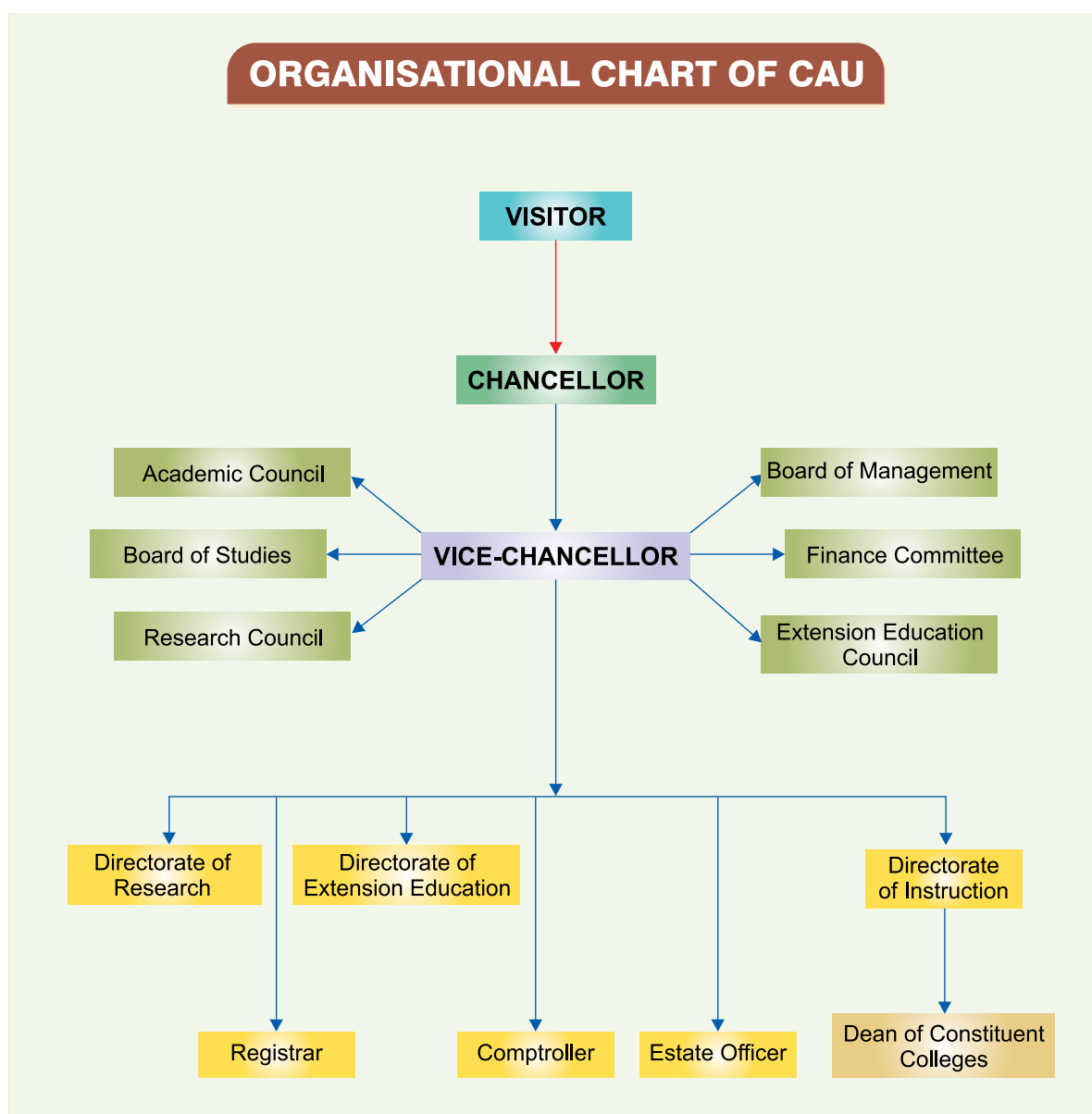
The College of Agricultural Engineering and Post-Harvest Technology, Gangtok was established by CAU, Imphal in May 2006. The college is situated at Ranipool, at a distance of 10.0 km from Gangtok, the capital city of Sikkim. The College campus is spread over an area of 10.5 acres of land at an altitude of 2438.4 m above the mean sea level, mostly hilly terrain comprising of terraces, hill slopes and valley land.



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

1.2.1.7 College of Post Graduate Studies, Umiam, Barapani, Meghalaya

The College of Post Graduate Studies (CPGS), Barapani was established in 2007 at Umiam (Barapani) in Ri-bhoi District which is at a distance of 20.0 km from Shillong, the capital



College of Post Graduate Studies, Umiam

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 in an area of 14 acres.



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 is temporarily operating from the campus of College of Agriculture, Iroisemba, Imphal. The college campus is spread over in an area of 30 acres.

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 temporarily operating from the campus of College of Horticulture and Forestry, Pasighat. However, the college has acquired 86.20 acres of land.

1.2.1.10 College of Agriculture, Kyrdemkulai, Meghalaya

The College of Agriculture at Kyrdemkulai, Meghalaya is temporarily operating from the campus of College of Post Graduate Studies, Barapani, Meghalaya and started its first academic session from July, 2015. The college has acquired 200 acres of land.

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 and is temporarily operating from the campus of College of Agricultural Engineering and Post Harvest Technology, Ranipool, Gangtok, Sikkim and which will be shifted as soon as the basic requirement of the College are created at Bermiok, South Sikkim. The college started its first academic session from July, 2015. The college campus is spread over in an area of 38.60 acres.



College of Horticulture, Bermiok, Sikkim

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 Tuitam Zau, Thenzawl which is 92 kms 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. Currently classes are held at ATIC Building of the College of Veterinary Sciences & AH, Selesih, Aizawl until the construction is fully ready at permanent campus in Thenzawl.



College of Horticulture, Thenzawl

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

College of Veterinary Sciences and Animal Husbandry, Jalukie, Peren Dist. Nagaland

THE UNIVERSITY



College of Veterinary Sciences & Animal Husbandry, Jalukie

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 71.1 km 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.

1.3 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.

1.4 Highlights of Academics and Students' Welfare

1.4.1 Academic Activities

The National Agricultural Education Accreditation Board, ICAR, New Delhi granted

accreditation for various academic programmes (UG/PG/Ph.D's) to the Central Agricultural University, Imphal (Manipur) and its constituent colleges from 28th March, 2016 to 27th March, 2021. During the year, CAU, Imphal started the admission of students with higher fee category for some of the undergraduate degree programmes of the university. The new academic session started from 1st July, 2017 for both UG and Master's courses and from 1st August, 2017 for College of Veterinary Sciences and Animal Husbandry. The Ph. D. Programmes for all the colleges started from 2nd Sept 2017. A total of 481, 177 and 21 students were admitted in various Under-graduates, Masters and Ph.D programmes, respectively during the academic year 2017-18. A total of 255 UG and 141 PG students completed their degrees and 8 students were also awarded Ph.Ds during this period. Out of the total students' strength of 1929 in the university, 324 students belonged to the general category, 135 scheduled castes, 976 scheduled tribes, 490 other backward class and 4 students from foreign countries. Out of them, 840 students were male and 1089 were female amounting to Male : Female ratio of 1 : 1.29.

The students of the university showed excellent performance at national level competitive examinations and admissions in national/premier institutes of higher studies. A total of 14 students secured JRF, 6 SRF, 54 NET, 5 GATE, 2 CAT and 4 students got selected as ARS scientist during the year. 160 students were admitted to Post Graduate Degree Programmes in reputed institutes in the country where 87 of the students were admitted through ICAR Entrance exam. Six students were also admitted to Ph.D. degree courses through ICAR Entrance exam. Students from different constituent colleges of the University were granted more than 490 NTS/ ICAR, University and other Merit Scholarships like Jawaharlal Nehru Merit Scholarship, DST-



Inspire Fellowship etc. during the year under report. The university has an exemplary record of placement through campus interviews during last couple of years in a number of private and public sector organizations, government undertakings. 57 of our students were placed in various capacities in different organizations during the year 2017-18.

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 and post office. All colleges celebrated the college week where students competed in various sports, games and 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 4th Annual CAU Inter-Collegiate Youth Festival 2017-18 was organized jointly by Directorate of Instruction and College of Agriculture, CAU, Imphal from 15th-17th January 2018 at the College of Agriculture, Imphal. During the three days programme, 351 participants from 13 constituent colleges of the university participated in 18 different cultural events of the Youth Festival. The winners of the 4th Intercollegiate Youth Festival 2017-18 were selected for representing the university at the 18th All India AGRIUNIFEST, 2018, held at Sri Venkateswara Veterinary University, Tirupati during 12th-16th February 2018 and

the University secured 2nd prize in the event of Quiz. The 14th National Youth Parliament Competition (Group Level) was also held at the College of Agri-Engineering and Post Harvest Technology, Ranipool, Sikkim on 26th August, 2017 as per National Youth Parliament Competition Scheme. The staff and students of the university also actively participated in implementation of all the major flagship programmes initiated by the Government of India.

I.5 Highlights of Research and Developmental Activities

The University has a separate Directorate of Research to coordinate, supervise, monitor and evaluate all the research activities. The University research aims at developing technologies which can bring about far reaching impact on production, productivity and profitability of crops, animals and fish through sustainable and eco-friendly scientific and technological approaches for socio-economic upliftment of the people of N.E.H. Region.

In order to fulfill the research objectives of the university, a number of need based location specific problem solving, internally and externally funded basic, strategic and applied research projects are being taken up in all the constituent colleges and Directorate of Research.

During the year under report, University carried out 79 (seventy nine) Intramural Research Projects (IRPs) where 10 IRPs were newly sanctioned, 59 ongoing and 10 completed under University Funded Research Programmes. Out of the 143 externally funded research projects, 5 were newly sanctioned, 77 ongoing and 61 were completed. The University was successful in developing location specific recommendations and research findings on

agriculture and allied disciplines for the farmers and agri-entrepreneurs 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 condition of the region. Under Tribal Sub Plan quality seeds, planting materials, animal breeds, fish and improved agricultural tools and implements were distributed which will help to enhance the production and productivity of tribal farmers.

I.6 Highlights of Extension Education

Dissemination of information through field days, farmers fairs, training programmes are the significant ways to popularize any new pioneer technologies to the farming community. The university has made efforts to organize and execute certain important events at various colleges to have a technological interaction between scientists, stakeholders and farmers in the form of major events.

The Directorate of Extension Education organized 9 Capacity building training programmes for extension functionaries which benefitted 258 persons. The Directorate also organized 39 training programmes, awareness days and campaigns for farmers and farm women during the year and benefitted 2187 individuals.

In an effort for greater outreach among the rural farmers, the Directorate also organized CAU Regional Agriculture Fair 2017 (5th-7th November, 2017) at College of Fisheries, CAU, Agartala (Tripura) and benefitted 5050 farmers. The Directorate also participated in 5 national/regional/state Farmers' Fair / Exhibition. The University Stall was adjudged "First Runner-Up" Award in the N.E. Regional Agriculture Fair (6th-9th January, 2018) at

ICAR Research Complex, Umiam, Barapani and first prize at the State Level Agri Fair 2017-18 at Imphal (26th Feb- 1st March, 2018), Two progressive farmers who obtained training from the university viz. Mr. H. Zirsangliana, Village & P.O. Siphir, District – Aizawl (Mizoram), and Mr. Pumto Perme, Village – Ayeng, P.O. Mebo, District East Siang (Arunachal Pradesh) were awarded with prestigious "IARI Innovative Farmer Award-2018 at the Unnat Krishi Mela (16th-18th March, 2018) held at IARI, New Delhi.

Two new KVKs at South and East Garo Hills District of Meghalaya were sanctioned to Central Agricultural University, Imphal during the year. The Directorate of Extension Education monitors the activities of all the KVKs under the university including vocational training of the farmers, on farm trails and frontline demonstrations. About 2480 kg seed of Rapeseed-Mustard produced in the farms of the university were distributed to the farmers and different agencies.

A total of 64 On Campus and 133 Off Campus trainings for farmers were organized under the three KVKs where 6408 farmers were benefitted from the trainings. Twenty three trainings were organized for extension functionaries for knowledge enhancement in which 614 persons have been trained for furthering the cause of outreaching the farmers in remote places, including male, female and youths belonging to SC/ST/OBC categories. Further, the KVKs also organized 34 On Farm Trials (OFT) and 48 Front Line Demonstrations (FLD). The Directorate also published Report on CAU Regional Agri-Fair, 2017-18; Souvenir CAU Regional Agri-Fair, 2017-18; CAU Newsletter; two Compendias viz. Integrated Farming for Sustainable Income and Integrated Sustainable Duck Farming; CAU Calendar-2018; CAU Kisan Diary 2018 (in three languages – English, Hindi and Manipuri



versions) and CAU Farm Magazine (in different languages – English, Hindi, Manipuri, Mizo, Bengali and Khasi versions).

Special Farmers Welfare Oriented Programmes were also organised by the directorate. Under Unnat Bharat Abhiyan/ Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojna, a special, innovative and farmers welfare oriented programme sponsored by Ministry of Agriculture & Farmers' Welfare, Govt. of India, 5 skills oriented trainings were organized in Manipur, Meghalaya, Mizoram and Tripura and benefitted 156 trainees. Mera Gaon Mera Gaurav (MGMG) launched in different constituent colleges and KVK's of the university has helped the farmers to increase farm production and supplement their income in the field of agriculture and allied activities. Four externally funded projects were also undertaken during the period viz. (i) Farmers FIRST Programme (ii) Integrated Beekeeping Development Centre under Centre of Excellence (iii) Kisan Business School (iv) Augmenting Rapeseed-Mustard Production by Tribal Farmers of NE State for Sustainable livelihood Security.

I.7 Highlights of Human Resource Development

The overall performance of the staff and officers of the university 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. Each college arranges distinct on-campus and off-campus trainings of common interests by inviting the experts from outside the institution.

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 college buildings, laboratories, hostels, staff quarters, auditoriums, information centers, canteen, bank and post office buildings and also other buildings required for smooth running of the colleges.

I.9 New and On-going Initiatives

The following new and ongoing initiatives were continued as envisaged in the annual plan:

- i) Location specific problem solving Intramural Research Projects.
- ii) Extension Demonstration and Exhibition of New Technologies.
- iii) Innovative Extension Programmes in Colleges and KVKs.
- iv) Informal/Vocational Education Programmes for farmers/school dropouts.
- v) Experiential Learning Programmes of students.
- vi) Soft Skills and Personality Development Programmes.
- vii) Formal Training Programmes for Line Departments.



2

Academics & Student Welfare





THE Central Agricultural University offered 9 Undergraduate, 38 Masters and 21 Ph. D. Degree Programmes in different subjects/disciplines through its 13 constituent colleges. The University maintains common Academic Calendar for all courses except B.V.Sc. & 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 is made through Competitive Entrance Test conducted by concerned member states located within the jurisdiction of CAU, Imphal for undergraduate programme, common entrance test conducted by university for PG & Ph.D programmes and AIEEA conducted by Indian Council of Agricultural Research (ICAR), Krishi Anusandhan Bhawan, Pusa, New Delhi. Candidates seeking admission 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. From the Year 2017-18 onwards, CAU, Imphal has reserved some seats for open higher fee category for some of the undergraduate degree programmes of the university. These seats are against payment of higher fee and are admissible to Indian Nationals from the North Eastern States excluding Assam.

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.D's) to the Central Agricultural University, Imphal (Manipur) and its constituent colleges from 28th March, 2016 to 27th March, 2021.

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 & 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 state wise seats allocated to different UG programmes in constituent colleges during 2017-18 are given in Table 2.1.1.

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Degree Programmes	Arunachal Pradesh	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura	ICAR/ VCI	J.K. Mi-grant	Sub Total	Payment seat	Total	
1.	B. Sc. (Hons) Agriculture													
	a) College of Agriculture, Imphal, Manipur	12	16	14	09	09	09	16	15	-	100	05	105	
	b) College of Agriculture, Pasighat, Arunachal Pradesh	05	03	02	02	02	02	03	03	-	22	02	24	
	c) College of Agriculture, Kyrdemkulai, Meghalaya	02	04	04	02	02	01	04	03	-	22	-	22	
											SUB TOTAL	144	07	151
2.	B. Sc. (Hons) Community Sc.,	05	06	07	03	03	03	05	05	-	37	-	37	
	a) College of Home Science, Tura, Meghalaya													
3.	B.Sc. (Hons) Nutrition & Dietetics,	02	03	05	02	02	02	03	03	-	22	-	22	
	a) College of Home Science, Tura, Meghalaya													
4.	B. V. Sc. & A.H,	12	09	09	12	04	06	11	11	02	76	-	76	
	a) College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram													
	b) College of Veterinary Sciences & Animal Husbandry, Jalukie, Peren, Nagaland	03	04	03	03	04	02	04	05	-	30	-	30	
											SUB TOTAL	106	-	106
5.	B. Sc. (Hons) Horticulture													
	a) College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	07	07	06	06	06	06	07	08	-	53	05	58	
	b) College of Horticulture, Thenzawl, Aizawl, Mizoram	02	04	02	04	02	01	04	03	-	22	-	22	
	c) College of Horticulture, Bermiok, Sikkim	02	04	03	01	02	03	03	03	-	22	-	22	
											SUB TOTAL	97	05	102



Sl. No.	Degree Programmes	Arunachal Pradesh	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura	ICAR/ VCI	J.K. Mi-grant	Sub Total	Payment seat	Total
6.	B. Sc. (Hons) Forestry, College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	04	05	03	04	03	03	04	04	-	30	03	33
7.	B.F. Sc. (Fisheries), College of Fisheries, Lembuchera, Tripura	04	09	03	03	03	03	09	05	-	39	05	44
8.	B. Tech. (Agricultural Engineering), a) College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim	06	08	06	05	05	05	08	08	-	51	05	56
9.	B. Tech. (Food Technology) a) B. Tech. (FT) at CAEPHT, Ranipool, Gangtok, Sikkim b) College of Food Technology, Imphal, Manipur	02	04	02	02	02	03	04	03	-	22	-	22
		02	05	03	02	02	01	04	03	-	22	05	27
		SUB TOTAL									44	05	49
	GRAND TOTAL	70	91	72	60	53	51	89	82	02	570	30	600

2.1.2 Intake capacity and number of students admitted in 2017-18

The new academic session started from 1st July, 2017 for both UG and Master's courses except College of Veterinary Sciences and Animal Husbandry where it started from 1st August, 2017. Ph. D. programmes for all the colleges started from the 2nd September 2017. A total of 481, 177 and 21 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, 2017-2018.

A. Under Graduate programme

Sl. No.	Name of College	Degree Programme	Intake Capacity	No. of Students Admitted	No. of Students Graduated
1.	College of Agriculture, Imphal, Manipur	B.Sc. (Hons.) Agriculture	105	98	63
2.	College of Food Technology, Lamphelpat, Manipur	B. Tech (Food Tech)	27	11	-

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Name of College	Degree Programme	Intake Capacity	No. of Students Admitted	No. of Students Graduated
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	B. Tech. (Agricultural Engineering)	56	41	26
		B. Tech. (Food Technology)	22	10	09
4.	College of Horticulture, Bermiok, Sikkim	B.Sc. (Hons.) Horticulture	22	20	-
5.	College of Fisheries, Lembuchera, Tripura	B.F.Sc.	44	36	23
6.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Horticulture	58	45	32
		B.Sc. (Hons.) Forestry	33	29	20
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Agriculture	24	18	18
8.	College of Veterinary Sciences and Animal Husbandry, Selesih, Aizawl, Mizoram	B.V.Sc & A.H.	76	70	43
9.	College of Home Science, Tura, Meghalaya	B.Sc. Community Science	37	27	21
		B.Sc. Food Nutrition and Dietetics	22	14	-
10.	College of Horticulture Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	22	17	-
11.	College of Agriculture, Kyrdem Kulai, Ri-Bhoi, Meghalaya	B.Sc. (Hons.) Agriculture	22	19	-
12.	College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland	B.V.Sc. & A.H	30	26	-
Total			600	481	255

B. Master's programmes

Sl. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
1.	College of Agriculture, Imphal, Manipur	M.Sc. (Agriculture)	Agronomy	5+2*=7	07	06
			Ag. Economics	5+2*=7	03	03
			Extn. Education	5+2*=7	07	04
			Entomology	5+2*=7	06	04
			Horticulture	5+2*=7	07	05



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SI. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
			Plant Pathology	5+2*=7	05	06
			Genetics & Plant Breeding	5+2*=7	06	04
			Soil Science & Agricultural Chemistry	5+2*=7	07	04
		Reserve for ICAR Nominee	Sub Total	40+16=56	48	36
2.	College of Post-Graduate Studies, Umiam, Meghalaya	M.Sc. (Agriculture)	Agronomy	5+2*=7	04	06
			Soil Science & Agricultural Chemistry	5+2*=7	04	04
			Genetics & Plant Breeding	5+2*=7	05	06
			Plant Molecular Biology & Biotechnology	5+2*=7	05	06
			Entomology	5+2*=7	07	05
			Plant Pathology	5+2*=7	07	06
			Agricultural Economics	5+2*=7	01	04
			Agricultural Extension	5+2*=7	03	06
			Sub Total	40+16*=56	36	43
		MBA (ABM)		05	05	-
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	M. Tech.	Farm Machinery & Power Engineering	3+2*=5	02	01
			Soil & Water Engineering	3+2*=5	02	03
			Food Engineering	3+2*=5	02	02
			Sub Total	9+6*=15	06	06
4.	College of Fisheries, Lembucherra, Tripura	M.F.Sc.	Aquatic Animal Health (AAH)	4+1*=5	05	03
			Fish Processing Technology(FPT)	4+1*=5	05	05
			Aquaculture (AQU)	4+1*=5	05	05
			Fisheries Extension (FEX)	4+1*=5	04	05

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
			Fisheries Resource Management (FRM)	4+1*=5	04	03
			Fish Genetics & Breeding (FGB)	4+1*=5	05	05
			Sub Total	24+6*=30	28	26
5.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	M.Sc. Horticulture	a) M.Sc. (Hort.) Vegetable Science	4+1*=5	04	01
			b) M.Sc. (Hort.) Fruit Science	4+1*=5	07	02
		M.Sc. Forestry	c) M.Sc. Forestry	4+2*=6	04	-
			Sub Total	12+4*=16	15	03
6.	College of Veterinary Sciences and Animal Husbandry, Selesih, Aizawl, Mizoram	Master of Veterinary Sciences	Veterinary Biochemistry	4+1*=5	-	-
			Veterinary Anatomy	3+1*=4	-	01
			Veterinary Gynecology & Obstetrics	4+1*=5	03	03
			Veterinary Medicine	4+1*=5	04	03
			Veterinary Parasitology	2+1*=3	01	02
			Veterinary Pathology	4+1*=5	04	01
			Veterinary Microbiology	4+1*=5	05	02
			Veterinary Surgery & Radiology	4+1*=5	05	02
			Veterinary Public Health & Epidemiology	4+1*=5	02	03
			Animal Genetics & Breeding	4+1*=5	02	02
			Animal Nutrition	4+1*=5	02	02
			Veterinary Physiology	3+1*=4	-	-
			Livestock Production & Management	4+1*=5	04	02
			Livestock Products Technology	4+1*=5	03	01



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Sl. No.	Name of College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
			Veterinary & A.H. Extension	3+1*=4	03	03
			Veterinary Pharmacology & Toxicology	4+1*=5	-	-
			Sub Total	59+16*=75	38	27
8.	College of Home Science, Tura, Meghalaya	M.Sc. Community Science	Food and Nutrition	2+1*=3	-	-
			Extension Education and Communication Management	2+1*=3	02	-
			Sub Total	4+2*=6	02	-
			Grand Total	254	177	141

(c) Ph.D. Programmes

Sl. No.	Name of the Constituent College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
1.	College of Agriculture, Imphal, Manipur	Ph.D. (Agriculture)	i) Agronomy	1+1*=2	01	-
			ii) Plant Pathology	1+1*=2	01	-
			iii) Plant Breeding & Genetics	2+1*=3	02	-
			iv) Soil Science & Agricultural Chemistry	2+1*=3	01	-
			v) Entomology	1+1*=2	01	-
			Sub Total	7+5*=12	06	-
2.	College of Post-Graduate Studies, Umiam, Meghalaya	Ph.D. (Agriculture)	Agronomy	2+1*=3	-	-
			Soil Science & Agricultural Chemistry	2+1*=3	01	-
			Genetics & Plant Breeding	2+1*=3	03	01
			Plant Molecular Biology & Biotechnology	2+1*=3	02	02
			Plant Pathology	2+1*=3	02	-
			Agricultural Economics	2+1*=3	-	01
			Agricultural Extension	2+1*=3	01	02
			Sub Total	14+7*=21	09	06

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Name of the Constituent College	Degree Programme	Discipline	Intake Capacity	No. of Students Admitted	No. of Students awarded
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	Ph.D.	Farm Machinery & Power Engineering	2+1*=3	01	-
			Soil & Water Engineering	1+1*=2	01	-
			Food Engineering	1+1*=2	-	-
			Sub Total	4+3*=7	02	-
4.	College of Fisheries, Lembucherra, Tripura	Ph.D.	Aquatic Animal Health (AAH)	2+1*=3	01	-
			Sub Total	2+1*=3	01	-
5.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	Ph.D.	Vegetable Science	2+1*=3	02	-
			Fruit Science	2+1*=3	01	-
			Sub Total	4+2*=6	03	-
6.	College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram	Ph.D.	Animal Nutrition	2+1*=3	-	01
			Livestock Production Management	2+1*=3	-	-
			Veterinary Biochemistry	1+1*=2	-	-
			Veterinary Microbiology	2+1*=3	-	01
			Veterinary Pathology	1+1*=2	-	-
			Veterinary Medicine	2+1*=3	-	-
			Veterinary Gynecology & Obstetrics	1+1*=2	-	-
* Reserve for ICAR Nominee			Sub Total	11+7=18	-	02
Grand Total				67	21	08

2.1.3 Students Strength in 2017-18

The total student strength of the university in the year was 1929 comprising of 1495 students at the Under-graduates [Table 2.1.3. (a)], 351 students at Masters [Table 2.1.3. (b)] and 83 students at Ph.D [Table 2.1.3. (c)] degree programmes.



CENTRAL AGRICULTURAL UNIVERSITY ANNUAL REPORT 2017-18

Table 2.1.3(a): Under Graduate Programmes

Sl. No.	Name of College	Degree Programme	Year wise students strength					Total	No. of Students Graduated in 2017-18
			1 st	2 nd	3 rd	4 th	5 th		
1.	College of Agriculture, Imphal, Manipur	B.Sc. (Hons.) Agriculture	98	55	53	71	-	277	63
2.	College of Agriculture, Kyrdem Kulai, Ri-Bhoi, Meghalaya	B.Sc. (Hons.) Agriculture	19	15	13	-	-	47	-
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	B. Tech. (Agril. Engg.)	41	34	26	22	-	123	26
		B. Tech. (Food Tech.)	10	6	10	6	-	32	09
4.	College of Horticulture, Bermiok, Sikkim	B. Sc. (Hons.) Horticulture	20	16	14	-	-	50	-
5.	College of Fisheries, Lembucherra, Tripura	B.F.Sc.	36	27	26	22	-	111	23
6.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	B.Sc (Hons.) Horticulture	45	42	35	43	-	165	32
		B.Sc (Hons.) Forestry	29	21	16	19	-	85	20
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc (Hons.) Agriculture	18	17	19	18	-	72	18
8.	College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram	Bachelor of Veterinary Sciences and Animal Husbandry	70	63	49	55	41	278	43
9.	College of Home Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	27	20	27	17	-	91	21
		B.Sc. (Hons.) Food Nutrition & Dietetics	14	14	10	12	-	50	-
10.	College of Horticulture, Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	17	17	-	-	-	34	-
11.	College of Food Technology, Lamphelpat, Manipur	B. Tech (Food Tech)	11	10	8	-	-	29	-
12.	College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland	B.V.Sc.&A.H	26	25	-	-	-	51	0
Grand Total			481	382	306	285	41	1495	255

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Table 2.1.3(b): Master's programmes

Sl. No.	Name of College	Degree Programme	Departments/Disciplines	Intake Capacity	Students Strength (M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)			No. of Students awarded
					Prev.	Final	Total	
1.	College of Agriculture, Imphal, Manipur	M. Sc. (Agriculture)	a) Agronomy	07	07	09	16	06
			b) Agricultural Economics	07	03	04	07	03
			c) Extension Education	07	07	05	12	04
			d) Entomology	07	06	09	15	04
			e) Horticulture	07	07	04	11	05
			f) Plant Pathology	07	05	05	10	06
			g) Genetics & Plant Breeding	07	06	11	17	04
			h) Soil Science & Agricultural Chemistry	07	07	08	15	04
			Sub Total	56	48	55	103	36
2.	College of Post-Graduate Studies, Umiam, Meghalaya	M.Sc. (Agri)	1. School of Natural Resource Management					
			a) Agronomy	07	04	05	09	06
			b) Soil Science & Agricultural	07	04	06	10	04
			c) Chemistry					
			2. School of Crop Improvement					
			a) Genetics & Plant Breeding	07	05	07	12	06
			b) Plant Molecular Biology & Biotechnology	07	05	06	11	06
			3. School of Crop Protection					
			a) Entomology	07	07	06	13	05
			b) Plant Pathology	07	07	07	14	06
			4. School of Social Sciences					
			a) Agricultural Economics	07	01	07	08	04
			b) Agricultural Extension	07	03	07	10	06
			Sub Total	56	36	51	87	43
				MBA	ABM	05	05	-
Grand total				61	41	51	92	-



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Sl. No.	Name of College	Degree Programme	Departments/Disciplines	Intake Capacity	Students Strength			No. of Students awarded
					(M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)	Prev.	Final	
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	M. Tech.	a) Farm Machinery & Power Engineering	05	02	-	02	01
			b) Soil & Water Engineering	05	02	01	03	03
			c) Food Engineering	05	02	02	04	02
			Sub Total	15	06	03	09	06
4.	College of Fisheries, Lembucherra, Tripura	Master of Fisheries Science (M.F.Sc.)	a) Aquatic Animal Health	05	05	02	07	03
			b) Fish Processing Technology	05	05	02	07	05
			c) Aquaculture	05	05	05	10	05
			d) Fisheries Extension	05	04	03	07	05
			e) Fisheries Resource Management	05	04	04	08	03
			f) Fish Genetics & Breeding	05	05	05	10	05
Sub Total	30	28	21	49	26			
5.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	M.Sc. (Horticulture)	Vegetable Science	10				01
			Fruit Science		15	13	28	02
		M.Sc. (Forestry)	Forestry	06				-
Sub Total	16	15	13	28	03			
6	College of Veterinary Sciences & A.H.	Master of Veterinary Sciences	Veterinary Biochemistry	05	-	-	-	-
			Veterinary Anatomy	04	-	02	02	01
			Veterinary Gynecology & Obstetrics	05	03	03	06	03
			Veterinary Medicine	05	04	03	07	03
			Veterinary Parasitology	03	01	01	02	02
			Veterinary Pathology	05	03	04	07	01
			Veterinary Microbiology	05	05	03	08	02
Veterinary Surgery & Radiology	05	05	03	08	02			

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Name of College	Degree Programme	Departments/Disciplines	Intake Capacity	Students Strength (M. Sc. / M. V. Sc. / M. F. Sc. / M. Tech.)			No. of Students awarded
					Prev.	Final	Total	
			Veterinary Public Health & Epidemiology	05	02	01	03	03
			Animal Genetics & Breeding	05	02	03	05	02
			Animal Nutrition	05	02	02	04	02
			Veterinary Physiology	04	-	-	-	-
			Livestock Production & Management	05	04	02	06	02
			Livestock Products Technology	05	03	02	05	01
			Veterinary & A.H. Extension	04	03	01	04	03
			Veterinary Pharmacology & Toxicology	05	-	-	-	-
			Sub Total	75	37	30	67	27
7.	College of Home Science, Tura, Meghalaya	M.Sc. (Community Science)	Food & Nutrition	03	-	01	01	-
			Extension Education and Communication Management	03	02	-	02	-
			Sub Total	06	02	01	03	-
Grand Total				259	178	173	351	141

Table 2.1.3(c): Ph.D. Programmes

Sl. No	Name of College	Departments/Disciplines	Intake Capacity	Students Strength (Ph. D.)				No. of Students awarded
				1 st year	2 nd year	3 rd year	Total	
1.	College of Agriculture, Imphal, Manipur	i) Agronomy	02	01	03	02	06	-
		ii) Plant Pathology	02	01	02	02	05	-
		iii) Plant Breeding and Genetics	03	02	03	02	07	-
		iv) Soil Science & Agricultural Chemistry	03	01	01	04	06	-
		v) Entomology	02	01	-	-	01	-
		Sub Total	12	06	09	10	25	-



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Sl. No	Name of College	Departments/ Disciplines	Intake Capacity	Students Strength (Ph. D.)				No. of Students awarded
				1 st year	2 nd year	3 rd year	Total	
2.	College of Post-Graduate Studies, Umiam, Meghalaya	1. School of Natural Resource Management						
		i) Agronomy	03	-	03	02	05	-
		ii) Soil Science & Agricultural Chemistry	03	01	-	04	05	-
		2. School of Crop Improvement						
		i) Genetics & Plant Breeding	03	03	01	02	06	01
		ii) Plant Molecular Biology & Biotechnology	03	02	01	01	04	02
		3. School of Crop Protection						
		i) Pl. Pathology	03	02	02	02	06	-
		4. School of Social Sciences						
		i) Agricultural Economics	03	-	02	02	04	01
		ii) Agricultural Extension	03	01	02	03	06	02
		Sub Total	21	09	11	16	36	06
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	Farm Machinery & Power Engineering	03	01	01	-	01	-
		Soil & Water Engineering	02	-	-	-	-	-
		Food Engineering	02	01	-	-	01	-
		Sub Total	07	02	01		02	
4.	College of Fisheries, Lembucherra, Tripura	Ph.D. in Aquatic Animal Health (AAH)	03	01	02	-	03	-
		Sub Total	03	01	02	-	03	-
5.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	Ph.D (Horticulture)	06	03	05	03	11	-
		Sub Total	06	03	05	03	11	-
6.	College of Veterinary Sciences & Animal Husbandry	Animal Nutrition	03	-	-	01	01	01
		Livestock Production Management	03	-	-	-	-	-
		Veterinary Biochemistry	02	-	01	-	01	-

ACADEMICS AND STUDENTS WELFARE

Sl. No	Name of College	Departments/ Disciplines	Intake Capacity	Students Strength (Ph. D.)				No. of Students awarded
				1 st year	2 nd year	3 rd year	Total	
		Veterinary Microbiology	03	-	-	-	-	01
		Veterinary Pathology	02	-	-	-	-	-
		Veterinary Medicine	03	-	01	-	01	-
		Veterinary Gynecology & Obstetrics	02	-	01	01	02	-
		Sub Total	18	-	03	02	05	02
		Grand Total	67	21	31	31	83	08

2.1.4 Category-wise Students' Strength

The details of category wise break-up of students' strength in various UG, PG & Ph.D. programmes of the university are given in Table 2.1.4. Out of the 1929 students, 324 students belonged to the general category, 135 scheduled castes, 976 scheduled tribes, 490 other backward classes and 4 students from foreign countries.

Table 2.1.4: Category wise student strength during 2017-18

Sl. No.	Name of College	Degree programme	Students Strength					Total
			Gen.	SC	ST	OBC	Foreigner	
1.	College of Agriculture, Imphal, Manipur	B. Sc. (Hons.) Agriculture	48	18	154	57	-	277
		M. Sc. (Agriculture)	21	11	28	41	01	103
		Ph.D. (Agriculture)	07	02	02	14	-	25
		Sub Total	76	31	184	112	01	405
2.	College of Post Graduate Studies, Umiam, Meghalaya	M.Sc. (Agriculture)	15	14	26	32	-	87
		MBA (ABM)	01	-	03	01	-	05
		Ph.D	08	05	15	08	-	36
	Sub Total	24	19	44	41	-	128	
3.	College of Agriculture, Kyrdem Kulai, Ri-Bhoi, Meghalaya	B.Sc. (Agriculture)	03	02	30	12	-	47
		Sub Total	03	02	30	12	-	47
4.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	B. Tech. (Agricultural Engineering)	23	13	52	35	-	123
		B. Tech. (Food Technology)	07	03	10	12	-	32
		M. Tech (FMPE)	01	-	-	-	01	02



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Sl. No.	Name of College	Degree programme	Students Strength					Total
			Gen.	SC	ST	OBC	Foreigner	
		M. Tech (SWE)	-	-	-	03	-	03
		M. Tech (PFE)	02	-	-	02	-	04
		Ph.D.	02	-	-	-	-	03
		Sub Total	35	16	62	52	01	167
5.	College of Horticulture, Bermiok, Sikkim	B. Sc. (Hons.) Horticulture	04	02	24	20	-	50
		Sub Total	04	02	24	20	-	50
6.	College of Fisheries, Lembucherra, Tripura	B.F.Sc.	30	08	46	27	-	111
		M.F.Sc.	12	07	10	20	-	49
		Ph.D.	01	-	01	01	-	03
		Sub Total	43	15	57	48	-	163
7.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Horticulture	26	04	101	34	-	165
		B.Sc (Hons.) Forestry	10	05	47	23	-	85
		M.Sc. (Horticulture)	01	01	12	05	02	21
		M.Sc. (Forestry)	-	-	05	02	-	07
		Ph.D Programme	04	-	05	02	-	11
		Sub Total	41	10	170	66	02	289
8.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc (Hons.) Agriculture	05	08	50	09	-	72
		Sub Total	05	08	50	09	-	72
9.	College of Veterinary Sciences & Animal Husbandry, Selesih, Mizoram	BVSc. & A.H.	36	08	188	46	-	278
		MVSc.	20	04	27	16	-	67
		Ph.D	02	-	02	01	-	05
		Sub Total	58	12	217	63	-	350
10.	College of Home Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science.	10	07	44	30	-	91
		B.Sc. (Hons.) Food Nutrition & Dietetics	07	02	27	14	-	50
		M.Sc. Community Science (Food & Nutrition)	-	-	01	-	-	01

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Sl. No.	Name of College	Degree programme	Students Strength					Total
			Gen.	SC	ST	OBC	Foreigner	
		M.Sc. (Community Science) Extension Education and Communication Management	-	-	02	-	-	02
		Sub Total	17	09	74	44	-	144
11.	College of Horticulture, Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	03	02	22	07	-	34
		Sub Total	03	02	22	07	-	34
12.	College of Food Technology, Lamphelpat, Imphal	B. Tech (Food Tech)	07	05	07	10	-	29
		Sub Total	07	05	07	10	-	29
13.	College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland	B.V.Sc. & A.H	07	04	34	06	-	51
		Sub Total	07	04	34	06	-	51
GRAND TOTAL			324	135	976	490	04	1929

2.1.5 Male to Female students' ratio

During the academic year, 2017-18, 840 (43.55%) male and 1089 (56.45%) female, respectively, were enrolled in different degree programmes at constituent colleges. There was a marginal increase in the number of female students during the year and male: female student ratio was 1:1.29. The college wise break-up of male and female students enrolled in various courses is given in Table 2.1.5.

Table 2.1.5: Enrolled male and female students and their ratio during the academic session, 2017-18

Sl. No.	Name of College	Degree Programme	Total student	Male students		Female Students		M : F
				No.	%	No.	%	
1.	College of Agriculture, Imphal, Manipur	B.Sc. (Agriculture)	277	122	44.00	155	56.00	1:1.2
		M. Sc. (Agriculture)	103	48	46.60	55	53.40	1:1.1
		Ph.D. (Agriculture)	25	10	40.00	15	60.00	1:1.5
		Sub Total	405	180	44.40	225	55.60	1:1.25
2.	College of Post Graduate Studies, Umiam, Meghalaya	M.Sc. (Agriculture)	87	48	55.17	39	44.83	1:0.81
		MBA (ABM)	05	2	40.00	3	60.00	1:1.50
		Ph.D (Agriculture)	36	23	63.89	13	36.11	1:0.56
		Sub Total	128	73	57.03	55	42.97	1:0.75



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Sl. No.	Name of College	Degree Programme	Total student	Male students		Female Students		M : F
				No.	%	No.	%	
3.	College of Agriculture, Kyrdem Kulai, Ri-Bhoi, Meghalaya	B.Sc. (Hons.) Agriculture	47	17	36.17	30	63.83	1:1.76
		Sub Total	47	17	36.17	30	63.83	1:1.76
4.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	B. Tech. (AE)	123	76	61.79	47	38.21	1.61:1
		B. Tech. (FT)	32	15	46.88	17	53.12	1:1.13
		M. Tech. (FMPE)	02	01	50.00	01	50.00	1:1
		M. Tech. (SWCE)	03	02	66.67	01	33.33	1:0.5
		M. Tech. (PFE)	04	04	100.00	-	-	1:0
		Ph. D (FMPE)	02	01	100.00	-	-	1:0
		Ph.D (PFE)	01	-	-	01	100.00	0:1
		Sub Total	167	100	59.88	67	40.12	1:0.67
5.	College of Horticulture, Bermiok, Sikkim	B. Sc. (Hons.) Horticulture	50	19	38.00	31	62.00	1:1.63
		Sub Total	50	19	38.00	31	62.00	1:1.63
6.	College of Fisheries, Lembucherra, Tripura	B.F.Sc.	111	51	45.95	60	54.05	1:1.18
		M.F.Sc.	49	31	63.27	18	36.73	1:0.58
		Ph.D.	03	2	66.67	1	33.33	1:0.50
		Sub Total	163	84	51.53	79	48.47	1:0.94
7.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Horticulture	165	60	36.37	105	63.63	1:1.75
		B.Sc. (Hons.) Forestry	85	44	51.76	41	48.24	1:0.93
		M.Sc(Horticulture)	21	10	47.62	11	52.38	1:1.1
		M.Sc(Forestry)	07	07	100.00	-	-	1:0
		Ph.D.	11	05	45.45	6	54.55	1:1.2
		Sub Total	289	126	43.60	163	56.40	1:1.29
8.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Agriculture	72	26	36.11	46	63.89	1:1.76
		Sub Total	72	26	36.11	46	63.89	1:1.76

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Sl. No.	Name of College	Degree Programme	Total student	Male students		Female Students		M : F
				No.	%	No.	%	
9.	College of Veterinary Sciences & Animal Husbandry, Mizoram	BVSc. & A.H.	278	124	44.61	154	55.40	1:1.24
		MVSc.	67	38	56.72	29	43.29	1:0.76
		Ph.D	05	04	80.00	01	20.00	1:0.25
		Sub Total	350	166	47.43	184	52.57	1:1.10
10.	College of Home Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	91	-	-	91	100.00	0:1
		B.Sc. (Hons.) Food Nutrition & Dietetics	50	-	-	50	100.00	0:1
		M.Sc. Community Science (Food & Nutrition)	01	-	-	01	100.00	0:1
		M.Sc. (Community Science) Extension Education and Communication Management	02	-	-	02	100.00	0:1
		Sub Total	144	-	-	144	100.00	0:1
11.	College Of Horticulture, Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	34	14	41.18	20	58.82	1:1.4
		Sub Total	34	14	41.18	20	58.82	1:1.4
12.	College of Food Technology, Lamphelpat, Manipur	B. Tech (Food Technology)	29	18	62.06	11	37.93	1:0.61
		Sub Total	29	18	62.07	11	37.93	1:0.61
13.	College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland	B.V.Sc.&A.H	51	17	33.33	34	66.67	1:2
		Sub Total	51	17	33.33	34	66.67	1:2
Grand Total			1929	840	43.55	1089	56.45	1:1.29

2.1.6 Rank Holders of U.G. and P.G. Programmes, 2017-18

Table 2.1.6(a): First Rank Holders under UG Programme in different Colleges during the year, 2017-18

Sl. No	Name of Colleges	Degree Offered	Names of Students	OGPA
1.	College of Agriculture, Imphal, Manipur	B.Sc. (Agri.)	Hage Mamung	8.69
		M. Sc. (Agri)	Aswin C.	8.76



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Sl. No	Name of Colleges	Degree Offered	Names of Students	OGPA
2.	College of Agricultural Engineering & Post Harvest Technology, Gangtok, Sikkim	B. Tech. (Food Technology)	Mr. Macdonald Ropmay	8.22
		B. Tech. (Agricultural Engineering)	Mr. Kishan Nath	9.07
3.	College of Fisheries, Tripura	B.F.Sc.	Ms. Yumnam Joshi Devi	8.902
4.	College of Horticulture & Forestry, Pasighat	B.Sc (Horticulture)	Mr. Aditya Pratap Singh	8.95
		B.Sc. (Forestry)	Miss. Mitinam Jamoh	8.93
5.	College of Veterinary Sciences & Animal Husbandry, Selisih, Mizoram	B.V.Sc. & A.H.	Kangabam Bidyalaxmi	8.135
6.	College of Home Science, Tura	B.Sc. (Community Science)	Ms. Aheibam Abenao Chanu	8.62
7.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Agri.)	Mr. Arif-ur-Rahaman Chowdhury	8.69

Table 2.1. (b): Subject wise first rank holders in Master's Programme in different colleges during the year, 2017-18

Sl. No.	Name of College	Subject	Names of Students	OGPA
1.	College of Agriculture, Imphal, Manipur	Agronomy	Aswin C	8.76
		Agricultural Economics	Donyi Sanjay Tawang	7.85
		Entomology	Sukanya Sougaijam,	8.35
		Extension Education	Bandana Yumnam	8.67
		Horticulture	L. Daina Devi	8.67
		Plant Breeding & Genetics	Dairy Zirthansangi	8.44
		Plant Pathology	Prateek R Behera	8.52
		Soil Science	T. Vikas Kumar	8.34
2.	College of Post-Graduate Studies, Umiam, Meghalaya	Agronomy	Ms. Meghna Gogoi	8.50
		Soil Science & Agricultural Chemistry	Mr. Techu Tagung	8.14
		Genetics and Plant Breeding	Mr. Santhosh B.L.	8.18
		Plant Molecular Biology and Biotechnology	Mr. Lalduhzuala Colney	8.22
		Entomology	Mr. Sankarganesh E.	8.86

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Sl. No.	Name of College	Subject	Names of Students	OGPA
		Plant Pathology	Ms. Lipa Deb	8.80
		Agricultural Economics	Mr. N. Chinglen Meitei	8.10
		Agricultural Extension	Ms. Ditolyn Sumi	9.04
3.	College of Agricultural Engineering & Post Harvest Technology, Gangtok, Sikkim	M. Tech. (SWE)	Mr. Deependra Rai	8.50
		M. Tech. (FMPE)	Mr. Vishnu Sankar A.	8.88
		M. Tech. (FE)	Mr. Sajesh Chettri	8.48
4.	College of Fisheries, Lembucherra, Tripura	Aquatic Animal Health	Md. Idrish Raja Khan	8.54
		Aquaculture	Ms. Narinder Kaur	8.54
		Fish Processing Technology	Ms. Priya Rawat	8.90
		Fisheries Extension	Mr. Siddhnath	9.00
		Fish Genetics & Breeding	Mr. Rajsumerljardar	8.28
		Fisheries Resource Management	Mr. Sudhakar Bisen	8.77
5.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh.	Vegetable Science	Mr. Dhiman Chakraborty	8.98
		Fruit Science	Mr. Devaraja R	8.65
6.	College of Veterinary Sciences & Animal Husbandry, Selisih, Mizoram	Veterinary Anatomy	Dr. Swarup Debroy	8.42
		Veterinary Gynaecology & Obstetrics	Dr. M.S. Dawngliana	8.49
		Veterinary Medicine	Dr. Santanu Ghorai	8.26
		Veterinary Parasitology	Dr. Chirom Nishita Devi	7.19
		Veterinary Pathology	Dr. Kim Jamoh	7.81
		Veterinary Microbiology	Dr. Satyaki Chakraborty	8.78
		Veterinary Surgery & Radiology	Dr. Mekha Chandran	8.85
		Veterinary Public Health & Epidemiology	Dr. Malay Das	8.51
		Animal Genetics & Breeding	Dr. Timothy Lalmalsawma	8.27
		Animal Nutrition	Dr. Kekiepeu Nza	7.95
		Livestock Production & Management	Dr. Karuna Saikia	8.06



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Sl. No.	Name of College	Subject	Names of Students	OGPA
		Livestock Products Technology	Dr. Moon Choudhury	8.57
		Veterinary & A.H. Extension	Dr. Lalhmunmawia	8.23

Table 2.1.6 (c): Students awarded Ph.D degree in different colleges during the year 2017-18

Sl. No.	Name of College	Subject	Names of Students	OGPA
	College of Post-Graduate Studies, Umiam, Meghalaya	Genetics and Plant Breeding	Mr. Shiva Kumar K	7.04
			Plant Molecular Biology and Biotechnology	Mr. Suvendhu Sekhar Dutta
		Mr. Satish Kumar M. Verma		7.18
		Agricultural Economics		Ms. Monika Aheibam
		Agricultural Extension	Mrs. Punitha P	8.64
	Ms. Alethea Dympep		8.52	
	College of Veterinary Sciences & Animal Husbandry, Selesih, Mizoram	Animal Nutrition	Dr. Suzanne Malsawmthangi	7.99
		Veterinary Microbiology	Dr. Lalhruaipuii	8.39

2.1.7 Scholarship awarded to students during 2017-18

The college-wise number of students who received various scholarships during the year 2017-18 is given in Table 2.1.7:

Table 2.1.7: Scholarship awarded to students, 2017-18 (NTS/ University Merit Scholarship/Others)

Sl. No.	Name of the College	Degree programme	Year	No. of Students receiving NTS	No. of Students receiving Univ. Merit Scholarship/ Univ. Institutional Fellowship	Other Scholarships
1.	College of Agriculture, Imphal, Manipur	B.Sc. (Hons.) Agriculture	1 st yr	02	01	-
			2 nd yr	03	01	-
			3 rd yr	01	01	-
			4 th yr	01	01	-
		M. Sc. (Agriculture)	1 st yr	08	28	-
			2 nd yr	07	30	-

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Sl. No.	Name of the College	Degree programme	Year	No. of Students receiving NTS	No. of Students receiving Univ. Merit Scholarship/ Univ. Institutional Fellowship	Other Scholarships
2.	College of Post-Graduate Studies, Umiam, Meghalaya	M.Sc. (Agriculture)	1 st yr	14	22	-
			2 nd yr	12	37	-
		Ph.D (Agriculture)	1 st yr	-	09	-
			2 nd yr	-	09	01 (UGC-JRF Scholarship)
			3 rd yr	-	04	07 (NF&SHE for ST) 01 (NF&SHE for SC) 02 (Jawaharlal Nehru Scholarship) 01 (ICAR-JRF) 01 (UGC Scholarship (JRF))
4 th yr	-	-	03 (NF&SHE for ST)			
3.	College of Agriculture, Kyrdem Kulai, Ri-Bhoi, Meghalaya	B.Sc. (Hons.) Agriculture	1 st yr	-	-	-
			2 nd yr	-	-	-
			3 rd yr	01	-	-
4.	College of Agricultural Engineering and Post Harvest Technology, Gangtok	B. Tech. (Agril. Engg.)	1 st yr	06	01	-
			2 nd yr	06	-	-
			3 rd yr	03	-	-
			4 th yr	04	-	-
		B. Tech. (Food Tech.)	1 st yr	-	01	-
			2 nd yr	-	01	-
			3 rd yr	02	-	-
			4 th yr	01	-	-
		M. Tech (FMPE)	1 st yr	01	-	-
			2 nd yr	-	-	-
M. Tech. (SWCE)	1 st yr	02	-	-		
	2 nd yr	01	-	-		



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Sl. No.	Name of the College	Degree programme	Year	No. of Students receiving NTS	No. of Students receiving Univ. Merit Scholarship/ Univ. Institutional Fellowship	Other Scholarships	
5.	College of Horticulture, Bermiok, Sikkim	M. Tech. (PFE)	1 st yr	02	-	-	
			2 nd yr	01	01	-	
		Ph. D (FMPE)	1 st yr	-	-	-	
			2 nd yr	-	01	-	
			3 rd yr	-	-	-	
		Ph. D (PFE)	1 st yr	-	-	-	
			2 nd yr	-	01	-	
			3 rd yr	-	-	-	
		B. Sc.(Hons.) Horticulture	1 st yr	-	01	02 (UGC Ishan Uday) 10 (State Scholarship) 03(Umbrella Scholarship)	
				2 nd yr	02	01	02 (UGC Ishan Uday) 02 (Post Matric Scholarship) 02 (State ST Scholarship) 02 (Umbrella Scholarship)
				3 rd yr	-	01	03 (UGC Ishan Uday) 08 (State Stipend) 01 (State ST Scholarship) 01 (Umbrella Scholarship)
			6.	College of Fisheries, Tripura	B.F.Sc.	1 st yr	-
2 nd yr	-					01	-
3 rd yr	-					01	-
4 th yr	-	01				-	
M.F.Sc.	1 st yr	-	25	-			
	2 nd yr	-	24	-			

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Name of the College	Degree programme	Year	No. of Students receiving NTS	No. of Students receiving Univ. Merit Scholarship/ Univ. Institutional Fellowship	Other Scholarships
		Ph.D.	1 st yr	-	01	-
			2 nd yr		01	01 (INSPIRE Fellowship, DST)
7.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Horticulture	1 st yr	02	01	-
			2 nd yr	02	01	-
			3 rd yr	02	01	-
			4 th yr	01	01	-
		B.Sc. (Hons.) Forestry	1 st yr	01	01	-
			2 nd yr	01	01	-
			3 rd yr	01	01	-
			4 th yr	-	01	-
		M.Sc. (Forestry)	1 st yr	-	04	-
			2 nd yr	-	03	-
8.	College of Agriculture, Pasighat, Arunachal Pradesh	B.Sc. (Hons.) Agriculture	1 st yr	-	01	-
			2 nd yr	-	01	-
			3 rd yr	02	01	-
			4 th yr	-	01	-
9.	College of Veterinary Sciences & Animal Husbandry, Selisih, Mizoram	BVSc. & A.H.	1 st yr	-	01	-
			2 nd yr	-	01	-
			3 rd yr	01	01	-
			4 th yr	02	01	-
			5 th yr	-	01	-
		MVSc.	1 st yr.	08	17	-
			2 nd yr.	06	24	-
		Ph.D	2 nd yr	-	03	-
			3 rd yr	-	02	-



CENTRAL AGRICULTURAL UNIVERSITY ANNUAL REPORT 2017-18

Sl. No.	Name of the College	Degree programme	Year	No. of Students receiving NTS	No. of Students receiving Univ. Merit Scholarship/ Univ. Institutional Fellowship	Other Scholarships
10.	College of Home Science, Tura, Meghalaya	B.Sc. (Hons.) Community Science	1 st yr	-	01	Post Matric Scholarship (ST), Ishan Uday Scholarship (UGC)
			2 nd yr	-	01	
			3 rd yr	-	01	
			4 th yr	-	01	
		B.Sc. (Hons.) Food Nutrition & Dietetics	1 st yr	-	01	
			2 nd yr	-	01	
			3 rd yr	-	01	
			4 th yr	-	01	
	M.Sc. Community Science	2 nd yr	-	01	-	
11.	College of Horticulture, Thenzawl, Mizoram	B.Sc. (Hons.) Horticulture	1 st yr	-	01	-
			2 nd yr	01	01	-
12.	College of Food Technology, Lamphelpat, Manipur	B.Tech. (Food Technology)	1 st yr	01	01	-
			2 nd yr	01	01	-
			3 rd yr	01	01	-
13.	College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland	B.V.Sc.&A.H	1 st yr	-	01	-
			2 nd yr	-	01	-

Table 2.1.8: National level examinations qualified during the year 2017-18: (JRF/SRF/NET/ARS/GATE/CAT/ others)

Sl. No.	Name of College	Name of exam	No. of Students appeared	No. of students qualified
1.	College of Agriculture, Imphal, Manipur	JRF	55	Qualified: 38
				Secured: 04
		SRF	20	Qualified: 11
				Secured: 08

ACADEMICS AND STUDENTS WELFARE

Sl. No.	Name of College	Name of exam	No. of Students appeared	No. of students qualified
2.	College of Post Graduate Studies, Umiam, Meghalaya	SRF	30	Qualified: 08 Secured: Nil
		NET	40	32
		ARS	20	01
		UGC -NET	10	04
		CSIR NET	07	01
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	JRF	20	Qualified: 05 Secured: 1
		GATE	22	05
		CAT	09	02
		Others		04 (NERIST entrance)
4.	College of Fisheries, Tripura	JRF	24	Qualified: 24 Secured: 02
		SRF	10	Qualified: 10 Secured: 01
		NET	06	14
		ARS	10	01
5.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	JRF	23	Qualified: 03 Secured: 04
		NET		05
6.	College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram	JRF		Qualified: 26 Secured: 0
		ARS		02
		NET		03
7.	College of Home Science, Tura, Meghalaya	JRF		Qualified: 15 Secured : 03



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Table 2.1.9: Placement of passed out students in different positions/organizations during 2017-18

Sl. No.	Name of College	Name of student	Year of passing from college	Organizations joined	Position/ joined as
1.	College of Agriculture, Imphal, Manipur	Hoabam Kholchandra Singh	2017	Bank	Bank P.O.
		Tshering Palden Bhutia	2017	Canara Bank	Officer
		Nang Moni	2017	Canara Bank	Officer
		Miss Kh. Manoram devi	2017	Dept. of Agriculture, Govt. of Manipur	Asst. A.O.
2.	College of Post-Graduate Studies, Umiam, Meghalaya	Mr. Kamal Kant Laduna	2017	Jagannath University, Jaipur, Rajasthan	Assistant Professor
		Mr. Shiv Kumar Telkar	2017	Jagannath University, Jaipur, Rajasthan	Assistant Professor
		Mr. Achin Kharmudai	2017	ATMA, East Khasi Hills	ATM
		Mr. Lalduhzuala Colney	2017	Mizoram	Horticulture Extension Officer
		Ms. Yami Bei	2017	Arunachal Pradesh	ADO
		Ms. Annie Lego	2017	Arunachal Pradesh	ADO
		Mr. Samir Medhi	2017	KVK, Ri Bhoi Meghalaya	SRF
		Mr. Teching Tagung	2017	ICAR, RC for NEHR, Umiam Meghalaya	SRF
		Mr. Shimreiso Vashum	2017	ICAR, RC for NEHR, Umiam Meghalaya	SRF
		Mr. Kaleeswaran	2017	TNAU, Coimbatore	SRF
		Ms. Tanni Rangkhram	2017	ATMA, Longding District, Arunachal Pradesh	BTM
		Mr. Ashotosh Dubey	2017	Bank of Baroda	AFO
		Mr. Sukheimon Passah	2017	CPGS, Umiam	SRF
		Mr. Santosh BL	2017	State Agriculture Department	Agriculture Officer
Ms. Dayohini Rymbai	2017	NICRA, ICAR, Meghalaya	SRF		

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Sl. No.	Name of College	Name of student	Year of passing from college	Organizations joined	Position/ joined as
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	Sajesh Chettri	2017	Zydus	
		T.B Marak	2017	CG Foods, Guwahati	
4.	College of Fisheries, Tripura	Ms. Manoharmayum Shaya Devi	2013	ICAR	ARS Scientist
		Ms. Laishram Galaxy Khuman	2016	PDDUKV, Manipur	Assistant Professor
		Mr. Asem Sanjit Singh	2012	PDDUKV, Manipur	Assistant Professor
		Mr. Chongtham Baru Singh	2011	PDDUKV, Manipur	Assistant Professor
		Mr. Sumit Patel	2016	NABARD	Assistant Manager
		Mr. Rualthantluanga P.	2017	KVK, State Dept., Mizoram	Subject Matter Specialist,
		Ms. Bamchi Marak	2015	FFDA	Programme Manager
		Ms. Rikje Momin	2012	FFDA	Programme Manager
		Ms. Neriang Jamoh	2016	State Fishery Dept., Arunachal Pradesh	Fishery Officer
		Mr. Tsering Tashi	2015	State Fishery Dept., Arunachal Pradesh	Fishery Officer
		Mr. Narang Taming	2016	State Fishery Dept., Arunachal Pradesh	Fishery Officer
		Mr. Bishorjit Hijam	2015	Sesta Development Service, Tripura	Subject Matter Specialist
		Mr. Sudhakar Bisen	2017	State Fishery Dept., Chattisgarh	Fishery Inspector
Mr. Nikhilesh G.	2017	State Fishery Dept., Chattisgarh	Fishery Officer		
Mr. Atul Sinha	2017	State Fishery Dept., Chattisgarh	Fishery Officer		



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Sl. No.	Name of College	Name of student	Year of passing from college	Organizations joined	Position/ joined as
		Ms. Atiya Niyazi	2017	State Fishery Dept., Chattisgarh	Fishery Officer
5.	College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram	Duyu Dumi	2017	Private practitioner	
		Gopal Chhetri		NGO	
		Lucky Julis J. Sangma,		Private practitioner	
		Mampi Baidya		Private practitioner	
		Manorisha Mawrie		Private practitioner	
		N. Priyokumar Singh		Private practitioner	
		Pramada Gurung		Private practitioner	
		Prarayan Manger		Private practitioner	
		Rapa Sangno		Private practitioner	
		Rupas Kumar Debbarma		Private practitioner	
		Sujoy Biswas		Private practitioner	
		Satyan Thakur		Private practitioner	
		Shubham Katiyar		Private practitioner	
6.	College of Home Science, Tura, Meghalaya	Supta Sarkar	2013	Jayashankar Telangana State Agricultural University	Assistant Professor
		Freyanky A. Sangma	2015	Laboratory Nursery School, College of Home Science, CAU, Tura	Teacher
		Stephanie K. Sangma	2015	AICRP, Dept. Of FRM, College of Home Science, CAU, Tura	Technical Asst.
		Lidya Ch. Momin	2009	AICRP, Dept. Of TAD, College of Home Science, CAU, Tura	Technical Asst.
		Nikrachi Ch. Sangma	2015	AICRP, Dept. of ECM, College of Home Science, CAU, Tura	Technical Asst.
		Brighty A Sangma	2014	NIN, William Nagar	Research Asst.
		Charis Kharkongor	2011	College of Home Science, CAU, Tura	Part time Lecturer

2.2 Library Services

All the constituent colleges of the university have well equipped libraries which provides its 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. The details of books, theses, journals, magazines and other reading material along with its expenditure are furnished as under.



2.2.1 College of Agriculture, Imphal, Manipur

Sl. No	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	18028	405456.00
ii.	Theses (Reference section)	1064	
iii.	Journals		
	a. Indian Journals	25	79,250.00
	b. International journals	Nil	
	Total bound Volume Journals	1224	
iv.	Popular Magazines	4	4200.00
v.	Newspapers		
	a. National Newspapers	2	4560.00
	b. Local Newspapers	2	3600.00
	Total amount spent on newspapers & magazines		12360.00
vi.	Miscellaneous		
	a. Books/Journals send for binding during 2017-18	Nil	

No. of Academic Books purchased during 2017-18

Sl. No.	Title	No. of Copies	Expenditure (₹)
1.	74	254	405456.0



2.2.2. College of Post Graduate Studies, Umiam, Meghalaya

SI No.	Library Collections	Total Collection	Expenditure (₹)	Books added during 2017-18
1.	Books (Total Holdings)	5221	38273.00	45
2.	Theses (Reference Section)	Ph.D.=17, M. Sc.=261	-	Ph.D=10, M.Sc.=51
3.	Journals			
	a. Indian Journals	30	91800.00	
	b. International Journals			
	c. Total Bound Volume Journals			
4.	Popular Magazines	8		2
5.	Newspapers			
	a. National Newspapers	5		
	b. Local Newspapers	3		1
	Total amount spent on newspapers and magazines		23149	

2.2.3. College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim

SI. No.	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	7558	83,67,261/-
ii.	Theses (Reference Section)	195	Nil
iii.	Journals		
	a. Indian Journals (Subscribed during 2017-18)	02	4000/-
	b. International Journals (Subscribed during 2017-18)	Nil	Nil
	c. Total Bound Volume Journals	Nil	Nil
iv.	Popular Magazines (Subscribed during 2017-18)	07	14344/-
v.	Newspapers (Subscribed during 2017-18)	05	6245/-
	a. National Newspapers	03	3830/-
	b. Local Newspapers	02	2415/-
	Total amount Spent on newspapers & magazines		6245/-
vi.	Miscellaneous		
	a. Books/ Journals sent for binding during 2017-18	Nil	Nil

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2.2.4. College of Fisheries, Lembucherra, Tripura

Sl. No	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	8466	15728409.00
ii.	Theses (Reference Section)	101	
iii.	Journals		
	a. Indian Journals	17	34025.00
	b. International Journals	14 Back Vol.	
	c. Total Bound Volume Journals		
iv.	Popular Magazines	17	28897.00
v.	Newspapers	5	
	a. National Newspapers	3	
	b. Local Newspapers	2	
	Total amount spent on newspapers & magazines		18537.00
vi	Miscellaneous		
	a. Books/Journals sent for binding during 2017-18	-	

2.2.5. College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

Sl. No.	Library collection	Nos.	Expenditure (₹)
i.	Books (Total holdings) College of Horticulture and Forestry- Expenditure YEAR 2017-18	15419	1,99,970.00
ii.	Theses (Reference Section) M.Sc.(P.G. theses)	38	-
iii.	Journals		
	Indian Journals (2017-18)	2	3636.00
	b. International journals		
	Horticultural Science Abstracts 2013 to 2016	48	
	- Back Vol. Foreign Journals,	19 Vol.	
	- Acta- Horticulture total No.	134	
	Horticulture Science Abstract - 2006 to 2011 2	72	
	CAB CD Rom Data from 1972 to March 2005	48	
	Total bound Volume Journals	278	
iv.	Popular Magazines	4	
v.	Newspapers		
	a. National Newspapers	3	



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Sl. No.	Library collection	Nos.	Expenditure (₹)
	b. Local Newspapers	3	
	Total amount spent on newspapers & magazines		14,268.00
vi.	Miscellaneous	N.A.	
	a. Books/Journals sent for binding during 2017-18	N.A.	

2.2.6. College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram

Sl. No	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	10221	198,399.00
ii.	Theses (Reference Section)	120	-
iii.	Journals		
	d. Indian Journals	14 (For 2017) 14 (For 2018)	38,877.00 47,961.00
	e. International Journals	nil	-
	f. Total Bound Volume Journals	354	-
iv.	Popular Magazines	03 (2017-2018) (3 Titles) + 01 Title (2018, 2019, 2020)	10,845.00 6810.00
v.	Newspapers		
	c. National Newspapers	04 (4 Titles)	36,272.00
	d. Local Newspapers	02 (2 Titles)	7800.00
	Total amount spent on newspapers & magazines		61,727.00
vi	Miscellaneous	-	-
	Books/Journals sent for binding during 2017-18	-	-

No. of Academic Books purchased during 2017-18

Sl. No.	Titles	No. of Copies	Expenditure (₹)
1.	58	59	198,399.00

2.2.7. College of Home Science, Tura, Meghalaya

Sl. No	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	6709	Please refer below for 2017-18 expenditure
ii.	Theses (Reference Section)	Nil	Nil

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Sl. No	Library Collections	Nos.	Expenditure (₹)
iii.	Journals		
	a. Indian Journals (subscribed during 2017-18)	11	21,170.00
	b. International Journals	Nil	Nil
	c. Total Bound Volume Journals	Nil	Nil
iv.	Popular Magazines (subscribed during 2017-18)	11	Combined expenditure is given below
v.	Newspapers (subscribed during 2017-18)		
	a. National Newspapers	03	„
	b. Local Newspapers	01	„
	Total amount spent on newspapers & magazines		13,986.00
vi	Miscellaneous		
	a. Books/Journals sent for binding during 2017-18	Nil	Nil

No. of Academic Books purchased during 2017-18

Sl. No.	Titles	No. of Copies	Expenditure (₹)
1	1 (one)	10	3,500.00

2.2.8. College of Horticulture, Bermiok, Sikkim

Sl. No.	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	1044	8,28,995/-
ii.	Theses (Reference Section)	Nil	Nil
iii.	Journals		
	a. Indian Journals (Subscribed during 2017-18)	Nil	Nil
	b. International Journals (Subscribed during 2017-18)	Nil	Nil
	c. Total Bound Volume Journals	Nil	Nil
iv.	Popular Magazines (Subscribed during 2017-18) (Indian Horticulture)	1	400
v.	Newspapers (Subscribed during 2017-18)	Nil	Nil
	a. National Newspapers	Nil	Nil
	b. Local Newspapers	Nil	Nil
	Total amount Spent on newspapers & magazines		
vi.	Miscellaneous		
	a. Books/ Journals sent for binding during 2017-18	Nil	Nil



2.2.9. College of Horticulture, Thenzawl, Mizoram

Sl. No	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	354	2,06,610.00
ii.	Theses (Reference Section)	-	-
iii.	Journals	-	-
	a. Indian Journals	-	-
	b. International Journals	-	-
	c. Total Bound Volume Journals	-	-
iv.	Popular Magazines	-	-
v.	Newspapers	-	-
	a. National Newspapers	-	-
	b. Local Newspapers	-	-
	Total amount spent on newspapers & magazines	-	-
vi.	Miscellaneous	-	-
	a. Books/Journals sent for binding during 2017-18	-	-

2.2.10. College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland

Sl. No.	Library collection	Nos.	Expenditure (₹)
i.	Books (Total Holding)	218	3,04,276.00
ii.	Thesis	-	-
iii.	Journals	-	-
iv.	Popular Magazines	-	-
v.	Newspaper	-	-
	a) National	-	-
	b) Local Newspapers	-	-
	Total amount spent on newspaper & magazines	-	-
vi.	miscellaneous	-	-
	Total		304276.00

2.2.11. College of Food Technology, Lamphelpat, Manipur

Sl No	Library Collections	Nos.	Expenditure (₹)
i.	Books (Total holdings)	18028	4,05,456
ii.	Theses (Reference section)	-	-

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iii.	Journals	-	-
	d. Indian Journals	-	-
	e. International journals	-	-
	f. Total bound Volume Journals	-	-
iv.	Popular Magazines	4	4200
v.	Newspapers	-	-
	c. National Newspapers	2	4560
	d. Local Newspapers	2	3600
	Total amount spent on newspapers & magazines	-	12360
vi.	Miscellaneous		
	a. Books/Journals send for binding during 2017-18	-	-

No. of Academic Books purchased during 2017-18

Sl. No.	Title	No. of Copies	Expenditure (₹)
01	71	309	4,05,456

2.3 Computer Facilities

2.3.1. College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim

Computer Centre provides the computing facilities to the college teaching staff and research students. It also provides Internet browsing to all teaching staff, administrative staff and all students of the College. There are nearly 300+ users which are using internet facilities and computing facilities. Computer centre supports a wide 1000 MBPS fiber optic network that connects all the academic units, hostels, library, residence and other central facilities to the computer centre. Users can use the computing resources of Computer center from their offices, academic unit, hostels and residence. Login is provided to all the students, faculty and staff members for browsing Internet. Wi-Fi Facilities are provided to Boys Hostel, Girls Hostel, ATIC Building, Guest House, VC Camp office and Dean's Residence. LAN is provided through Optical Fiber connection in North Academic Building, South Academic Building, New Girls Hostel, Auditorium, Residential Quarter, Medical Unit and





Farmers Produce Organization Building. The network security is provided through UTM/Firewall. The Computer Laboratory is equipped with 20 Computers with the facilities of LAN connection to each and every computer. Latest softwares of different courses have been installed as per requirement of the concern subject. It is having a back-up of 10 KVA UPS to uninterrupted power supply fluctuation. From time to time it's giving a practical, training session to students and others staff for new softwares and login facilities to certain sites. Computer center maintains College website (www.caephtcau.ac.in) hosted at NIC Cloud. The College website has Dynamic Web pages and having Security Audit clearance certificate from CERT-IN. It is updated by this Centre from time to time. The Information on the website is displayed after the approval of the Dean, or administrative offices.

2.3.2. College of Post Graduate Studies, Umiam, Meghalaya

The computer laboratory has 20 computers with latest statistical packages like SAS and SPSS. The lab has 20 seating capacity. White board and over head projector have been placed for conducting classes of UG, PG and Ph D relevant to computer requirement. The Local Area Network (LAN) facility in CPGS (CAU) has been designed to centrally distributed Internet, e-resources (including KOHA Online Library, IP-based academic e-journals, e-books and other e-literature, etc.) and other e-facilities from the server room to each computer, within the college campus. The CAU and CPGS Website Servers, Firewalls, Management Servers, etc., make up the IT Server Farm which are linked to the ISP BSNL via a dedicated 10 Mbps Leased Line Circuit and a backup 2 MBPS line. All the computers in various schools, sections and hostels are linked to the server room, via wired and/or wireless connections.

2.3.3. 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 numbers of 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 (10 number of users) and is installed in two numbers of computers in the lab. LAN Topology and Connectivity: Mesh Topology and 16 MBPS leased line connection from BSNL have been made for the entire college.

2.3.4. College of Horticulture & Forestry, Pasighat, Arunachal Pradesh.

The college has well furnished air-conditioned Computer Laboratory which houses 20 numbers of Desktop Computers with Internet facility. The college has 2 MBPS Leased line Internet connection from BSNL. The College provides unlimited Internet facility to the staff and students. Wi-Fi Internet hotspot facility has been provided at Academic building, Old College building, VC Camp office, Guest House and Daisy Girls' Hostel. The college has planned to connect with National Knowledge Network (NKN) which is a Pan India high speed Internet network connecting premier Academic and R&D Institutions.

2.3.5. College of Veterinary Sciences & Animal Husbandry, Selisih, Aizawl, Mizoram

The College is equipped with two Computer Labs which are well connected 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.

In addition, it is extending its service in maintaining the Bio-informatics Centre of the college. It provides services to the host faculty and other neighboring institutions of higher education in terms of Internet connectivity, retrieval of online and offline biological databases, bioinformatics software and tools for facilitating biological research particularly in the area of sequence and phylogenetic analysis, database development, molecular modeling and drug design, etc. It also periodically organizes hands-on trainings on various aspects of application of bioinformatics tools and molecular techniques in biological research. It is also looking after DeLCON, CERA, e-journal consortium, DBT in the college. The College supports a wide high speed fiber optic and wireless network bridge that connects Administrative Building, all the Departments, Library, Hostels, Residential Quarters and other central facilities to the Computer Centre. The College procured 10 MBS with uploading speed of 1:1 lease line connection from Bharat Sanchar Nigam Limited (BSNL), Aizawl, Mizoram for internet connectivity. Users can use the computing resources of Computer Center from their offices Academic Unit, Hostels and Residence. Computer Centre has a power back up through a 10 KVA UPS and a 300 KVA generator set. E-mail login is provided to all faculty and staff members for accessing college Mail service.

2.3.6. College of Home Science, Tura, Meghalaya

The college has internet connection (leased line) provided by BSNL with a speed of 2 MBPS. The IT Lab has 15 computers for students' practical classes and for their other requirements. The classrooms are well-equipped with a computer and LCD projector each, for teaching and students' presentation. Besides these, all the departments have

computers, printers and scanning facilities. All the departments and sections will soon be connected through BSNL Optic Fibre with 10 MBPS leased line connections.

2.3.7. College of Agriculture, Imphal, Manipur

The college has well established computer laboratory with 26 computers. This laboratory provides statistical computing with statistical packages, internet facility for searching of research materials, etc. These facilities are being used by the students, researchers and faculty members.

2.4 Students' Welfare & Extra 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.



Boys Hostel of College of Agriculture, Imphal



There are separate hostels for boys and girls as well as 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. 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 food prepared is available for the students and staff of the college at the nominal rate. A duly constituted committee monitors the hygienic and nutritional 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 staff 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.



Canteen at College of Home Science, Tura



Medical Cell

2.4.4 Placement Cell

The University has Placement cell in each campus which facilitates placement for the students in different agri allied sectors including banks, private establishments, NGO's, industry etc. The 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 Kendra (s), State Line Departments and Research Institutes of High Repute etc. We have students doing Doctoral Degree Research in International Research Institutes as well as serving in the Universities in India and abroad in different capacities.

2.4.5 Extra-curricular activities

The university promotes co-curricular activities and encourages students participation in all



ACADEMICS AND STUDENTS WELFARE

aspects of campus life. All constituent colleges of the universities have well managed games and sports infrastructures including all season indoor facilities, auditorium and gymnasium. 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 Inter-Collegiate 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 AIU Youth Festivals and ICAR Youth Festivals etc. All constituent colleges of the university organises 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



Students performing during the Annual College Week

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 organizes animal health camps, field visits, seminar on stress management, communal harmony weeks with poster campaigns and other community service related activities on regular intervals.

2.4.5.1 Some glimpses of extra-curricular activities

College Week

All the constituent colleges organize 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.

4th Intercollegiate Youth Festival 2017-18

The 4th Annual CAU Inter-Collegiate Youth Festival 2017-18 was organized jointly by Directorate of Instruction and College





of Agriculture, CAU, Imphal from 15th-17th January 2018 at the College of Agriculture, Imphal. During this three Day programme, 351 participants including officials from 13 constituent colleges of the university participated in 18 (eighteen) different cultural events of the Youth Festival. During the inaugural function on 15th January 2018, Shri Karam Shyam Singh (Hon'ble Minister of PDS & consumer Affairs, Weights & Measure, Revenue & Relief and Rehabilitation, Govt. of Manipur), Prof. M. Premjit Singh (Hon'ble Vice Chacellor, CAU, Imphal), Dr. C.A. Srinivasamurthy, Director of Instruction, Dr. J.M. Laishram, Dean, College of Agriculture and Dr. Ratan Kumar Saha, Director of Exention Education, CAU, Imphal graced as Chief Guest, President and Guests of Honour respectively After the three days cultural programme, the College of Fisheries, Lembuchera, Tripura was declared as overall champion while College of Horticulture, Bermiok, Sikkim got the Runners Up trophy.

4th Student Advisory Council Meeting

The Directorate of Instruction, CAU, Imphal, also organized 4th Student Advisory Council (SAC) 2018 meeting of the university at the College of Agriculture on 16th February 2018. The meeting was held in the august presence of Prof. M. Premjit Singh, the Competent Authority of the University



Students of College of Fisheries, Lembucherra with Dignitaries

as Patron, Prof. C.A. Srinivasamurthy, Chairman of SAC and Prof. Ph. Ranjit Sharma, Member Secretary, SAC. Altogether 26 student representatives from 13 constituent colleges of the university participated in the meeting where students related issues and grievances were discussed at length for redressing.

18th All India Agri-Unifest

The Directorate of Instruction, CAU, Imphal, initiated participation of CAU, Imphal at the 18th All India AGRUNIFEST, 2018, held at Sri Venkateswara Veterinary University, Tirupati



4th Student Advisory Council Meeting in Progress

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during 12th-16th February 2018. The winners of the 4th Intercollegiate Youth Festival 2017-18 were selected for representing the university at the festival. 22 students participated for the purpose. The University won 2nd prize in the event of Quiz.

14th National Youth Parliament Competition (Group Level)

The 14th National Youth Parliament Competition (Group Level) was held at the College of Agricultural Engineering and Post Harvest Technology, Ranipool, Sikkim on 26th August, 2017 as per National Youth Parliament Competition Scheme, 55 students participated in the event. The theme of National Youth Parliament Competition was Swachhata Bharat



Students of CAU, Imphal, Quiz Team, collecting 2nd position certificate during the Agri Uni-Fest

Mission and accordingly, Oath taking in line of “Swachhata Bharat Mission” was also performed.

The New India Manthan – Sankalp Se Sidhi

The Central Agricultural University Headquarters and all the constituent colleges of the university observed the The New India Manthan – Sankalp Se Sidhi programme on 26th August 2017. Hon’ble Vice Chancellor, Prof. M. Premjit Singh, Deans, Senior Scientist and Heads of KVKs, teaching and non-teaching staff members and students of the university took active participation in the programme.



National Youth Parliament in Progress at College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim

As part of the programme, the “New India Pledge” was conducted towards a clean India, a poverty free India, a corruption free India, a terrorism free India, a communalism free India and casteism free India.

Swachhata Hi Seva

The Central Agricultural University, Imphal across its constituent colleges and KVK’s conducted cleanliness drive under the “Swachhata Hi Seva” campaign during 17th Sept. to 2nd Oct., 2017. Hon’ble Vice Chancellor, Prof. M. Premjit Singh, Deans, Senior Scientist and Heads of KVKs, teaching and non-teaching staff members and students of the university took active participation in



Observance of Sankalp Se Sidhi



Seva Diwas on 17th Sept, 2017 at CAU Headquarters, Lamphelpat

cleaning and pruning of irregular trees and vegetation along the road, collection and dumping of solid wastes especially plastic bottles and bags were done at appropriate places. Saplings were also planted in the college campus and its premises. During the course of celebration, several specific programmes such as “Seva Diwas” (17th Sept., 2017), “Samagra Swachhta Diwas” (24th September, 2017) and “Sarwatra Swachhta” (25th September, 2017) were organized. The fortnight was concluded on 2nd October, 2017 by celebrating the Gandhi Jayanti remembering his work of sincerity, humbleness, spirituality and his work towards cleanliness and sanitation.

Celebration of Hindi Pakhwada-2017

The Hindi Pakhwada-2017 was celebrated in the constituent colleges during September 1-14, 2017 where awareness and promotion of uses of Raj Bhasha Hindi in the official works as per guidelines of the government of India was highlighted.

Rashtriya Ekta Diwas (National Unity Day)

The constituent colleges of the university

celebrated the Rashtriya Ekta Diwas on 31st October, 2017 which is the birth Anniversary of Shri Sardar Vallabhai Patel. Unity Pledge and run for unity were organized as an endeavor to solidify the bond of oneness and unification.

Agricultural Education Day

Central Agricultural University, Imphal observed Agricultural Education Day in the memory of



Celebration of Hindi Pakhwada at College of Fisheries, Lembucherra

our first president of Independent India, Bharat Ratna, Dr. Rajendra Prasad for his contribution in agriculture across its constituent colleges on 3rd December, 2017. The day was observed by competition programmes of essay writing,

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Unity Run by students of College of Agriculture, Imphal on 31st Oct, 2017



School Students participating in various events at College of Horticulture & Forestry, Pasighat on Agricultural Education Day



Students of College of Home Science, Tura performing at the Republic Day Celebration



Observance of International Day of Yoga at College of Fisheries, Lembucherra, Tripura

paintings, debates etc based on the theme of agriculture.

International Day of Yoga

International day of yoga was celebrated in the constituent colleges of CAU, Imphal on 21st June, 2017 with great enthusiasm and vigour. The practice of yoga helps overall harmony of body and mind thus providing mental and physical strength and enables us to lead a healthy life.



Students of College of Fisheries, Lembucherra performing Hojai Dance at the 4th Inter Collegiate Youth Festival



Snapshots of Activities



Students of College of Agriculture & Food Technology, Imphal, performing at the Teachers Day Celebration



Students of College of Horticulture and Forestry, Pasighat at the Mass Rally on Intensified Mission Indradhanush on 23rd Sept., 2017



Students of College of Home Science undergoing cleanliness drive during the Swachhata Hi Seva programme



Students of CoVSc & AH, Aizawl at Free Animal Health camp



Blood Donation Camp held on 11th August, 2017 at College of Agriculture, Imphal.



NCC Unit of CoVSc & AH, Aizawl, Mizoram

Snapshots of Activities



Students performing group song at the 18th All India AGRIUNIFEST held at Sri Venkateswara Veterinary University, Tirupati



Students of CPGS, Barapani competing during College week



Students watching Live Webcasting of the Speech by Hon'ble Prime Minister



Special NSS Camp held at CoHF, Pasighat on 12th June, 2017



3

Research and Development





CENTRAL AGRICULTURAL UNIVERSITY ANNUAL REPORT 2017-18

DURING the year 2017-18, University carried out 79 (seventy nine) Intramural Research Projects (IRPs) under University Funded Research Programme and 143 (one hundred forty three) Externally Funded Research Projects. The details of the research projects are given below:

Table 3.1: University Funded Intramural Research Projects (IRP)

Sl. No.	Name of the College	Year (2017-18)			Total
		Completed	On going	Newly sanctioned during (2017-18)	
1.	College of Agriculture, CAU, Imphal	1	24	1	26
2.	College of Veterinary Sciences & AH, CAU, Selesih, Aizawl, Mizoram	2	18	1	21
3.	College of Fisheries, CAU, Lembucherra, Tripura	3	2	0	5
4.	College of Horticulture & Forestry, CAU, Pasighat, Arunachal Pradesh	2	2	4	8
5.	College of Home Science, CAU, Tura, Meghalaya	0	4	0	4
6.	College of Agricultural Engineering & PHT, CAU, Gangtok, Sikkim	2	6	4	12
7.	College of Post-Graduate Studies, CAU, Umiam, Meghalaya	0	3	0	3
	Total	10	59	10	79

Table 3.2: Externally Funded Research Projects (EFRP)

Sl. No.	Name of the College	Year (2017-18)			Total
		Completed	On going	Newly sanctioned during (2017-18)	
1.	Directorate of Research, CAU, Imphal	2	14	-	16
2.	College of Agriculture, CAU, Imphal	3	17	-	20
3.	College of Veterinary Sciences & AH, CAU, Selesih, Aizawl, Mizoram	22	13	-	35
4.	College of Fisheries, CAU, Lembucherra, Tripura	5	5	1	11
5.	College of Horticulture & Forestry, CAU, Pasighat, Arunachal Pradesh	20	21	-	41

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Sl. No.	Name of the College	Year (2017-18)			Total
		Completed	On going	Newly sanctioned during (2017-18)	
6.	College of Home Science, CAU, Tura, Meghalaya	3	1	-	4
7.	College of Agricultural Engineering & PHT, CAU, Gangtok, Sikkim	3	3	2	8
8.	College of Post-Graduate Studies, CAU, Umiam, Meghalaya	3	3	2	8
Total		61	77	5	143

As an outcome of these internal and external funded research endeavours, the university was successful in developing location specific deliverable technologies/practices, 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 below:

3.1 Agriculture

1. Crop Improvement

i) Understanding phosphorus deficiency and iron toxicity tolerance in rice under acidic soils of North East Hill Region



(a)

- Identified polymorphic markers for survey on two crosses LR 23 x LR 26 and LR 11 and KMR3.
- Identified a set of ten superior lines for cross LR 23 x LR 26 for further characterization.

ii) Achievements of quality seed production programme during the year 2017-18

Sl. No.	Crop	Achievement (q)
1.	Rice	671.53
3.	Oilseeds	48.52



(b)

Advancement of crosses in the field (a) and use of android based mobile app for data collection (b)



iii) Evaluation of CMS lines, identification of effective maintainers and restorers and studies on combining ability analysis for the development of hybrid rice under local conditions of Manipur

- Improvement of CMS and restorer lines is suggested to obtain cent percent sterility and restoring capacity and to develop uniform F1 hybrid seeds of local taste



preference.

iv) Pyrazosulfuron-ethyl (PE) fb hand weeding under DSR (sprouted seeds)

- From the research entitled “Weed management study on direct seeded and transplanted rice under lowland condition of Manipur”, it can be summarized that of



pyrazosulfuron-ethyl (PE) fb hand weeding under DSR (sprouted seeds) that reflected highest BCR (2.41) could be the most profitable package.

2. Natural Resource Management

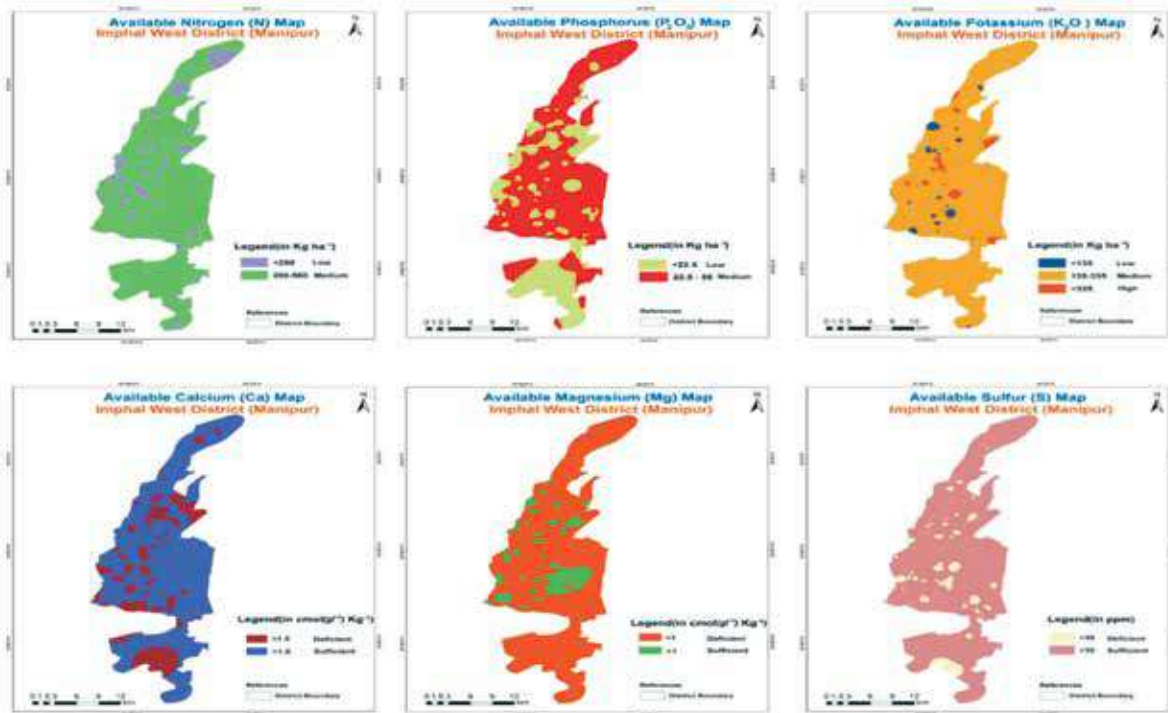
(i) Digitized soil fertility maps for four (4) subdivisions of Imphal West district of Manipur

Digitized soil fertility maps for four (4) subdivisions of Imphal West district of Manipur w.r.t. available N, P, K, Ca, Mg and S had been made for four (4) subdivisions of Imphal West district of Manipur viz., Patsoi, Lamshang, Lamphelpat and Wangoi. Available nitrogen ranged from 156.80 to 501.76 kg ha⁻¹, available phosphorus varied from 10.23 to 51.03 kg ha⁻¹ with a mean value of 25.17 kg ha⁻¹, available potassium varied from 101.34 to 478.87 kg ha⁻¹ with a mean of 219.18 kg ha⁻¹, available calcium ranged from 0.70-3.10 [C mol (p+) kg⁻¹] with an average of 1.69 [C mol (p+) kg⁻¹], available magnesium ranged from 0.30-2.10 [C mol (p+) kg⁻¹] with mean of 0.86 [C mol (p+) kg⁻¹] and available sulphur ranged from 3.25 to 43.83 mg kg⁻¹ with an average of 15.53 mg kg⁻¹.

ii) Delineation of Micro & Secondary Nutrient Deficiency and Sufficiency areas of Manipur

- A total of 804 soil samples were analyzed,

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Digitized soil fertility maps for four (4) subdivisions of Imphal West district of Manipur

covering all blocks under five districts (Churachandpur, Imphal East, Imphal West, Thoubal and Bishnupur) of Manipur.

- High content of available Iron ($0.63\text{--}379.93\text{ mg kg}^{-1}$) in the soil may be attributed to higher organic matter because it acts as chelating agent (Kumar et al, 2011) and Manganese sufficiency ($0.20\text{--}152.54$) might be due to higher biological activity and organic carbon content in the surface layers (Murthy et al., 1997). Zn content was $0.12\text{--}2.69\text{ mg kg}^{-1}$ and copper content was $0.9\text{--}63.4\text{ mg kg}^{-1}$ in the soils.
- The fact that sulphur is readily leached from the soil and weathered soil in high rainfall areas frequently have a low status ($2.06\text{--}61.96\text{ mg kg}^{-1}$) may contribute to the factors. Regular high level of phosphorus may replace sulphur from soil matrix and lead to sulphur depletion. In Churachandpur district, deficiency of

sulphur may also be attributed to the burning of vegetation that results in gaseous losses of sulphur from the farming system.

- The calcium ($0.09\text{--}1.83\text{ cmol (p+)}$) and magnesium ($0.03\text{--}11.95\text{ cmol (p+)}$) contents of the soils are low and thus management of acidic soils involves liming materials. Acid soils under high rainfall areas usually show low magnesium content.
- iii) **Study on endophyte metabolomics of rice in response to habitat-adaptive fitness against Al-stress**
 - Rice root and leaf bacterial endophytes exhibit Aluminium tolerance up to 300 ppm solution concentration.
 - The incidence of rice endophytes obtained from axenic culture belongs to bacterial genera Bacillus, Pantoea and



Pseudomonas.

- GC-MS analysis of bacterial metabolites provided evidence that the incidence and quantity of metabolites of bacterial endophyte strains F10, F13 and F14 were responsible to AI stress.

3. Crop Production

i) AICRP on Forage Crops & Utilization

- Recommended Integrated Nutrient Management using poultry manure for cultivation of fodder rice bean in foothills of Manipur and similar situations of NEH region.
- Recommended cutting and nutrient management of fodder oat grown for dual purpose (fodder+seed) in foothills of Manipur and similar situations of NEH region.

4. Crop Protection

i) ICAR-All India Coordinated Research Project on Nematode in Cropping Systems

The frequency of occurrence of rice-root knot nematode, *Meloidogyne graminicola* and white tip nematode, *Aphelenchoides besseyi* were 9 and 20 per cent, respectively was observed during *kharif*, 2018 in Ri-Bhoi district of Meghalaya. In rice growing region presence of nematode parasites such as *Pratylenchus*, *Xiphinema* and *Longidorus* and *Criconemoides* species was observed which may be due to cultivation of ginger or turmeric along with rice in certain localities of the region. However, the infectivity of them on the root of rice is not evident. Roving survey carried out in the winter season of 18 villages in East Khasi hill district of Meghalaya revealed total absence of adherence of potato cyst nematodes either of the species, *G. rostochiensis* and *G. pallida* as

alone or coupled together on the root surface. However, recovery of globular cyst have been recovered out of soil sample from the above locality does not prove its absence. The further attempt is underway to look for confirmation of the infestation in the ensuing season. In chickpea, three advanced lines viz., D7, D11 and D 26 were identified as highly resistant against root-knot nematode, *Meloidogyne incognita*. Whereas, D 26 identified as resistant towards infestation of migratory ecto parasites, *Xiphinema* and *Longidorus* species under field condition recording lesser stubbiness of root system. For cover cropping prior to potato planting, with antagonistic crops such as crotalaria, asparagus and mustard significantly bring down soil population of plant parasitic nematodes by 41.6, 37.9 and 36.2 per cent, respectively.

ii) All India Co-Ordinated Research Project on Honeybees and Pollinators

a) Pollinator diversity in mustard

Among six pollinators, the highest in number was *Apis cerana* with mean population of 4.41 and relative abundance of 33.33% whereas lowest was black ants with mean population of 0.08 and relative abundance of 0.60%. The abundance of pollinators were high in the morning hours of 9:00 AM compared to 12:00 PM and 3:00 PM.

b) Pollinator diversity in Coriander

Altogether five insect species were recorded to



Apis cerana

Apis florea



Syrphid sp. 1

Syrphid sp. 2

visit coriander. Among the five pollinators, the highest in number was *Apis florea* with overall mean of 7.91 and the relative abundance was 50.54% whereas the lowest in number was Housefly with mean of 0.16 and the relative abundance of 1.06%.

a) Morphometric characterization of honeybees in north east India

Considering all the morphological characters of the four species of honeybees prevalent in North east region of India, the sizes were in the order of *Apis dorsata* (Imphal) > *Apis mellifera* (Jorhat) > *Apis cerana* (Ukhrul) > *Apis cerana* (Jorhat) > *Apis florea* (Imphal).

iii) Mass production of *Trichoderma* with locally available agricultural waste materials has been standardized

The highest population (CFU) of *Trichoderma* was found in the substrate combination of rice bran, mustard cake and sugarcane juice



Level-1 Agro-Associates rendering services to farmers

followed by rice bran, mustard cake and jaggery.

iv) Isolation of endophytic and rhizospheric microbes from Chak-hao rhizosphere

- A total of 170 bacteria and 55 fungi have been isolated from Chak-hao and High Yielding rice varieties rhizosphere.
- Selected of 11 bacterial strains with multiple Plant Growth Promoting attributes and 7 fungi possessing phosphate solubilization and antagonistic potentials.
- Comparison with Genbank databases revealed that bacterial 16s rDNA sequences are at least 98-99% similar to those of known species of *Enterobacter*, *Bacillus* and *Pseudomonas* and fungal ITS sequences to those of *Penicillium*, *Trichoderma* and *Aspergillus*.
- The Genbank analysis revealed the dominance of strains belonging to *Bacillus* sp. and *Penicillium* sp.

5. Social Science

i) Development and Deployment of Mobile Based Agro-Advisory System in North East India (m4agriNEI)

Four agriculturally important districts of the



Agro-Associates providing awareness at Nongpathaw village of East Khasi Hills district



Method demonstration on soil treatment being performed under m4agriNEI

state Meghalaya viz., the Ri-bhoi district, the East Khasi Hills district, the West Khasi Hills district and the West Jaintia Hills district have been covered under the project. As many as 11,400 farmers have been registered under this project. A continuous need based Agro-Advisory Services on scientific agronomic package of practices on crops and vegetables cultivation; integrated pests and diseases management of food-grains and vegetable crops; natural resource management; livestock production management etc. are being provided to registered farmers under *m4agriNEI*. A striking total of 9361 queries pertaining to agriculture and allied activities raised by farmers have been solved.

3.2 Horticulture

i) All India Co-ordinated Research Project on Mushroom

Strain PL-17-01 is recommended for cultivation of mushroom in Arunachal Pradesh.

ii) All India Co-ordinated Research Project on Floriculture

Tuberose varieties 'Phule Rajni', 'Prajawal', 'Bidhan Rajni-1' are recommended for commercial cultivation in Arunachal Pradesh.

iii) All India Coordinated Research Project on Spices

Turmeric variety NDH-98 is recommended for cultivation in Arunachal Pradesh for higher yield.

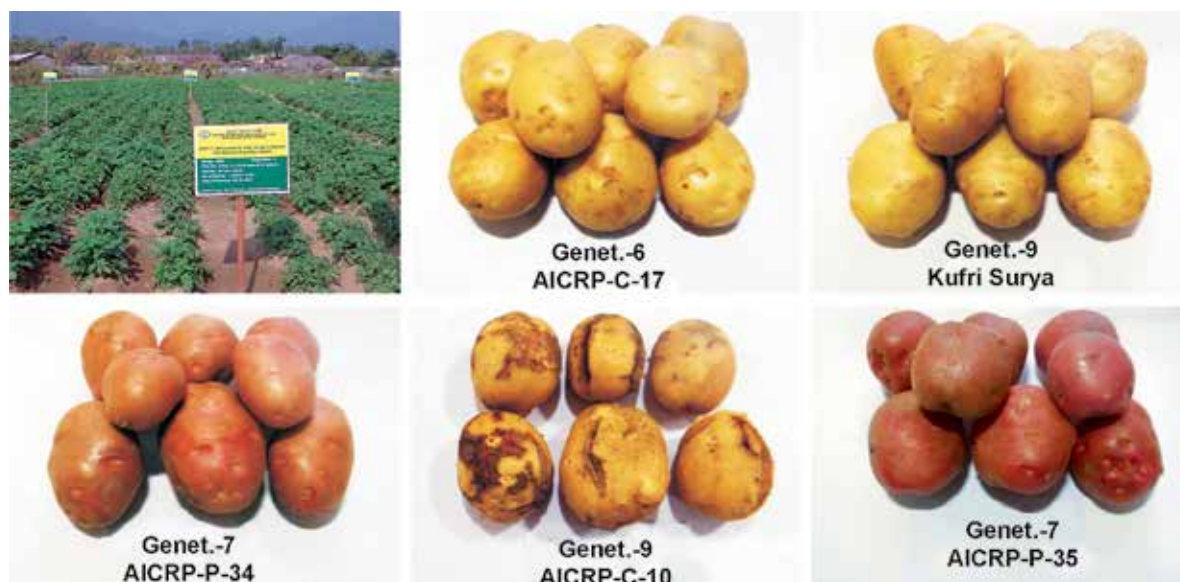
iv) AICRP on Weed Management

For effective management of weeds in horticultural crops (sweet corn, French bean, okra and vegetable pea) under sweet corn-French bean and okra – vegetable pea cropping sequence integrated weed management approaches like growing of soybean as inter crop with maize (1:1), use of plastic mulch for French bean, okra and pea is more efficient and economically viable.

v) All India Coordinated Research Project on Potato

For potato cultivation, application of Zn @ 3 kg/ha is recommended in Arunachal Pradesh. Thirteen trials for growing potatoes were taken up during the period:

- Under Initial Varietal Trial (IVT) with early maturing hybrids, out of five entries, AICRP-C-17, AICRP-C-36 and AICRP-P-40 performed well at 60 days harvesting.
- Under Initial varietal trial (IVT) with red skinned hybrids out of six entries, AICRP-P-34, AICRP-C-17 and AICRP-P-35 performed well at 60 and 75 days harvesting.
- Out of four entries under advanced varietal trial-2 (AVT-2) with processing (French Fries) hybrids AICRP-C-10 and AICRP-C-8 performed good at 75 days harvesting.
- In initial varietal trial (IVT) with processing (Chips) hybrids out of five entries, Kufri Surya and AICRP-C-10 have showed good performance at 75 days harvesting.
- Under crop production trial for site



specific NPK requirements among the seven treatments, T2 i.e. 100% RDF of NPK showed good crop growth and higher yield compared to the other treatments.

vi) AICRP on Fruits

In citrus 31 genotypes have been collected from different regions of north east and maintained in the field.

vii) AICRP on Palm

- Adopting the recommended package and practices for cultivation of oil palm, an average yield of 25.8 t/ha can be obtained in the NE Region.
- From the varietal evaluation, the cross combination NRCOP-23 holds promise for better performance in the humid agro climatic condition of North East India.

viii) Preventing extinction and improving conservation status of threatened plants through application of biotechnological tools

- One new population of *Coptis teeta* was

located at Amuli village in Upper Dibang District (95°55'45.4''E, 28°46'08.1''N). The density of plants at the site was 8.65 individuals/m².

- Genetic diversity of the population on 17 samples of *Amentotaxus assamicus* was carried out using ISSR marker with a total of 7 primers. Reported low index for the site within population diversity (0.51 ± 0.03) as measured by Shannon's information.

ix) Evaluation of genetic diversity of carambola (*Carambola averrhoa* L.) in Arunachal Pradesh, India

An extensive survey was conducted in different District (Upper Siang, West Siang and East Siang) of Arunachal Pradesh to study the genetic diversity of carambola and to identify superior genotypes having sweet in taste based on the descriptor of NBPGR carambola.

The experimental result showed that individual fruit weight ranged from 83.53 g (P_{20}) to 300.00g (P_{14}); fruit diameter 4.07 cm (P_5) to 9.13 cm (P_{14}); fruit length 6.83 cm (P_4) to



15.93 cm (P_{14}); juice content 25.00 ml (P_4) to 61.67 ml (P_{14}); seed/fruit 2.00 (P_1) to 4.67 (P_{12}); fruit yield 84.33 kg (P_4) to 185.00 kg/tree (P_8); TSS 5.03 (P_{12}) to 14.97 OBrix (P_{11}); oxalic acid 0.01% ($P_2, P_3, P_5, P_7, P_8, P_{14}$ and P_{18}) to 0.35% (P_9); ascorbic acid 25.00 (P_{17}) to 68.00 mg/100g (P_9); acidity 0.08 % to 1.22 %; reducing sugar 3.20% (P_3) to 11.93 % (P_{11}); total sugars 3.40% (P_3) to 12.80% (P_{11}) and shelf life 10.67 days (P_{10}) to 14 days (P_{17}). Based on the results obtained from the present investigation, it can be concluded that, selected carambola genotypes exhibited noticeable variation in the morphological, biochemical and yield characters. SDS-PAGE analysis also showed considerable variation in band number of protein, which ranged from 14-38. Thus, these findings illustrated the usefulness of physico-chemical characterization and biochemical marker as a tool for the genetic diversity evaluation in carambola.

x) A High *Citrus tristeza virus* incidence in mandarin (*Citrus reticulata*) in North eastern states of India

An extensive survey of the Khasi mandarin orchard for six North Eastern states of India namely Arunachal Pradesh, Meghalaya, Assam, Nagaland, Sikkim and Tripura, was carried out to establish the identity of these viruses using ELISA and PCR/RT-PCR techniques. Out of 300 Khasi mandarin tree samples collected from the six states, 172 were found to be positive for CTV infection by DAS-ELISA indicating 57.33% overall CTV disease incidence. Results revealed presence of CTV in all the surveyed states showing a maximum incidence of 66.00% in Arunachal Pradesh followed by 62.00% in Assam, 60.00% in Meghalaya and Nagaland, 54.00% in Sikkim and 42.33% in Tripura. Higher CTV concentration was recorded in the age group >15 years (69.09%) followed by 10-15(57%) and 5-10 years (43.33)

xi) Alleviation of Anti-Nutritive Components of Bamboo Shoot through Fermentation

Adi tribes of Arunachal Pradesh uses different species of bamboo for consuming as raw and fermented product without much knowledge of their nutritional status and anti-nutritional features. Moreover, the importance of fermentation in reducing the content of cyanogenic glycoside and other components like phytic acid, tannins etc., of bamboo shoot. Many workers have reported the medicinal importance of bamboo shoots and different ways to decrease the content of cyanogenic glycoside, which may lead to neurological disorders like Konzo after prolonged use of raw bamboo shoots. These scientific findings and reports for the better consumption of bamboo shoots must reach to the people of this region as these indigenous people use bamboo shoots as their main food source.

xii) Biochemical of indigenous rice cultivars of Arunachal Pradesh consumed by Adi tribe for nutritional quality.

Deku and *Itanagar* are the two major rice varieties, which are consumed by Adi tribe of Arunachal Pradesh. Many ethnic methods are adopted by *Adi* tribe for preparation of rice, which makes the food more attractive for consumption. Our main concern is to keep the compiled chemical scenario of such main food of *Adi* tribe so that they get the chance to enhance their awareness of the components of these two varieties of rice while selecting as food. Some of nutritional and anti-nutritional components were analyzed and found that the contents of Reducing sugar, starch, soluble protein, ascorbic acid, total phenols were higher in *Itanagar* variety. *Deku* variety has higher content of carbohydrate, cellulose, thiamine, vitamin E, phytic acid, tannins, and free fatty acids.

xiii) Collection, identification and conservation of wild edible germplasm from forest and local market

- a) Ten mushroom species collected from different parts of Arunachal Pradesh on the basis of GPS data and immediately maintained the culture and spore print and sent to the ICAR-DMR, Solan, Himachal Pradesh for accession number.
- b) Study at molecular level is in progress for the collected mushrooms.
- c) Three species got the accession number from ICAR-DMR Solan Himachal Pradesh.

xiv) Collection and evaluation of indigenous vegetable peas (*Pisum sativum* L.) and other vegetables under NEH region

Thirty five germplasm of garden pea collected from various part of north eastern hill region were grown for evaluation. The research work is under progress. Ash gourd, fig leaf gourd, velvet bean, jackbean, tree tomato and some of the exotic vegetables like lettuce, parsley, celery, asparagus, collard, mexican coriander, etc. were collected and are grown for evaluating their adaptability and standardization under Pasighat condition.

xv) New Invasive Beetle Threat To Litchi

Scientists, for the first time in the country, have found evidence of an invasive beetle from neighbouring countries infesting litchi plants in Arunachal Pradesh. A study found that litchi trees in the Northeast were severely damaged by a longhorn beetle, *Aristobia reticulator* (Voet), a stem borer. The study has been published in the March edition of *The Coleopterists Bulletin*. Recently, litchi trees in the Northeast were severely damaged by a stem borer, *Aristobia reticulator* (Voet). This is the first report of heavy incidence of this



Carombla diversity (11)

borer in litchi trees in India, which was earlier reported from China.

3.3 Veterinary Science & Animal Husbandry

i) Viral metagenomic profiling of native and migratory aquatic birds of North-eastern states to unravel influenza virus ecology harboured in them

Metagenomic approach can be adopted for viral profiling harboured in native and migratory ducks and goose species. It is an easier technique to explore the gut virome and can also detect exchange of viromes among the species.

ii) Isolation of Salmonella species from chicken and their virulence gene(s) detection

The presence of virulent *Salmonella typhimurium* from the chicken samples collected from Aizawl, Mizoram, India is of economical and public health significance as this is the most important zoonotic *Salmonella* species. So, utmost importance should be given for improvement of hygiene and sanitation of slaughter houses and proper information to consumers as well since chicken contribute



substantially as far as meat consumption is concerned.

iii) Studies on Bacteriological quality of raw pork sold in local market of Imphal

The common food borne pathogens (*Escherichia coli*, *Salmonella* spp. and *Staphylococcus* spp.) were present in the raw pork therefore, strict hygienic measures has to be taken while handling the raw pork, also unscrupulous use of antibiotics should be checked as antibiotic resistance bacteria are being found. Further, detail study has to be done by increasing the sample size, location and including other common food borne pathogens in order to access the hygienic quality of meat.

iv) Studies on *Bacillus cereus*, an emerging Food Borne Pathogen from Milk and Milk Products

Bacillus cereus are present in milk and milk products, therefore strict hygienic measures is essential while handling and processing till it reach to the consumer. Use of antibiotics has to be checked as all the *B. cereus* isolates were resistance to penicillin. Further detail study has to be done by increasing the sample size.

v) Occurrence of pathogenic *Escherichia coli* of extra intestinal and intestinal origin and their VPH significance

The common serotypes and virulence genes of intestinal and extra intestinal *E. coli* detected in chicken and human samples indicate the probable zoonotic significance of pathogenic *E. coli* which may be transmitted to human from chicken or vice versa. Hence identification of critical points in poultry production chain and appropriate control measures at these points to prevent the cross contamination with pathogenic *E. coli* is recommended.

vi) Improved breed of Zovawk

Improvement in the growth and quality of local pigs (Zovawk) by cross breeding with exotic Large White Yorkshire breed (LWY) up to 75% blood level of LWY has been achieved resulting in a new breed with better pork quality and higher feed conversion ratio. This new breed would be released shortly (Accession Number: India_Pig_2700_Zovawk_09007).

vii) Genetic characterization of Kaunayen



Pure Zovawk (Gilt)



75% LWY (Gilt)

Genetic characterization of the fighting type indigenous chicken of Manipur locally known as "Kaunayen" has been completed. This chicken has been given registration by ICAR with the Accession Number: INDIA_CHICKEN_1200_KAUNAYEN_12017.

viii) Training Needs Assessment of Poultry Farmers in Imphal West & Imphal East of Manipur

Result of the Studies suggested that major

RESEARCH AND DEVELOPMENT



Pucca House

Kachha House

Scientific Brooder

Self Designed Brooder

focus is to be given on increasing flock size and economic motivation for improved poultry production, and extension activities should be increased in the study area and should focus on training of the farmers on the improved poultry production management practices so as to enable the use of the available resources efficiently.

3.4 Fisheries

i) Center of Excellence on Fisheries and Aquaculture Biotechnology (CoE-FAB)

- Inventorization & Barcoding

DNA barcodes of 16 unique fish species from

Mizoram, Meghalaya, Manipur and Nagaland have been generated and COI sequences were submitted in NCBI GenBank Database. Mean Kimura-2-P (K2P) genetic distance was calculated among all the studied species with the help of MEGA 7 and as expected, hierarchical increase in mean K2P genetic divergence with increasing taxonomic level was observed.

- CAUi-Brshti: A Low Cost *In-situ* Hatchery for Carp Seed Production: A major highlight of this design is the in-built system that enables the operator to adjust water temperature naturally. In the inevitable event of surface water in the small pond getting overheated in summer,

Table 3.3: Statewise data for barcoding of unique fish species

Name of the state	2017-18				Consolidated	
	No of surveys	No of rivers covered	No. of sites covered	No. of samples collected	Identified	Bar-coded
Arunachal Pradesh	1	5	23	303		
Assam	1	4	21	542		
Manipur	2	2	12	150		
Meghalaya	1	3	10	161		
Mizoram	-	-	-	-	149	122
Nagaland	2	3	8	171		
Sikkim	1	1	5	108		
Tripura	-	-	-	-		
Total	8	18	79	1435		



CAUi-Brshti: A Low Cost *In-situ* Hatchery for Carp Seed Production

the rotatable inlet allows the operator to let in cooler water from the metalimnion of the pond. Additionally, we confirmed that the deeper waters are not hypoxic.

- Live wolffia-based semi-intensive fry rearing technology of *Labeo rohita*.
- Feeding silver barb with live wolffia reduces the incidence of ulcerations during winter-rearing.
- Live *Wolffia globosa* is the best performing duckweed as allochthonous feed for *Labeo rohita*, *Osteobrama belangeri* and *Ctenopharyngodon idella*.

ii) Molecular characterization of leptin in Indian major carps

- Complete characterization of the leptin gene from mrigal has been done and the sequences have been submitted to the NCBI data base (GenBank accession number: MG699120).
- The differential tissue expression of leptin in mrigal was found significantly higher in case of liver as compared to kidney, gonad and gill.
- Expression of recombinant leptin proteins

in the prokaryotic host, *E. Coli* BL21 using pRSet-B vector was done.

iii) Identification and characterization of Aquaporin genes in catfish

- Eight different Aquaporin genes has been identified and characterized from freshwater catfish *Clarias batrachus*.

iv) Dietary Supplementation for Restoring Health & Growth of Fish during Chronic Exposure to Waterborne Iron & Acidity in Tripura

Developed dietary pyridoxine using Aswagandha roots and bamboo (*Melocanna baccifera*) leaves ethanolic extract for preventing/ameliorating low pH stress in fish.



Pop eye, exophthalmia, haemorrhage were found in fishes in acid and iron treatment



Feed with varying concentration of nutraceuticals for ameliorating the adverse effect of stresses

v) Surveillance of Fresh Water Fish and Shellfish diseases in Tripura

A total 35 numbers of farms were screened for finfish pathogens and out of that 24 farms were detected for the fish pathogens. The farms were infected with motile aeromonad septicemia (MAS), epizootic ulcerative syndrome (EUS), *Saprolegnia parasitica*, *Argulus* sp. However, for the first time a shellfish viral disease has been reported in Tripura. The pathogen was *Macrobrachium rosenbergii* nodavirus.

vi) Utilization of Detoxified Rubber Seed Cake in Aqua Feed

Protocol for preparing Protein concentrate from the rubber seed kernel with 60% crude protein has been standardized. The same protein concentrate can be utilized for preparing aquafeed. Method for 100% detoxification of rubber seed kernel in terms of cyanogenic glycoside content has been standardized. Protein concentrate of 60% CP has been developed. Detoxified rubber seed can replace 68.67% of MOC and can be incorporated up to 30% in feed. De-oiled Rubber seed can be used to replace Fish meal up to 35% in feed without compromising the growth and survivability. Protein concentrates can be utilized for replacing other conventional protein sources like fish meal and mustard oil cakes.

3.5 Agricultural Engineering

(i) Post Harvest and Value Addition

- Technology developed for production of red and green cherry pepper (Dalle) flakes through vacuum drying. The standardized technology for production of red and green cherry pepper (Dalle) flakes



Detoxified Rubber Seed Cake in Aqua Feed



through vacuum drying will be helpful in value addition of cherry pepper and production of better quality cherry pepper flakes with more retention of colour and flavour.

- **Solar biomass hybrid dryer.** The machine was designed and developed with 20 kg/batch capacity for drying of large cardamom. The system consists of mainly three components viz, the solar collector, gasifier and the drying chamber. The solar collector was designed based on the average sunshine availability and the net energy required in the drying chamber. The moisture content of large cardamom under full load condition of the solar biomass hybrid dryer reduced from 82.3% (w.b.) initial value to 10% (w.b.) final value in 20 hours.

(ii) AICRP on FIM

- **Designed and developed power operated new small axial flow hold-on thresher for paddy crop**

In the axial flow thresher the crop is directly fed in to the thresher and there is no need for holding it during threshing. The performances

of both the threshers were found satisfactory. The threshing efficiency of the hold-on type thresher was slightly less than the axial flow thresher, which was due to seeds trapped inside the bunch of crop held for threshing. The cleaning efficiency in axial flow thresher is well within acceptable limits. However, the grain loss due to blown grain is slightly high. The grain loss in this thresher can be improved by modifying the winnowing and cleaning system. The capacity of the axial flow thresher can be further improved by providing a feeding platform by which the crop picking time can be reduced and thereby feeding can be faster and easier.

- **Designed and developed power tiller operated two row multi-crop seed drill cum planter**

The machine consists of both fluted roller metering mechanism as well as vertical cell plate type metering mechanism for sowing and planting mechanism. The two mechanisms are so connected that either of them can be used as per need. The machine consists of hoppers, metering mechanism, furrow openers, frame, hitching frame, power transmission system, ground wheel/ transport wheel. Arrangement



The power paddy threshers developed at CAEPHT: hold-on type (*left*) and Axial flow type (*right*)

RESEARCH AND DEVELOPMENT



Designed and developed power tiller operated two row multi-crop seed drill cum planter

is made to lift the ground wheel during turns in order to stop the metering mechanism and it turn minimize seed wastage. The farmers liked the versatility of the machine. The machine was demonstrated in a total area of 2.3 ha in six villages. Efforts are being made to manufacture multiple units of the machine for multi-locational trials and popularization.

- **Developed manual transplanter suitable for root washed seedlings**

It was demonstrated in Sajong and Ray Khola village, Sikkim. The nursery of the locally available variety *viz.* Kanti was grown in the traditional way. The transplanting of seedlings



Developed manual transplanter suitable for root washed seedlings

was done by the transplanter and performance was compared with the traditional method of manual transplanting. The performance results indicate that this transplanter is suitable for transplanting of traditionally grown rice seedlings and the work can be done much faster than the manual hand transplanting. The labour requirement in the mechanical transplanting was 32-34 man-h/ha, while in hand transplanting it was 46 man-h/ha. The labour saving was about 28 % in transplanting by the transplanter over manual transplanting.



Mechanical Bamboo Shoot Peeling machine



iii) AICRP on Post Harvest Engineering & Technology

- **Developed mechanical operated bamboo shoots peeling machine**

The developed innovative bamboo shoots peeling machine removes the bamboo shoots skin at rate about 50-60 second per 1 unit of bamboo shoots or 64 units of bamboo shoots per hour which is about 50% lower time taken than that of the traditional method without any drudgery to operator.

- **Developed mechanical *Citrus macroptera* peeling machine**

The developed machine can peel *Heiribob*, *Pomelo* and large size lemon having output capacity of 40 fruits/h. There will be high potential for popularization and adoption of *C. macroptera* processing to the entrepreneurs and farmers and mainly house hold of Manipur



Mechanical *Citrus macroptera* peeling machine

state.

- **Developed mechanical makhana harvester**

Performance evaluation is under progress.

i) AICRP on UAE

- **Developed animal drawn Bio fertilizer-applicator cum maize-planter**

Developed improved organic farming equipment "Bio-fertilizer-cum maize-planter". Due to cost effective and simplicity the equipment can be easily adopted by the farmers of Sikkim. It is recommended for front line demonstration to the farmers' field for popularization and adoption.



Calibration of bio-fertilizer applicator-cum-maize planter



Sowing of maize seed by using Bio-fertilizer-cum-maize planter at various farmers filed

- **Developed utilization technique of domesticated Mithun for agricultural operations**

Domesticated mithun were trained for working in heat tolerant and cold climatic conditions for ploughing operations. The theoretical field capacity, actual field capacity and field efficiency of the machine drawn by mithun were 0.0396 ha/h, 0.0266 ha/h and 67.17 per cent respectively. The average draft of wedge of plough was 589.8 N at the operating depth of 147.5 mm and average speed 1.98 kmph (0.55 m/s). Mithun could develop draft force 11.80 percent of his body weight for continuous farm operation.



Domesticated Mithun for agricultural operations

- **Developed saddle with harnessing system for pack load transport in hilly areas using Yak and other animals**

- The adjustable saddle (expansion range in width 300-400 mm and in height 150-190 mm) could sustain 20 per cent more pack load than the tradition saddle.
- Improved adjustable saddle was fitted for one or more Yak.



Adjustment of saddle according to body dimensions of Yak



Pack load transport by Yak on track

- The amount Rs. 1000/- saved each saddle of improved adjustable saddle over the traditional one.

iv) Soil Moisture Characterization and its impact on productivity of Large Cardamom in Sikkim

- Developed soil moisture characteristics curve for selected sites.
- Measured the soil moisture stress of selected sites on temporal scale.
- Developed the relationship between soil moisture stress and stomata count.
- Developed the relationship between soil moisture stress and chlorophyll content.



4

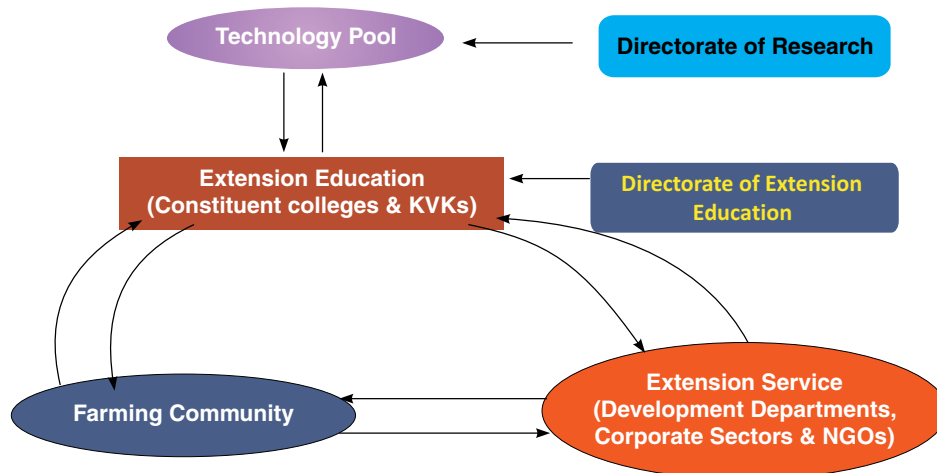
Extension Education





EXTENSION education is an ever growing and continuous process to equip all the farmers, farm women and extension service agencies i.e. line departments of the states, NGOs and corporate sectors. Further, extension system in agriculture and allied sectors is concerned with the successful transfer of technologies to the farming community to increase productivity, employment and income generation. On the other side, it provides need-based feedback to influence the research, education and training module set up. Such education also forces the act of transferring innovation through proper education of the concerned personnel so that they are properly trained and the skills are acquired for conviction, action and adoption. Since the inception of organized extension programmes in the country farmers' participation has been given prime emphasis, this system operates as a farmers' programme with the presence of the scientists and extension educationists along with the support and initiative of the Government and non-government organizations.

Although, agriculture as a whole is state subject but being the origin centre of technology generation and refinement of need-based technologies through rigorous experimentation, the educational/research institutions bear the responsibility to train the master trainers of the states and to conduct elite demonstrations. Owing to this responsibility, Directorate of Extension Education, Central Agricultural University, 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 three Krishi Vigyan Kendras i.e., Imphal East, Andro (Manipur); Aizawl, Selesih (Mizoram) and East Siang, Pasighat (Arunachal Pradesh). Recently, two more KVKs – (i) KVK, South Garo Hills and (ii) KVK, East Garo Hills have also been sanctioned to disseminate the agricultural technologies rapidly to the farmers of these two districts of the state of Meghalaya. The thematic function of agricultural universities for carrying out extension programmes in their jurisdiction is shown in the following figure:



Diagrammatic Elaboration of System of Extension Education

EXTENSION EDUCATION

4.I Training Programmes

4.1.1. Capacity building training programmes for extension functionaries

During the year 2017-18, the Directorate of Extension Education organized 9 (nine) training programmes in four states under the area jurisdiction of the University for capacity building of extension functionaries and to keep them updated with latest technical know-how in identified areas of agriculture and allied fields. The total beneficiaries were 258.

Table 4.1: Capacity building training programmes for extension functionaries during the year 2017-18

Sl. No.	Title of the Training	Place, Date & Duration	No. of Benef.	Male	Female
1.	Sustainable Livestock Production in N. E. Region and Extension Techniques	College of Vety. Sc.& A.H, Selesih, Aizawl; October 21-23, 2017, Three (3) days	26	22	04
2.	Integrated Farming for Sustainable Income	College of Agriculture, Imphal, October 24-27, 2017, Four (4) days	22	11	11
3.	Planning for enhancing water use efficiency with emphasis on efficient utilization of agricultural water	CAE&PHT, Ranipool, Sikkim, Dec. 11-15, 2017, Five (5) days	22	14	08
4.	Increasing Cropping Intensity by Efficient Farm Resource Management	College of Agriculture, Imphal, Dec. 12-15, 2017, Four (4) days	24	16	08
5.	Integrated Sustainable Duck Farming	College of Agriculture, Imphal, January 3-5, 2018, Three (3) days	23	16	07
6.	Soil Testing and Organic Farming for Sustainable Agriculture Management in North East India	KVK, East Siang, Pasighat, January 15-24, 2018, Ten (10) days	37	31	06
7.	Commercial Horticulture for Doubling Farmers Income of NE States	College of Hort. & Forestry, Pasighat, February 6-9, 2018, Four (4) days	41	24	17
8.	Biological and Organic Inputs for Sustainable Agriculture	College of Agriculture, Imphal, February 21-23, 2018, Three (3) days	32	17	15
9.	Rain water Harvesting and its management for Horticultural Crops	College of Hort. & Forestry, Pasighat, March 7-9, 2018, Three (3) days	31	19	12
Grand Total			258	170	88



Capacity Building training programme on “Integrated Farming for Sustainable Income” during December 24-27, 2017 for extension functionaries of CAU, Imphal



Capacity Building training programme on “Increasing Cropping Intensity By Efficient Farm Resource management” during December 15-16, 2017 for extension functionaries of CAU, Imphal



Capacity Building training programme on “Integrated Sustainable Duck Farming” during January 3-5, 2018 for extension functionaries of CAU, Imphal



Capacity Building training programme on “Biological and Organic Inputs for Sustainable Agriculture” during February 21-23, 2018 for extension functionaries of CAU, Imphal



Capacity Building training programme on “Commercial Horticulture for Doubling Farmers' Income” during March 12-15, 2018 for extension functionaries of Arunachal Pradesh

EXTENSION EDUCATION

4.2 Capacity Building training programmes for farmers

The Directorate of Extension Education conducted 39 (thirty nine) training programmes, awareness days and campaigns during 2017-18 to meet the need of farmers and farm women in order to increase farm production and supplement the income in the field of agriculture and allied activities. Altogether, 2187 no. of individuals were benefitted.

Table 4.2.1. One day awareness programmes/campaign for farmers during the year 2017-18

Sl. No.	Title of the Training	Place, Date & Duration	No. Benef.	Male	Female
1.	Kisan Diwas (Off-Campus)	Keinou Thongkhong, Community Hall, Bishnupur Distt., Manipur, August 28, 2017	75	68	07
2.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off-Campus)	Saram Tangkhul, Thoubal Distt., Manipur, September 8, 2017	38	16	22
3.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off-Campus)	Konthoujam, Imphal-West Distt., Manipur, September 16, 2017	36	15	21
4.	Zero Tillage Cultivation of Rapeseed-Mustard in Rice Fallow (Off-Campus)	Wangoo Laipham Mayai Leikai, Kakching Distt., Manipur, October 28, 2017	42	40	02
5.	Zero Tillage Cultivation of Rapeseed-Mustard in Rice Fallow (Off-Campus)	Maharabi, Imphal-West Distt., Manipur, October 30, 2017	45	32	13
6.	Scientific Cultivation of Papaya & Distribution of Papaya Plants (Off-Campus)	Yourabung, Imphal-East Distt., Manipur, November 2, 2017	42	39	03
7.	Zero Tillage Cultivation of Rapeseed Mustard in Rice Fallow (Off-Campus)	Kumbi Terakhong, Bishnupur Distt., Manipur, November 7, 2017	50	36	14
8.	Zero Tillage Cultivation of Rapeseed Mustard in Rice Fallow (Off-Campus)	Wangoo Tera Awang(Ahanlup) Leikai, Kakching Distt., Manipur, November 11, 2017	55	29	26
9.	Agricultural and Allied Activities and Distribution of Chicks (Off-Campus)	Moreh, Tengnoupal Distt., Manipur, December 11, 2017	32	10	22
10.	Participatory Meeting and Selection of Farmers under Kisan Business School (Off-Campus)	Kumbi Terakhong, Bishnupur Distt., Manipur, December 11, 2017	31	27	04
11.	Vermi-culture and Vermicomposting (Off-Campus)	Premises of Welfare Association for Blind, Takyel, SAI Road, Imphal-West Distt., Manipur, January 12, 2018	22	15	07
12.	Doubling of Farmer's Income by 2022 (Off-Campus)	Kachikhul, Imphal-West Distt., Manipur, January 18, 2018	115	77	38



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Sl. No.	Title of the Training	Place, Date & Duration	No. Benef.	Male	Female
13.	Farmers Field Day (Off-campus)	Kachikhul, Imphal-West Distt., Manipur, March 9, 2018	65	39	26
14.	Farmers Awareness Programme on Integrated Paddy Cum Fish Farming (Off-Campus)	Top Siphai, Wangoi, Imphal-West, Manipur, March 13, 2018	48	32	16
15.	Farmers Awareness Programme on Integrated Paddy Cum Fish Farming (Off-Campus)	Laphupat Tera, Mayang Imphal Distt., Manipur, March 14, 2018	35	20	15
16.	Zero tillage cultivation of Rape-seed-Mustard in rice fallow (Off-Campus)	Saiton, Bishnupur Distt., Manipur, March 26, 2018	43	35	08
17.	Zero tillage cultivation of Rape-seed-Mustard in rice fallow (Off-Campus)	Salan Konjin, Bishnupur Distt., Manipur, March 26, 2018	44	21	23
18.	Save Agricultural Land and Permaculture/ Organic Agriculture (Off- Campus)	Chalou, Imphal-East Distt., Manipur, April 9, 2017	75	59	16
19.	Save Agricultural Land and Permaculture/ Organic Agriculture (Off- Campus)	Koutruk, Imphal-West Distt., Manipur, April 12, 2017	80	50	30
20.	Save Agricultural Land and Permaculture/ Organic Agriculture (Off- Campus)	Kwashiphai, Bishnupur-Distt., Manipur, April 13, 2017	78	58	20
21.	Save Agricultural Land and Permaculture/ Organic Agriculture (Off -Campus)	Wangoi, Imphal-West Distt., Manipur, April 16, 2017	100	68	32
22.	Agri & Allied Activities (Off-Campus)	Keinou Mamang Leikai, Bishnupur Distt., Manipur, March 29, 2018	60	32	28
23.	Agri & Allied Activities (Off- Campus)	Moljol, Village, Moreh, Tengnoupal Distt., Manipur May 22, 2017	39	24	15
24.	Agri & Allied Activities & Distribution of Planting Materials (Off -Campus)	Khangabok, Thoubal Distt., Manipur, June 8, 2017	30	24	06
25.	Agri & Allied Activities & Distribution of Planting Materials (Off- Campus)	Khurai, Imphal-East Distt., Manipur, June 9, 2017	35	25	10
26.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off- Campus)	Ngamukhong, Imphal-East Distt., Manipur, July 22, 2017	80	55	25
27.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off- Campus)	Iram Siphai, Imphal-West Distt., Manipur, July 24, 2017	82	53	29
28.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off- Campus)	Phaknung, Imphal-East Distt., Manipur, July 26, 2017	85	52	33
29.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off- Campus)	Irom Meijrao, Imphal- West Distt., Manipur, July 27, 2017	83	13	70

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Sl. No.	Title of the Training	Place, Date & Duration	No. Benef.	Male	Female
30.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off- Campus)	Langmeidong, Kakching Distt., Manipur, July 29, 2017	79	54	25
31.	Scientific Cultivation of Papaya & Distribution of Papaya Seeds (Off- Campus)	Karang, Bishnupur Distt., Manipur, July 31, 2017	75	36	39
32.	Plantings of Horticulture Crops & Distribution of Planting Materials (Off-Campus)	Kumbi Bazar, Bishnupur Distt., Manipur, August 26, 2017	52	48	04
Grand Total			1851	1202	649

Table 4.3: Training programmes for farmers during the year 2017-18

Sl. No.	Title of the Training	Place, Date & Duration	No. Benef.	Male	Female
1.	Pest & Disease Management in Rice (Off- Campus)	Rajashri Bhaigyachandra Skill Development Centre, Haraorou Imphal-East Distt., Manipur, September 16, 2017, Two (2) days	42	42	-
2.	Economic Crisis in Manipur Livelihood Transformation through Agri & Allied Activities a common future (Off- Campus)	Art and Culture Dormitory Hall, Palace Compound, Imphal-East, Manipur, January 9, 2018, Three (3) days	70	63	07
3.	Pig Farming for Farmers, Manipuri Medium (On-Campus)	College of Agriculture, Imphal, Manipur, January 15 to 16, 2018, Two (2) days	87	66	21
4.	Advances in Production Technology of Selected Agri-Horti Crops (On- Campus)	College of Hort. & Forestry, Pasighat, February 21 to 28, 2018, Eight (8) days	37	09	28
5.	Visit of farmers at State Level Agri Fair, 2017-18 under Kisan Business School (Off- Campus)	Iboyaima Shumang Leela Shanglen, Palace Compound, Imphal-East Distt., Manipur, February 26 to March 1, 2018, Four (4) days	35	34	01
6.	Organic Farming/Natural Farming Cow based Economy (Off-Campus)	R.S.B.S.D. Centre, Haraorou, Imphal-East Distt., Manipur, March 19 to 23, 2018, Five (5) days	30	18	12
7.	Market Led Miscellaneous Farming Activities under Kisan Business School (Off-Campus)	Kumbi, Bishnupur Distt., Manipur, March 24 & 26, 2018, Two (2) days	35	34	01
Grand Total			336	266	70



4.2.4. Farmers' Fairs organized

Sl. No.	Particulars	Date & Duration	Place	No. of Benef.	Male	Female
1.	CAU Regional Agriculture Fair	November 05-07, 2017 (3 days)	College of Fisheries, CAU, Agartala (Tripura)	5050	3372	1678



Lighting of Lamp in the Inaugural Function of CAU Regional Agri-Fair, 2017-18 by Hon'ble M. P. of Lok Sabha, Shri Sankar Prasad Datta & Felicitation of Hon'ble Chancellor, CAU, Imphal, Dr. R. B. Singh by Hon'ble Vice-Chancellor, CAU, Imphal, Dr. M. Premjit Singh at College of Fisheries, CAU, Agartala (Tripura)

4.2.5 Farmers' Fair / Exhibition participated

Sl. No.	Particulars	Place & Date	Remark
1.	NE Regional Agri Fair, 2017-18	Palace ICAR Research Complex Umium, Barapani (Meghalaya) during Jan 06-09, 2018 (4 days)	CAU, Stall was adjudged by "First Runner" award.
2.	North Regional Agri Fair, 2018	IIVR Varanasi during Feb. 23-25, 2018 (3 days)	KVK, Aizawl of the University participated and awarded as "Consolation Award (Public Sector)"
3.	State Agri Fair, 2018	Palace Compound, Imphal, Manipur during February 26 - March 01, 2018 (4 days)	Exhibition Stall of KVK, Imphal East, Andro (Manipur) was awarded by "First Prize" .
4.	Unnat Krishi Mela, 2018	IARI, Pusa, New Delhi during March 16-18, 2018 (3 days)	Two progressive farmers: (i) Mr. H. Zirsangliana, Village & P.O. Siphir, Dist. Aizawl and (ii) Mr. Punto Perme, Village-Ayeng, P.O. Siphir, Dist. East Siang (Arunachal Pradesh) were awarded with prestigious "IARI Innovative Farmers Award-2018" .
5.	105 th Indian Science Congress, 2018	Manipur University, Canchipur, Imphal during March 16-20, 2018 (5 days)	-

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The Central Agricultural University, Imphal participated in N.E. Regional Agriculture Fair during January 6-9, 2018 at ICAR Research Complex, Umiam, Barapani and the Stall of the University was adjudged by "FIRST RUNNER" Award



KVK, Aizawl of the CAU, Imphal participated in National Seminar on Agro-biodiversity Exhibition held during February 23-25, 2018 at IIVR, Varanasi and awarded as "Consolation Award (Public Sector)"



First Prize received by Director of Extension Education, CAU, Imphal & Sr. Scientist & Head, KVK, Imphal East, Andro (Manipur)



IARI Innovative Farmer Award-2018 received by Mr. Pumto Perme, Progressive Farmer, Village Ayeng, P.O. Mebo, Dist. East Siang, Arunachal Pradesh of Aizawl



IARI Innovative Farmer Award-2018 received by Sr. Scientist & Head, KVK, Aizawl & Mr. H. Zirsangliana, Progressive Farmer of Aizawl



University participation in 105th Indian Science Congress held during March 16-20, 2018 at Manipur University, Imphal



4.3. Other Activities during 2017-18

- Annual Workshop of KVKs, 2017-18 during March 9-10, 2018 at Bishnupur, Manipur was attended by Directorate of Extension Education.

4.4. Publications during 2017-18

- CAU Farm Magazine in different languages:
English Version (four issues) - Vol-7 (2), 7 (3), 7 (4) and 8 (1)

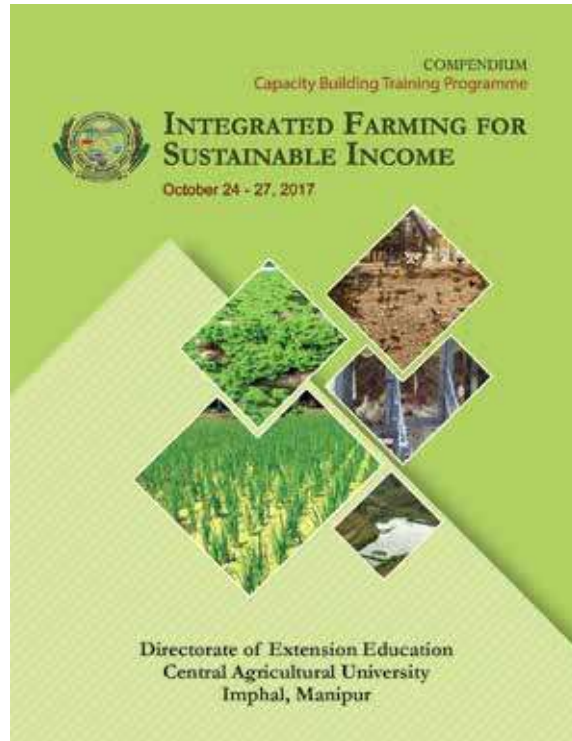


- Souvenir CAU Regional Agri- Fair, 2017- 18
- CAU Newsletter – 2017: Vol-2 (1) to 2 (4)

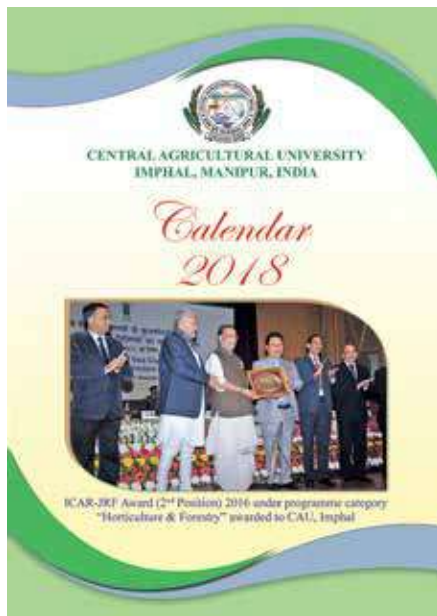


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- Compendium: i) Integrated Farming for sustainable Income
ii) Integrated Sustainable Duck Farming



- CAU Calendar 2018
- CAU Kisan Diary 2018 (in two languages including English & Hindi).



CAU Calendar 2018



CAU Kisan Diary 2018



4.5 Quality seeds produced & distributed

2480 kg seed of Rapeseed-Mustard produced and distributed to the farmers and different agencies. In addition, three (3) KVKs of the University produced and distributed 3.90 tonnes of seeds of different field crops and 3,40,000 planting materials of different horticultural crops to the farmers.

4.6 Overseeing the activities of KVKs under Zone-III by Director of Extension Education, CAU, Imphal

During the period under report, Director of Extension Education, Central Agricultural University visited 22 (twenty two) nos. of KVKs situated in different States of North Eastern Region for monitoring and better performance

of their activities.

4.7 Major Extension Activities of KVKs

Krishi Vigyan Kendras (KVKs) are innovative science based institutions which undertake vocational training of farmers, farm women and rural youths, conduct on-farm trials for technology assessment and refinement. Front line demonstrations are also organized by the KVKs to promptly demonstrate the latest agricultural technologies to the farmers as well as extension functionaries of State Government/ NGOs. Three Krishi Vigyan Kendras under CAU situated at Imphal East, Andro (Manipur), East Siang, Pasighat (Arunachal Pradesh) and Selesih, Aizawl (Mizoram) performed mandated activities during the period under report as under:

KVK, Aizawl, Selesih

(A) Training organized for farmers and rural youth

Sl. No.	Broad areas	On-Campus					Off-Campus				
		No. & Categorized of trainees					No. & Categorized of trainees				
		No. of Trg.	No. of Benef.	Level of Trainees			No. of Trg.	No. of Benef.	Level of Trainees		
SC/ST	OBC			Women	SC/ST	OBC			Women		
1.	Agronomy	7	231	231		101	7	153	153		56
2.	Plant protection	7	313	313	-	70	12	497	497	-	203
3.	Horticulture	7	165	165	-	63	7	198	198		76
4.	Home Science	5	102	102	-	100	9	184	184		184
5.	Agril. Engg.	6	200	200	-	99	6	163	163		50
6.	Animal Science	3	47	47	-	30	3	76	76	-	41
TOTAL		35	1058	1058		463	44	1271	1271		610

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(B) Training organized for extension personnel during the year 2017-2018

Sl. No.	Broad areas	On-Campus					Off-Campus				
		No. & Categorized of trainees					No. & Categorized of trainees				
		No. of Trg.	No. of Benef.	Level of Trainees			No. of Trg.	No. of Benef.	Level of Trainees		
SC/ST	OBC			Women	SC/ST	OBC			Women		
1.	Agronomy	01	10	10		2	-	-	-	-	-
2.	Plant protection	-	-	-	-	-	01	15	15	-	5
3.	Horticulture	01	15	15	-	3	01	10	10	-	-
4.	Home Science	01	07	07	-	07	-	-	-	-	-
5.	Agril. Engg.	-	-	-	-	-	02	30	30	-	7
6.	Animal Science	01	15	15	-	3	-	-	-	-	-
	Total	04	47	47	-	15	04	55	55	-	12

(C) On-Farm Trials (OFTs) organized during the year 2017-2018

Sl. No.	Problem Identified	Technologies selected for Assessment/Refinement	Performance of the technologies selected for assessment/refinement	Recommendation for micro level situation
1.	Ginger Rhizome Rot problem	Management of ginger soft rot/ rizome rot by <i>Bacillus subtilis</i> @ 20ml/litre solution for 30 mins. Dipping of rhizome	PDI=17.32% (L); 11.78% (D). Yield= 77qt/ha; 53qt/ha Net return=56,000 (D); 36,000 (L).	The technology is environment friendly and well suited for that local condition if the inputs can be easily available in the local market
2.	Poor yield of rice due to feeding during milling stage & Rice Gundhi bug.	Management of rice Gundhi bug of rice with <i>Beauveria bassiana</i> @ 5m/ltr of water for folier application.	PDI= 41.78% (L); 24.93% (D). Yield=4.7qt/ha (D); 2.9qt/ha (L). B.C Ratio: 1.45:1(D); 1.28:1(L)	The technology is bio-based management practice and good for local condition even though B.C ratio is not so high if the input can be easily available in local area.
3.	Snake gourd	Management of damping of seedling in snake gourd by <i>Pseudomonas fluorescens</i> @ 20ml/ltr of water	Fruit yield=320qt/ha (D); 270qt/ha (L). B.C Ratio=2.23 (D); 1.77 (L).	The technology is good & environmental friendly if the input can be easily available in local Market.
4.	Infestation by lesser grain borer (<i>Rhizopertha dominica</i>).	Defection & Management of Lesser grain borer of rice	Avg. no of insect detected per bin=2.4 (D) Avg. no. of insect trap/bin=15.3	The technology is simple and good.



Sl. No.	Problem Identified	Technologies selected for Assessment/Refinement	Performance of the technologies selected for assessment/refinement	Recommendation for micro level situation
5.	Low yield	Inbro fast white broiler birds	Average meat production at 2 month: 2.5 kg	This breed performed well and is being accepted by the farmers. The weight gain is much higher as compared to the other variety available in the market.
6.	Low production of rice in <i>jhum</i> .	INM in rice var. CAU-R1 using CAU Jhum Bioenhancer (liquid biofertilizer) and finely ground dry compost.	Grain yield : 1.52 t/ha B:C ratio: 1.98	CAU Bioenhancer promotes early root growth and crop establishment in acid soils.. It stimulates nodulation by native <i>Rhizobium</i> in legumes.
7.	Low production of French bean.	INM in French bean (Rajmash) using CAU Bioenhancer (Liquid biofertilizer) and dry compost.	Seed Yield: 1.3 t/ha B:C Ratio: 1.86	Bioenhancer can reduce soil acidity related stresses in crops and increase growth and yield of crops
8.	Lack of awareness in nutritional diet for infant	Evaluation of Assam Mix (food) for infant diet 6 – 12 months	At 6 month age (DEMO) Weight Infant: 8.7 kg Height Infant: 61.2 cm At 12 month age (DEMO) Weight Infant: 10.8 kg Height Infant: 71.3 cm At 6 month age (LOCAL) Weight Infant: 6.5 kg Height Infant: 56.2 cm At 12 month age (LOCAL) Weight Infant: 9.4 kg Height Infant: 68.1cm	The Technology is very beneficial for the region. As the recipe are locally available easily.
9.	Lack of awareness in processing of Amla	Home based preservation of Amla for income generation (50 kg of Amla is processed as candy)	Shelf life: more than 6 months under air tight condition Cost of production: Rs 16,750/- Gross Return: Rs 32,000/- Profit: 15,250/- B:C: 0.91	The Technology is very beneficial for the region. As the recipe are locally available easily. Further the SHGs can earn with it as packed fruit around the region.

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Sl. No.	Problem Identified	Technologies selected for Assessment/Refinement	Performance of the technologies selected for assessment/refinement	Recommendation for micro level situation	
10.	Low production of local varieties and susceptible to disease & insect pest	Varietal evaluation of Chilli var. i. Arka Meghana ii. CH-3	Parameter No. of fruits/pt. Fruit wt. (S) Fruit wt./pt Yield	A . CH-3 Meghana 130.4 nos. 2.43 g 316.87 g 230 Qt./ha 102.0 nos. 3.40 g 346.0 g 209 Qt/ha	Both varieties are satisfactory but difficulties to get seeds.
11.	Low yielding variety with various a biotic & biotic problem	Evaluation of indeterminate Tomato Var. Arka Rakshak under low cost poly house	Parameter No. of fruits/pt. Fruit wt. (S) Fruit wt./pt Yield	A. Rakshak 120 nos. 80 gm 9.6 kg 155kg/15M ²	Its highly recommended for production as well as nursery raising With use of locally available wooden (teak tree) for structure is durable and economic
12.	Due to low temperature during Jan–March is hastened the maturity period long	Varietal performance of Onion in pre kharif season Var. i. ALR ii. ADR	V e g e t a t i v e growth is superior and final data of yield & yield attribute is waiting	The kharif season variety performed well in the pre kharif season.	
13.	Loss of water from traditional farm pond (evaporation, percolation, seepage loss), scarcity of water in off season	Refinement: Water harvesting structure, Jalkund using HDPE Geomembrane liner	Durability (yrs.): 2 YEARS Total Capacity (ltrs): Avg. (27000 ltrs) Effect. Capacity (ltrs): Avg. (25000 ltrs) B:C Ratio: 1.8:1 Rate of water 9.00/- per litre. Gross Retrn: 2,25000 Cost: 8940.00/- Net Profit.: 16060/-	i. HDPE (7 x 8m) (black geomembrane 300 micron) lining with pond size of 5 x 4 x 1.5 m ³ is economical and effective for economical water harvesting.	



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Sl. No.	Problem Identified	Technologies selected for Assessment/Refinement	Performance of the technologies selected for assessment/refinement	Recommendation for micro level situation
14.	Water scarcity during lean season	Optimal irrigation scheduling using gravity drip irrigation system in tomato var. Arka Rakshak	<p>Technology</p> <p>1. Avg. Discharge rate: 2.1ltr/hr at operating height of 1.5m from ground level.</p> <p>2. Production: 1.5 q/30 msq (150kg)</p>	<p>Technology</p> <p>1. Inst. cost: Rs. 1,311</p> <p>2. Miscellaneous cost: Rs. 820</p> <p>Total cost: 2,131</p> <p>Gross income: 150 kg @ Rs. 30 = Rs. 4,500</p> <p>At micro level 30m² Gravity drips is economical and effective for terrace conditions.</p>
15.	Sevier water scarcity during pre kharif season	Performance evaluation of micro-sprinkler system in Onion during Pre Kharif (Onion Variety: ALR, ADR)	Vegetative growth is superior and final data of yield & yield attribute is waiting	Sprinkler Dia. 5m On going Overlapping 30 %

(D) FLDs Organized during the year 2017-2018

Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (ha)/ No. of Live-stock/ Demo	Demo yield (q/ha)	Increase in Yield (%)	B.C. Ratio
1.	Management of damping off in cabbage by <i>Trichoderma harzianesa</i>		03	0.15	303 qt/ha (D) 176 qt/ha (L)	72.15%	1.80 (D) 1.12 (L)
2.	Popularisation & demonstration of bee keeping (Apis spp.)		27	5ha	6.5 kg/colony/yr. 3.5 kg/colony/yr	85.7%	2.97 (D) 2.20 (L) (On Going)
3.	Performance evaluation of Hampshire cross with large cross breed white Yorkshire pigs	Hampshire cross with large cross breed white Yorkshire	5	5	-	-	This demonstration is still ON GOING. Piglets have been distributed on the 7 th July 2017 and now they are in the period of conception.

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Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (ha)/ No. of Live-stock/ Demo	Demo yield (q/ha)	Increase in Yield (%)	B.C. Ratio
4.	INM in Field pea var. Vikas	INM: NPK@ : 30 kg N, 60 kg P, 20kg K.	10	3	16	45.45	1.85
5.	INM in Soy-bean var. JS-335	INM: Seed treatment with Rhizobium Culture @ 15g/kg.; NPK@ Urea: 6.5kg/ ha SSP: 50kg/ ha MOP: 10kg/ha	5	2	6.5	62.5 %	1.78
6.	Implements Demo: briquette maker and chulha	Demonstration of briquette chulha and briquette maker	05	05	Sustainability (Yrs.): 2 year (On going) Labour/day: 1 Fuel Effic.: 185g Briquette/day: 1/day; (3–3.5 hrs)	87%	1.63
7.	Energy saving tools/ devices: Solar Dryer	Demonstration of Low cost solar dryer	5	5	DEMO: Suitability for Crops: Ginger, Chilli Capacity (kg/batch): 1kg Ginger/ 1kg Chilli Labour req. (Labour/day): 1 Drying time (Day/batch): Ginger: 5/ Chilli: 6 LOCAL : Suitability for Crops: Ginger, Chilli	37.5%	1.1 (Initial Year)



Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (ha)/ No. of Live- stock/ Demo	Demo yield (q/ha)	Increase in Yield (%)	B.C. Ratio
					Capacity (kg/batch): 1kg Ginger/ 1kg Chilli		
					Labour req. (Labour/ day): 1		
					Drying time (Day/batch): Ginger: 8/ Chilli: 9		
8.	INM in broccoli Var. Solan Green Head	Integrated Nutrient Management var. Solan Big Head (NPK@ 75:38:30 Kg/Ha + Vermicompost @ 2.5t/ha along with slaked lime @ 2 t/ha)	5	2.5	162	22.8%	2.9
9.	Orchard Rejuvenation in citrus Khasi Mandarin	Implemented the citrus rejuvenation calendar developed by ICAR-RC Basar	5	1.5	5750 fruit/ 50 trees	48.6	1.87
10.	Growing strawberry patch with organic and plastic mulchVar. Festival	Paddy straw, sliver on black and black on silver used as mulch with the dimension of bed 1 x 20 m each bed altogether 12 beds.	3	720 m ²	Om: 59 BPM: 86 SPM: 72	Om 15.98 BPM: 44 SPM: 22.6	2.8 3.6 3.2
11.	Performance of micro-sprinkler system in broccoli var. Solan Big Head	Performance Of Micro-Sprinkler System In Broccoli Var. Solan Big Head sprinkler dia. 3-5m , discharge:110l-tr/hr, Overlapping: 30%.	5	500 m ²	80 kg/100 m ²	33	2.27

EXTENSION EDUCATION

Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (ha)/ No. of Live-stock/ Demo	Demo yield (q/ha)	Increase in Yield (%)	B.C. Ratio
12.	Efficacy of vermicomposting using Geomembrane (HDPE woven) beds and pit system.	Efficacy of vermicomposting using Geomembrane (HDPE woven) beds and pit system.	5	280 m ²	-	-	On going (due to non timely availability of earth-worm)

(E) Field Day/Technology Week/Farmers' Fair/Field Camp/Animal Health Camp etc. organized during the year 2017-2018

Sl. No.	Name of Activity	Date & Duration of Activity	No. of Beneficiaries			
			Total No.	SC/ST	OBC	Women
1.	Field Day	22 nd Nov. 2017, 17 th Jan., 21 st Feb and 15 th March, 2018	86	86	-	42
2.	Animal Health Camp	16 th October, 2017	690	690	-	392
3.	Exhibition	5th-7th Nov. 2017 (NE CAU Agri-fair) 23rd-25th Feb., 2018 (National Agro biodiversity Exhibition IIVR Varanasi) 16th-17th March, 2018 (National Conference Aizawl Club, Aizawl)	6326	6326	-	3206
Total			7102	7102	-	3640

(F) Vocational Training organized during the year 2017-2018

Sl. No.	Name of Activities	Date & Duration of Activity	No. of Beneficiaries			
			Total No.	SC/ST	OBC	Women
1	Training on Oyster Mushroom Production	20 th -24 th March, 2018	31	31	-	14
2	Hi-tech horticulture	14 th -22 nd Nov., 2017	21	21	-	10
Total			52	52	-	24

(G) Miscellaneous Extension Activities during the year 2017-2018

Sl. No.	Name of Activities	Nos.	No. of Beneficiaries			
			Total No.	SC/ST	OBC	Women
1.	Diagnostic visits	83	336	336	-	169
2.	Advisory Services	42	305	305	-	278
3.	Awareness Camp/Animal Health Camp	1	104	104	-	64



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Sl. No.	Name of Activities	Nos.	No. of Beneficiaries			
			Total No.	SC/ST	OBC	Women
4.	Training manual	5			-	
5.	Exhibition	3	6326	6326	-	3206
6.	Farm Science Club Conveners meet	4	41	41	-	27
7.	Farmer-Scientist Interaction	11	201	201	-	145
8.	Farmers Visit to KVK	521	521	521	-	336
9.	Group meeting/ discussion	11	66	66	-	35
10.	Field Day	4	86	86	-	42
11.	Film Show	5			-	
12.	Lectures delivered as resource persons	10	210	210	-	99
13.	Method Demonstrations	20	80	80	-	53
14.	Scientists visit to farmers field	201	201	201	-	124
15.	Self Help Group Conveners meetings	5	80	80	-	69
16.	Research papers publication	5	-	-	-	-
17.	Leaflets/ folders	10	-	-	-	-
18.	Popular articles	3	-	-	-	-
19.	News paper coverage	10	-	-	-	-
20.	TV Talk	10	-	-	-	-
	Total	964	8557	8557	-	4647

KVK, Imphal East, Andro

(A) Training Organized for farmer and rural youth

Sl. No.	Broad Area	ON CAMPUS					OFF CAMPUS				
		No. & Categories of Trainees					No. & Categories of Trainees				
		No. of Trg.	No. of Benef.	SC/ST	OBC	Women	No. of Trg.	No. of Benef.	SC/ST	OBC	Women
1.	Agronomy	1	19	-	15	4	10	278	15	148	145
2.	Fisheries	-	-	-	-	-	4	102	21	58	23
3.	Farm/Agril. Engg.	1	26	-	20	6	8	144	31	75	98
4.	Vety. Sc. & A.H.	2	124	-	124	-	1	30	-	5	25

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Sl. No.	Broad Area	ON CAMPUS					OFF CAMPUS				
		No. & Categories of Trainees					No. & Categories of Trainees				
		No. of Trg.	No. of Benef.	SC/ST	OBC	Women	No. of Trg.	No. of Benef.	SC/ST	OBC	Women
5.	Women Em- powerment	1	18	-	10	8	6	170	20	62	108
Total		5	187	-	169	18	29	724	87	348	399

(B) Training Organised for Extension Functionaries

Sl. No.	Title	Date & Duration	No. of Categories of Trainees			
			Total No.	SC/ST	OBC	Women
1.	Integrated Farming System	26.10.2017 (One Day)	20	3	12	5
2.	Integrated Farming System and value chain management for upliftment of rural economy and livelihood	05.01.2018 to 09.01.2018 (Four Days)	33		3	30
3.	Extraction of Banana Fibre and its Utilization	22.01.2018 to 24.01.2018 (Three Days)	21	20	-	1
Total			74	23	15	36

(C) On Farm Trials Conducted

Sl. No.	Problem Identified	Technologies selected for Assessment/ Refinement	Performance of the Technologies selected for Assessment/ Refinement	Recommendation for micro level situation
1.	Lack of new high yielding blackgram varieties suitable for the region	Crop : Blackgram Variety : Tripura mashkolai Duration : 84 days Yield potential : 13-14 qt/ha Small seeded Fertilizer : 20:40:30 kg NPK/ha	The blackgram var. Tripura mashkolai is a good variety, which can bear as high as 28 pods per plant. However, due to its small seeded nature farmers preference is a little low. During this season trial, production and productivity of the crop could not be recorded as the plant population drastically reduced & only few plants survived. The trial is proposed to be repeated again in the coming season (Pre Kharif & Main Kharif)	-
2.	Lack of late sown high yielding wheat varieties suitable for the region	Crop : Wheat Variety : HD-2932 Suitable for late sown condition	Date of sowing : 15.12.2017 Grain filling/ maturity stage	-



SI. No.	Problem Identified	Technologies selected for Assessment/ Refinement	Performance of the Technologies selected for Assessment/ Refinement	Recommendation for micro level situation
		Yield potential: 41 q/ha Adult plant resistant against brown and yellow rust. Wider adaptability, Source : IARI, 2010		
3.	Non availability of short duration. High yielding field pea variety for planting after rice. Long duration varieties of field pea always face moisture stress during its vegetative growth and rain at maturity and harvesting stage	Crop-field pea Var-TRCP-8, Suitable for late sown condition of north eastern states, resistant to powdery mildew, tolerant to pod borer, Duration – 87-97 days Potential yield – 22 qt/ha	Date of sowing : Last week of December, 2017 Plant ht. : 41.5 cm No. of branches/plant : 1 No. of pods/plant : 3.9 Duration : 93 days Yield : 4.3 t/ha Plant performance is not upto the expected level as the sowing was delayed due continuous rain and field could not be ploughed.	-
4.	Un-utilization of existing abundantly available water bodies like canals, reservoirs, lakes etc. for fish culture which otherwise could contribute demand/requirement reducing large gap of fish production	Technology Cage size : 12 ft. x 12 ft. x 6 ft. Stocking density: 40/m ³ Feeding rate : 3-5% BW Feeding Interval: Twice interval Feed : Pellet floating feed (20% Protein) Culture Period : 4-6 months	1. Average Growth : 620 gm 2. Survivability : 90% 3. Production : 502 kg	Such system will be very much suitable for production of fish seed of Indian Major Carp.
5.	High cost of pellet fish feed for feeding of high value fishes	Technology Stocking density: 10 kg Harvesting Interval: Twice a week Culture Period : 5 months Application of fertilizer : MOP – 60 kg/ha; Urea – 100 kg/ha; Raw cowdung – 5000 kg/ha; SSP – 40 kg/ha; Mineral Mixture – 20 kg/ha	1. Propagation : 150 gm/ sq.ft/ week 2. Production : 210 kg in 5 months 3. Reproduction : Very fast during summer and stop during winter (Dec)	-
6.	High Cost of pellet fish feed for high value fishes like Pengba, Ngaton, Tilapia	Technology Species Culture : Pengba, Ngaton, Tilapia Stocking density: 10000 fingerlings/ha	Average growth : Pengba 0 110 gms Ngaton – 93 gms. Tilapia – 150 gms	

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Sl. No.	Problem Identified	Technologies selected for Assessment/ Refinement	Performance of the Technologies selected for Assessment/ Refinement	Recommendation for micro level situation
		Feeding Interval: Twice a day Feed use : Wolfia + RB + MOC Culture Period : 4 months		-
7.	Low water and fertilizer use efficiency, with flooding system of irrigation and broadcasting of fertilizer	Drip irrigation with fertigation crop : Tomato var. <i>Amitabh 004</i> Spacing 45cm x 45cm Fertilizer application: By Pass Venturi Injector. NPK (160:60:50 kg/ha) Increasing water use efficiency and reduction in labour requirement in giving irrigation. Date of sowing : 07.11.17, Date of transplanting : 28.11.167	Fruiting stage : Ongoing i) Average fruit/plant ii) Water use efficiency iii) Yield/ha	-

(D) Front Line Demonstrations Conducted

Sl. No.	Title of FLD	Technology Demonstrated	No. of farmer	Area (ha)/ No. of livestock/ Demo	Demo Yield (q/ha)	Increase in Yield (%)	B.C. Ratio
1.	SRI using CAUR1	01	31	20	68.55	25.6%	2.26
2.	Improved cultivation of Blackgram var. PU-31	01	26	10	5.48	-	2.83
3.	Improved cultivation of Greengram var. IPM-2-3	01	11	10	4.92	-	2.97
4.	Improved cultivation of Fieldpea var. IPF 5-19	01	32	15	Just harvested, threshing to be completed for the different locations		
5.	Charcoal Briquette Cake with gasifier	01	06	06	i) Duration of combustion (in min) : 105 min/500 gm ii) Cost price/ unit wt. : Rs.10/500 gm iii) Nature of flame : Smokeless, uniform flame	i) 250% ii) 30% iii) 100%	-



Sl. No.	Title of FLD	Technology Demonstrated	No. of farmer	Area (ha)/ No. of livestock/ Demo	Demo Yield (q/ha)	Increase in Yield (%)	B.C. Ratio
					iv) Nature of residue :Residue obtained as compact coarse cake	-	
6.	Revolving milking stool and stand	01	05	05	Body discomfort due to squatting position around thigh, calves, back not felt Psychological fear of spilling the milk due to kicking by the animal is greatly reduced	-	-
7.	Control of EUS fish disease using REDEX	01	07	3.5	90% infection	Control of 95% infection	-
8.	Composite fish culture using Jayenti Rohu	01	03	0.75	Average weight 3350 kg/ha	22%	2.1
9.	Eight row Drum Seeder	01	03	0.50	5.8 t/ha	15.25 %	2.07
10.	Reaper	01	03	03	-	-	-
11.	Eight row tractor drawn zero till seed drill crop Pea var. Aman	01	01	0.25	Harvesting started	-	-

(E) Project being handled by Krishi Vigyan Kendra, Imphal East, Andro during the year 2017-18

A project entitled "National Initiative on Climate Resilient Agriculture (NICRA)" is presently run by KVK, Imphal East, Andro with involvement of all technical staff of the Kendra since the year

2011-12. Under this Project, following activities have been taken during the year 2017-18-

- i) Six (6) modules – Natural Resource Management, Crop Production, Livestock and Fisheries, Institutional Interventions, HRD and Extension Activities were specially developed.

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- ii) Altogether, forty six (46 nos.) of farmers were benefitted under the module of NRM.
- iii) Straw mulching, Beehive charcoal briquette, Improved Zero Tillage Cultivation and drip irrigation were the main selected technologies under the module of NRM.
- iv) Under crop production module, nine (9) farmers were chosen.
- v) Rice variety (CAU R-3), deep water local paddy (Taothabi), used of eight – row drum seeder, community nurseries and crop intensification were the main technology in the module of crop production.
- vi) Cage culture technology was demonstrated in the module of livestock and fisheries. A pond having an area of 0.25 ha was selected as demonstration unit. The existing demonstration is going on for the benefit of local farmers.
- vii) Custom hiring centre for providing the facility of water pump, paddy reaper and power tiller has been developed under the module of institutional intervention of the project. Nine nos. of farmers have been benefitted by this centre.
- viii) Integrated farming system, vermin-culture, value addition, biodegradable waste management and soil health management were some of the important areas, where 849 farmers were imparted training.
- ix) With the efforts of the scientists of NICRA Project, 68 ha area has been covered under zero tillage cultivation of Rapeseed-Mustard during the year 2017-18. Similarly, 5.75 ha area has been cultivated with CAU R-3.

KVK, East Siang, Pasighat

(A) Trainings organized for farmers and rural youth

On Campus

Sl. No.	Broad areas	No. of Training	No. and Categories of trainees			
			No. of Beneficiary	SC/ST	OBC	Women
1.	Plant Protection	03	86	86	-	38
2.	Agronomy	01	77	77	-	24
3.	Fisheries	06	173	173	-	73
4.	Agril. Engg.	03	68	68	-	37
5.	Horticulture	01	25	25	-	03
6.	Vety. & AH	08	243	243	-	174
7.	Women Empowerment	02	49	49	-	49
Total		24	721	721	-	398



Off Campus

Sl. No.	Broad areas	No. of Training	No. and Categories of trainees			
			No. of Beneficiary	SC/ST	OBC	Women
1.	Plant Protection	19	878	878	-	433
2.	Agronomy	09	252	252	-	75
3.	Fisheries	15	661	661	-	353
4.	Agril. Engg.	13	547	547	-	296
5.	Horticulture	02	64	64	-	31
6.	Vety. & AH	01	30	30	-	18
7.	Women Empowerment	01	15	15	-	15
Total		60	2447	2447	-	1221

(B) Trainings organized for Extension Functionaries

Sl. No.	Broad areas	No. of Training	No. and Categories of trainees			
			No. of Beneficiary	SC/ST	OBC	Women
1.	05 days Training programme for Extension Functionaries on Promotion of Fishery Based Farming	25/09/17 to 29/09/17 (05 days)	18	18	-	06
2.	Livestock based integrated farming system under 05days training on "Promotion of Fishery Farming based System"	29/09/17 (01 day)	18	18	-	06
3.	Bankable improved equipments for processing of spices.	29/11/17 (01 day)	30	30	-	06
4.	ATMA East Siang sponsored Exposure visit cum Training on Poly culture of fishes in RWHT.	17/11/17 (01 day)	48	48	-	43
5.	Training on Soil Health Management	05/12/17 (01 day)	77	77	-	24
6.	Training on Soil Health and Organic Farming (Agril. Engg. Component).	15/01/18 to 24/01/18 (10 days)	36	36	-	06
7.	10 days training on Soil Testing and Organic Farming for Sustainable Agriculture (Integrated Farming system).	15/01/18 to 24/01/18 (10 days)	36	36	-	06
8.	10 days Training on Soil health and Organic farming.	15/01/18 to 24/01/18 (10 days)	36	36	-	06

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Sl. No.	Broad areas	No. of Training	No. and Categories of trainees			
			No. of Beneficiary	SC/ST	OBC	Women
9.	Aquaculture in Rain water storage tank. <i>In:</i> Rainwater harvesting and its management for horticulture crops.	07/03/18 to 09/03/18 (03days)	31	31	-	13
10.	Capacity building training programme on "Rainwater harvesting and its management for horticultural crops."	07/03/18 to 09/03/18 (03days)	31	31	-	13
11.	Organic Farming Issue and Strategies. <i>In:</i> One day workshop.	10/03/18 & 1 day	45	45	-	13
12.	Fisheries biodiversity in Arunachal Pradesh and its conservation. <i>In:</i> Forest Nursery & Plantation Techniques.	19/03/18 to 26/03/18 & 8 days	32	32	-	12
Total			438	438	-	154

(C) On-farm Trials conducted

Sl. No.	Problem Identified	Technology selected for Assessment	Performance of Technology selected for Assessment	Recommendation for micro level situation
1.	Less species diversification in aquaculture.	Culture of Pengba: A high valued fish and potential candidate species for aquaculture in NE region.	% of mortality during transportation: 40% Average wt: 45 gm Survival rate: 50%	High value fish, Good adaptability to different type of feeds, Susceptible to low water temperature.
2.	Unhygienic method of fish preservation.	Assessment of Low cost Solar fish dryer (Size: Height 1.2 x Breadth 1.0 m, No. of trays (T) 03, T ₁ = 35 cm x 95 cm; T ₂ = 50 cm x 95 cm; T ₃ = 70 cm x 95 cm).	% Waste materials (Gills, Gut): 33-39% Time required for drying: 17 sun shine hrs % Quantity of dried fish: 24-26% Maximum Temperature Recorded : 46.5 °C Moisture reduction capacity: 61-65% BC ration: 2.15	Hygienic and efficiency is more during sunny days.



SI. No.	Problem Identified	Technology selected for Assessment	Performance of Technology selected for Assessment	Recommendation for micro level situation
3.	High drudgery, labour scarcity during peak season, high labour wages and high cost of transplanting.	Assessment of Self-propelled walk behind type 4 row paddy transplanter for transplanting mat type nursery.	<ol style="list-style-type: none"> 1. Efficiency = 75% 2. Field capacity=0.16 (ha/hr) 3. Labour requirement= 24 (man-hr/ha) 4. Cost of transplanting = Rs. 3000.0/ha 5. Saving in cost (Rs./ha)= 6000.0 6. Yield (q/ha) = 55.0 7. BC ratio: 1.8 	Give best results when transplanted with mat type nursery of 15-20 days old. Require well trained operator for better efficiency and uniform transplanting.
4.	Poor growth performance of local pig and non-availability of improve breed of pigs.	Assessment of Large White Yorkshire cross breed	<ol style="list-style-type: none"> 1. Average body weight gain in 12 months: 84 kg 2. Age at first farrowing: 16½ months 3. Litter size at first farrowing: 09 no.s 4. BC ratio: 2.7 	Though body weight gain is more than local breed it is still not gaining up to its mark.
5.	Poor growth performance of local pig	Supplementing of Mineral mixture @ 20 g and 30 g per day to grower and sow respectively (AAUVETMIN)	Average body weight gain of adult pig: 60 kg	Though body weight gain is more than local breeds it is still not gaining up to its mark
6.	Non-availability of good performance goat	Introduction of cross bred goat, (Assam hill goat X Beetal)	Average body weight gain in 12 months: 22 kg	Though body weight gain is more than local breed it is still not gaining up to its mark
7.	High incidence of pod borer complex in Pigeonpea	IPM in Pigeonpea: Spraying of Imidacloprid 17.8% SL @ 1 ml/ 4 litre water at pre flowering stage and repeat spray with Monocrotophos 40 EC (0.04%) after 15 days interval.	Yield: 20.5 q/ha BC ratio: 3.7 8% damaged pod due to <i>Helicoverpa armigera</i> <i>Aphion clavies</i> incidence: 6% 20% reduction in pod borer complex infestation	IPM increased yield and economics of farmers, processing and inclusion in tribal food habit will encourage Pigeonpea farming.
8.	High incidence of Wilt in King chilli	IDM in King Chilli: <ol style="list-style-type: none"> 1. Raised bed planting and soil treatment with bleaching powder @ 2.5 kg. 2. Seedling dip treated with <i>T. viride</i> @ 8 g/l water/ 60 sq m. 	Yield: 12 kg/ unit (60 sq m); 19.9 q/ha BC ratio: 6.0 Wilt incidence: 8% aphids and thrips incidence: 7-8%	IDM increased yield and economics of farmers, Aphids and thrips problem resulting into Viral diseases, deteriorating quality of produce.

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Sl. No.	Problem Identified	Technology selected for Assessment	Performance of Technology selected for Assessment	Recommendation for micro level situation
		<p>3. Propalictic spray of Tetracycline @ 1g/l water.</p> <p>4. Soil drenching with Carbendazim @ 5g/l water.</p> <p>5. Spraying of Mancozeb 64%+ Metlaxyl 8% WP @ 2g/l of water).</p>		
9.	High incidence of banana weevils in cultivated Banana	<p>IPM in Banana:</p> <p>1. Healthy sucker selection.</p> <p>2. Sucker treatment with Carbofuran 3G slurry @ 5g/l soil mud slurry.</p> <p>3. Basin treatment with Carbofuran 3G @ 5 g/plant.</p> <p>4. Trapping of weevil by using banana pseudostem trap and destruction of trap.</p> <p>5. Stem injection with 4 ml solution of Monocrotophos 30 EC @ 1 ml + 3 ml water at 1ft and 3 ft height per plant.</p>	<p>Yield: 120 q/ha</p> <p>BC ratio: 3.1</p> <p>4% Weevil damage in 1st year and</p> <p>9% Weevil damage in 2nd year</p>	<p>IPM increased yield and economics of farmers, Aphids problem resulting into Viral diseases and deteriorating quality of produce.</p>
10.	Low productivity of existing local varieties of Soy bean	Assessment of Soy bean Var. JS-335 in East Siang conditions	<p>Yield: 18.5 q/ha</p> <p>BC ratio: 2.9</p> <p>Bold seeded, 90 days crop</p>	<p>JS-335 increased yield and economics of farmers, bold seeded varieties with short duration are needed for the region.</p>
11.	Non availability/ accessibility of variety in diet, water scarcity and house hold waste management	Assessment of feasibility of growing exotic vegetables (broccoli, cherry tomato, lettuce, red cabbage, chard, bok choy, arugula) in East Siang district condition	<p>The farmers liked the cherry tomato for the sweet taste. As well as broccoli, chards, lettuce, red cabbage and bok choy were well accepted however, Arugulla for its strong smell the farmers did not like it.</p>	<p>Need for popularization and awareness of exotic vegetables, its nutritional benefits and importance of variety in diet.</p>



(D) Front Line Demonstrations conducted

Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%) / % Change in Parameters	B.C. Ratio
1.	Feeding of Fishes with Balanced Diet (Pelleted Fish Feed)	Feeding of Balanced Feed: Floating Supplementary Carp Feed Prepared Through Extrusion Technology Formulated and Manufactured by COF, Agartala, Tripura	07	10,000/ ha (Fingerlings)	24.73	9.17	169.68	2.1
2.	Composite fish farming system	Composite Fish Farming: Six species of fish culture in ponds (2 Rohu : 2 Catla : 1.5 Mrigal : 2 Silver Carp: 1 Grass Carp : 1.5 Common Carp)	25	8,000/ha (Fingerlings)	21.0	9.17	129.0	2.1
3.	Semi intensive Fish Farming System with Sushama fish Feed	Feeding of Balanced Fish Feed: Sushama	14	8,000/ha (Fingerlings)	20.10	8.9	125.84	2.19
4.	Solar dryer (Poly house type, Size: 3 x 1.25 x 1.5 mm)	Solar dryer (Polyhouse type, Size-3 x 1.25 x 1.5 m) for drying of ginger, turmeric and chilly	32	02	Moisture content (75 kg) IMC= 84% FMC= 6% Temperature:	Moisture content (75 kg) IMC= 84% FMC= 8% Temp. of drying = 26°C.	1. FMC = 25% 2. Tem of Drying = 50%	3. Drying Time = 50%
					Inside drying temp = 39°C Outside ambient temp = 24°C			

EXTENSION EDUCATION

Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%)/ % Change in Parameters	B.C. Ratio
					Drying time =19 hr. (6 hr/day)	Drying time = 36 hrs./75 kg		-
					Quality of dried product= Very good	Quality of dried product = Acceptable		
5.	Sowing of Maize using tractor drawn Multi-crop planter	Demonstration on sowing of Maize using tractor drawn Multicrop planter	08	4.0	Field efficiency 75%	Field Capacity =0.05ha/hr	FC= 88 LR= 93.33 CS= 58.90 Yield= 29 BC ratio= 32.33	2.21
					Field Capacity = 0.42 ha/hr	Labour requirement = 120 man-hr/ha or (15 man days)		
					Labour requirement = 2 man-hr/ha	Cost of sowing= Rs. 3650 / ha		
					Cost of sowing = Rs. 1500/ ha	Yield = 51 q/ha		
					Yield = 66 q/ha			
6.	Hand operated winnower for cleaning threshed paddy & separation of husk, dust and other light weight foreign material	Demonstration of Hand operated winnower for cleaning threshed paddy & separation of husk, dust and other light weight foreign material	10	2.0	LR= 80 man-hr/ha	LR= 240 man-hr/ ha	LR= 66%	-
					Time taken= 13hr/23q	Time taken = 27hr/23q	Time taken= 51%	
					Output capacity= 200 kg/hr.	Output Capacity= 80-90kg/h	Out put Capacity= 122%	
					Cleaning efficiency=90%	Cleaning efficiency= 60%	Cleaning Efficiency= 50%	



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Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%) / % Change in Parameters	B.C. Ratio
7.	Animal drawn improved MB plough for ploughing paddy field	Demonstration on ploughing of Paddy field using Animal drawn improved MB plough	10	3.0	FE= 64.0 % FC= 0.03 ha/hr. Time taken=33.33 hr/ha Cost of operation Rs.2500/ha	FE=55.0 % FC= 0.02 ha/hr. Time taken=50.0 hr/ha Cost of operation Rs.4000/ha	FE= 16.36% FC= 50% Time taken= 33.34% CO= 37.5%	-
8.	Self propelled Vertical Conveyor Reaper-Reaper for harvesting Paddy	Demonstration on harvesting Paddy using Self propelled Vertical Conveyor ReaperReaper	30	4.0	Field Capacity =0.25 ha/hr (or 2 ha/day) Labour requirement =10 man-hr/ha Cost of operation= Rs. 3750/h	Field Capacity =0.03ha/hr. (25-28 person/day) Labour requirement =200 man-hr/ha Cost of operation= Rs. 8000/h	FC= 733 LR= 95 CO= 53	-
9.	High capacity paddy thresher for threshing paddy	Demonstration on Paddy threshing using High capacity paddy thresher	20	3.0	Threshing efficiency 92% Threshing Capacity =1625 kg/hr Labour requirement =40man-hr/ha (5 person/ha)	Threshing efficiency 60% Threshing Capacity 750 kg/hr (25 person) Labour requirement =200man-hr/ha (25 person/ha)	TE= 53 TC= 116 LR= 80 CT= 57	-

EXTENSION EDUCATION

Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%)/ % Change in Parameters	B.C. Ratio
10.	Popularization of dual purpose Vanaraja bird	Demonstration on popularization of dual purpose Vanaraja bird	10	300	Cost of threshing=Rs 3750/h Dem: Average body wt. gain in 6 month : 2.8kg Average Age at first laying: 22.5 wks Average annual egg production: 130 no.s Disease Susceptibility (Prone to Ranikhet & Fowl pox)	Cost of threshing=Rs 8750/ha FP: Average body wt. gain in 6 month : 1.5kg Average Age at first laying:23 wks Average annual egg production: 50 no.s Disease Susceptibility (Prone to Ranikhet & Fowl pox)	Farmers showed great satisfaction for Vanaraja bird.	-
11.	Artificial brooding of chicks up to 4 – 5 weeks.	Demonstration on Artificial brooding of chicks up to 4 – 5 weeks.	05	150	Demo: Average body wt gain of local chicks at 5 weeks: 255g Disease incidence: 10% Mortality: 5%	FP: Average body wt gain of local chicks at 5 weeks: 175g Disease incidence: 30% Mortality: 20%	Farmers accepted the technology	-



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Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%) / % Change in Parameters	B.C. Ratio
12.	Meat Processing/ Value addition of meat	Demonstration of Preparation of dry and wet pickle.	30	30	Demo: Self life: 6 months Consumer preference: 80%	FP: Self life: 3 months Consumer preference: 50%	Self help group showed great interest	-
13.	Popularization of Maize Var. RCM 1-76	Demonstration of Maize var. RCM 1-76	25	10	68.3	52.6	29.84	1.9
14.	Popularization of rice Var. CAU-R1	Demonstration of rice var. CAU-R1	50	20	56.3	51.3	9.7	1.5
15.	Participatory Seed production of rice Var. CAU-R1	Seed production of Rice var. CAU-R1	01	1.0	54.3	49.4	9.91	2.17
16.	IPM in Rice	IPM in Rice (Seed treatment, Use of bioagents, pheromone traps and need based use of chemical pesticides)	10	25	51.3	44.8	14.5	1.36
17.	Popularization of Black gram Var. PU-31	Demonstration of Black gram Var. PU-31	10	25	5.8	4.6	26.08	2.9
18.	Popularization of Sesamum Var. AST-1	Demonstration of Sesamum Var. AST-1	30	75	5.9	4.8	22.9	2.2

EXTENSION EDUCATION

Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%)/ % Change in Parameters	B.C. Ratio
19.	Participatory Seed production of Cowpea Var. Kashi Kanchan	Seed production of Cowpea Var. Kashi Kanchan	1.0	01	2.87	2.78	3.23	1.4
20.	Vermicomposting	Integrated Nutrient Management through Low cost Vermicompost production (30 sq. ft. per unit)	05 Units	05	257 kg/ Tank = Rs. 5140 (@ Rs 20/kg) Net return= Rs. 2140	-	-	1.71
21.	Mushroom cultivation	Low cost Oyster Mushroom cultivation (10 X 16 sq. ft. unit)	05 Units	05	750g/ bed (Total 160 beds)= Rs. 28500 (@ Rs. 250/kg) Net return= Rs. 14380	-	-	2.01
22.	Management of Citrus fruit drop	Management of Citrus fruit drop: Spraying of 2,4,D (Dichloro-phenoxy-acetic acid) @ 15ppm in May, June & August	3.0	10	Av. No. of fruit drop/ plant May : 59 June: 28 August: 13	51.35%, 11.68% and 2.6% reduction in fruit drop in month of May, June and August month respectively	4.58 per plant	2.00 per plant
23.	Popularization of Field pea Var. Prakash	Demonstration of Field pea Var. Prakash	10.0	25	7.55	6.5	16.15	1.51
24.	Popularization of Toria Var. TS-38	Demonstration of Toria Var. TS-38	50.0	125	6.2	5.1	21.56	1.86



Sl. No.	Title of FLD	Technology Demonstrated	No. of Farmers	Area (Ha)/ No. of Livestock/ Demo	Demo Yield (q/ha)	Yield of local check (q/ha)	Increase in yield (%) / % Change in Parameters	B.C. Ratio
25.	Beehive briquette: An alternative source of energy	Demonstration of Beehive briquette: An alternative source of energy	05	05	Energy and fuel efficient Smokeless Can be shifted to convenient place of use	50% 100% 100%	The technology is more acceptable in township area in comparison to village as the families are accustomed to the traditional fireplace. It can be promoted further for adoption in village	-

- IMC-Initial moisture content; FMC-Final moisture content; LR-Labour requirement; FE-Field efficiency; FC-Field Capacity; CS-Cost of sowing; CO-Cost of operation; TE-Threshing efficiency; TC-Threshing capacity; CT-Cost of threshing.

4.8. Special Farmers Welfare Oriented Programmes

Unnat Bharat Abhiyan / Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojna

This special, innovative and farmers welfare oriented programme was sponsored by Ministry of Agriculture & Farmers' Welfare, Govt. of India since the year 2016-17. During the year, skill oriented trainings were organized in four states of the region *i.e.*, Manipur, Meghalaya, Mizoram and Tripura. The brief achievement under this massive programme is as under:

Sl. No.	Venue	Dated & Duration	No. of Trainees					Total
			Male	Female	SC/ST	OBC	Gen.	
(A) Manipur								
1.	Haraorou, Imphal East	March 19-23, 2018	16	14	-	30	-	30
(B) Meghalaya								
1.	CPGS, Umiam	March 23-27, 2018	06	07	13	-	-	13
2.	CPGS, Umiam	March 27-31, 2018	-	30	30	-	-	30
3.	CPGS, Umiam	March 27-31, 2018	03	22	25	-	-	25

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Sl. No.	Venue	Dated & Duration	No. of Trainees					Total
			Male	Female	SC/ST	OBC	Gen.	
(C) Mizoram								
1.	Teperighat, Lunglei	March 31-April 5, 2018	12	18	30	-	-	30
(D) Tripura								
1.	College of Fisheries, Agartala	March 20-24, 2018	21	07	28	-	-	28
Total			58	98	126	30	-	156

Mera Gaon Mera Gaurav (MGMG)

This special programme has been launched from the year 2016-17 in different constituent colleges and 3 (three) KVKs of the University. The salient achievements under this Programme during the year 2017-18 are as under:

(a) College of Post Graduate Studies, CAU, Barapani, Meghalaya:

- Twenty two (22) villages have been taken up. Four teams of scientists comprising of 26 individuals have been involved to handle the programme.
- Eighteen (18) nos. of extension activities – method demonstration, interface meetings, training programmes, field day etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.
- Altogether, 17,188 nos. of farmers have been benefited during the year under this massive programme.

(b) College of Fisheries, CAU, Agartala, Tripura:

- Twenty five (25) villages have been taken up. Five teams of scientists comprising of 4-5 individuals have been involved to handle the programme.
- Seven (7) nos. of extension activities - analysis of soil and water testing,

demonstration, interface meetings, training programmes, field day etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.

- Altogether, 126 nos. of fish farmers have been benefited during the year under this massive programme.

(c) College of Agril. Engg. & PHT, CAU, Gangtok, Sikkim

- Four (4) villages have been taken up. Four teams of scientists comprising of sixteen individuals have been involved to handle the programme.
- Nine (9) nos. of training programs on food processing, repairing of small agril. Implements and soil and water conservation have been conducted benefitting 241 individuals.
- Altogether, 728 nos. of farmers have been benefited during the year in different activities of extension under the programme.

(d) College of Home Science, CAU, Tura, Meghalaya

- Two (2) villages were taken up. A team of scientists comprising of six individuals have been involved to handle the



programme.

- Six (6) nos. of extension activities-on farm varietal trials of RCM-10, demonstration, training programmes etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.
- Two training programmes on mushroom production technology and two farmers scientists interaction were organized.
- Altogether, 213 nos. of farmers and farm women have been benefited during the year under this massive programme.

(e) College of Vety. Sciences & A.H., CAU, Aizawl, Mizoram

- Forty seven (47) villages have been taken up. Twelve teams of scientists comprising of forty seven individuals have been involved to handle the programme.
- Seven (7) nos. of extension activities-distribution of inputs and livestock, field visit, animal health camp, demonstration, training programmes and exhibition etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.
- Altogether, 1003 nos. of farmers and farm women have been benefited during the year under this massive programme.

(f) College of Agriculture, CAU, Imphal

- Five (5) villages have been taken up. Six teams of scientists comprising of twenty four individuals have been involved to handle the programme.
- Five (5) nos. of training programmes were organized for farmers benefitting 144 individuals.
- Four (4) nos. of extension activities-awareness programme, distribution of agricultural inputs, demonstration

and analysis of soil and water etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.

- FLDs in farmers field to popularize improved technologies regarding tomat, french bean and cucumber in the area of 3.25 ha benefitting 103 farmers were conducted.
- With the continuous efforts of the College, three farmers: (i) Mr. N. Tomba Singh, Mr. H. Shanti Singh and M. L. Kangjamba Singh of the adopted villages of the MGMG have been earning more than Rs. 80, 000/- during *Rabi* from vegetables.

(g) Krishi Vigyan Kendra, CAU, Imphal East, Andro

- Five (5) villages have been taken up. Two teams of scientists comprising of six individuals have been involved to handle the programme.
- Six (6) nos. of extension activities-awareness programme, training, demonstration, vermin-composting, farm visit and interaction etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.
- Altogether, 286 nos. of farmers and farm women have been benefited during the year under this massive programme.

(h) Krishi Vigyan Kendra, CAU, Aizawl, Selesih

- Seven (7) villages have been taken up. Two teams of scientists comprising of six individuals have been involved to handle the programme.
- Seven (7) nos. of extension activities-training, demonstration, meeting, support by extension literature, distribution of seeds and other inputs, general awareness

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etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.

- Altogether, 1171 nos. of farmers and farm women have been benefited during the year under this massive programme.

(i) Krishi Vigyan Kendra, CAU, East Siang, Pasighat

- Two (2) villages have been taken up. Two teams of scientists comprising of six individuals have been involved to handle the programme.

- Five (5) nos. of extension activities-training-cum-demonstration, front line demonstration, diagnostic/field visit/ advisory services, farmers scientists interaction/kisan gosthi, and group discussion/meetings etc. were conducted to transfer the beneficial and useful technologies among the farming communities of the State.

- Altogether, 3308 nos. of farmers and farm women have been benefited during the year under this massive programme.

4.9. Details of Projects / Programmes carried out by Directorate of Extension Education during 2017-18

Sl. No.	Name of the Project/Programme	Sanctioning Year	Sponsoring Organization
1.	Farmers FIRST Programme	2017	ICAR, ATARI, Umiam, Barapani
2.	Integrated Beekeeping Development Centre (IB-KDC) under Centre of Excellence (COE)	2017	National Bee Board, New Delhi
3.	Kisan Business School	2017	CCSNIAM, Jaipur
4.	Augmenting Rapeseed-Mustard Production of Tribal Farmers of NE State for Sustainable livelihood Security	2011	DRMR, Bharatpur, Rajasthan

Farmers FIRST Programme

This innovative Project has been sanctioned by ICAR to this University vide letter No. ICAR/ ATARI/41/Farmers FIRST (Umiam) 2016/416, dated: 15/02/2017.

Coverage of FFP during 2017-18

Module	Intervention	Villages covered	Area covered (ha)/ Animal (No.)	Number of Households covered
Crop based	Quality seed production of CAU R-1 with improved production technology during kharif 2018.	Yairipok Yambem	12	6
	Demonstration and quality seed production of pre-kharif rice varieties CAU R-2 & CAU R-3 with improved production technology.	Yairipok Top Chingtha and Yairipok Yambem	6	6



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Module	Intervention	Villages covered	Area covered (ha)/ Animal (No.)	Number of Households covered
	Large scale cultivation of Rape seed Mustard Varieties M-27/TS-38, NRCHB-101, YSH-401 etc in rice fallows for additional income generation.	Yairipok Top Chingtha and Yairipok Yambem	50	20
	Large scale cultivation of Pea Var. Arkel either as sole/mixed in rice fallows for additional income generation.	Yairipok Top Chingtha and Yairipok Yambem	12	10
Horticulture Based	Scientific production technology of Makhana for higher productivity through area expansion. Evaluation of Makhana Var. Swarna Vaidehi developed by ICAR, Darbhanga, Bihar under Manipur condition and their comparative studies with local.	Yairipok Top Chingtha and Yairipok Yambem	2 ha.	2
	Scientific cultivation of hybrid varieties of Vegetables: (Cauliflower (Cabbage, Bottle gourd (Sakata) ,Onion, Tomato etc for higher income generation.	Yairipok Top Chingtha and Yairipok Yambem	2	10
Livestock & Fish Based	Semi-intensive farming activity among rural farmers for judicious utilization of water resources. Fishes have been cultured. Size sampling fishes are undergoing.	Yairipok Top Chingtha and Yairipok Yambem	23000 nos. fingerlings 2.5 ha.	120
	Scientific rearing of improved breed of poultry viz. Giriraja & Girirani. Birds have already started laying eggs @ 14-16 eggs/ month.	Yairipok Top Chingtha and Yairipok Yambem	3200	130
	Scientific rearing of good quality breeds of Pig namely Hampshire & Rani for higher production.	Yairipok Top Chingtha and Yairipok Yambem	50	50

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Module	Intervention	Villages covered	Area covered (ha)/ Animal (No.)	Number of Households covered
Enterprise based	Conducted 3 training cum demonstration on value addition technology especially to farm women and college going girls. Exposure visit to value added agro product manufacturing units in and around Imphal area.	Yairipok Top Chingtha and Yairipok Yambem	-	62



Director of Extension Education observing the Farm inputs (Power tiller) handed over to the Farmers under FFP, CAU, Imphal during November, 2017.

4. Establishment of extracting and processing unit for honey and other honey bee products is on progress.
5. Provision for supply of honey bees to orchardists and management of native pollinators for pollination management of 10 units having 50 colonies in each, hives and equipments etc. is continuing.
6. Efforts have been started to establish honey and other beehive products testing laboratory.
7. Establishment of queen bee multiplication centre is on progress.

Integrated Beekeeping Development Centre (IBDC)

Under this project following activities were undertaken during the year:

1. Establishment of bee disease diagnostic laboratory.
2. Eight (8) nos. of awareness/workshops/training/demonstration for scientific beekeeping & one State Level Seminar organized.
3. For establishment of Information Centre for Scientific Beekeeping, renovation of existing building of Dept. of Horticulture, College of Agriculture, CAU, Imphal completed.

Kisan Business School

Kisan Business School at CAU, Imphal has been funded by Chaudhary Charan Singh National Institute of Agricultural Marketing, Ministry



Hon'ble VC, CAU, Imphal and other dignitaries releasing the farm publications on different topics under the Farmer FIRST Programme



of Agriculture and Farmers Welfare, Govt. of India, Jaipur, Rajasthan after enactment of MOU between CAU, CCS NIAM *vide* their letter no. 05/NIAM/IVC/FBS/2015-16/14823-14824, dated:9/2/2017. This is an educational programme to educate the farmers for capacity building to increase their benefit in the farming. Presently, this Project is under operation in Bishnupur Dist. of Manipur.

During the year, following activities were taken up under this project

- i) Selection of contact farmers (30 nos.) through PRA technique.
- ii) Organized to contact classes/interaction.
- iii) Organized one exposure visit/ visit of farmers fair.
- iv) Organized one inter-state exposure visit of the KBS farmers to the state of Meghalaya & Sikkim.

Augmenting Rapeseed-Mustard Production of Tribal Farmers of NE State for Sustainable livelihood Security

This Project is funded by Directorate of Rapeseed-Mustard Research, Bharatpur (Rajasthan), since 2011-12. During the year 2017-18 this project has been implemented

in three states- Manipur, Meghalaya and Arunachal Pradesh. A total of 850 ha area has been covered in this three states and altogether, 346 nos. farmers have been benefited.

Under this Project, following activities have been taken up during the year:

- i) Twenty one (21) training programmes for the selected farmers were organized.
- ii) Three (3 nos.) of Field Days were organized.
- iii) Three (3 nos.) of inter-state exposure visit of the beneficiary farmers were organized.
- iv) One exposure visit of the beneficiary farmers to DRMR, Bharatpur was organized.

4.IO. Significant Achievements

- The Central Agricultural University, Imphal participated in N.E. Regional Agriculture Fair during January 6-9, 2018 at ICAR Research Complex, Umium, Barapani and the Stall of the University was adjudged by "FIRST RUNNER-UP" Award.
- KVK, Aizawl of the CAU, Imphal participated in National Seminar on Agro-biodiversity Exhibition held during



Seven days Farmer's Training Programme on Scientific methods of Beekeeping for Doubling Farmer's income under the IBDC Project, CAU, Imphal Centre



Two days Basic Training Programme on Scientific Beekeeping for the Farmers/Beekeepers under the IBDC Project, CAU, Imphal Centre

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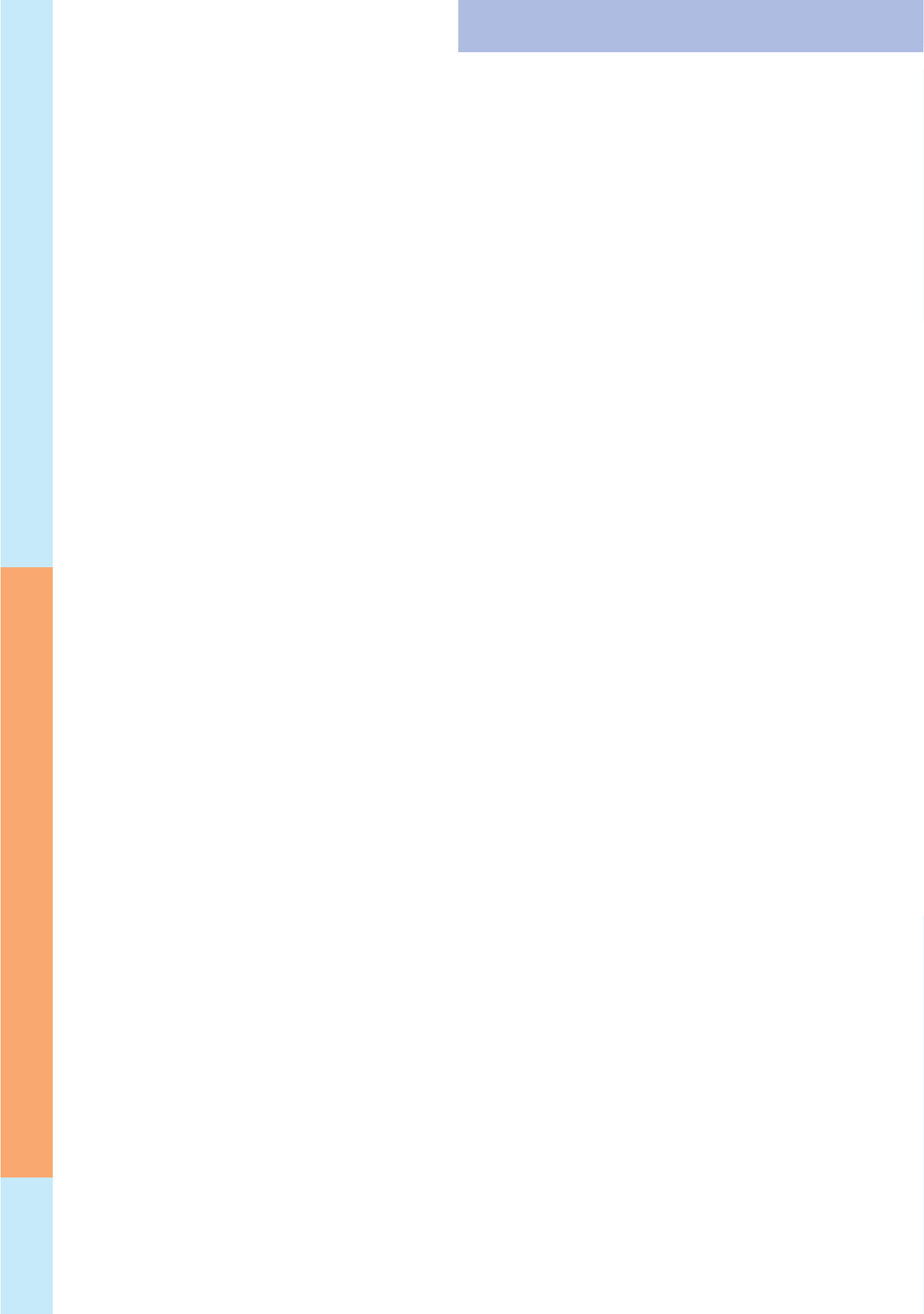
Exposure visit of beneficiary farmers under Kisan Business School to the states of Meghalaya and Sikkim during March 2018

February 23-25, 2018 at IIVR, Varanasi and awarded as “Consolation Award (Public Sector)”.

- The Central Agricultural University, Imphal participated in State Level Agri Fair 2017-18 at Imphal held during February 26 to March 1, 2018 and the Exhibition Stall of KVK, Imphal East, Andro was awarded as “FIRST PRIZE”. Rs. 25,000/- only was also given away with the prize.
- The Central Agricultural University, Imphal participated in Unnat Krishi Mela during March 16-18, 2018 at IARI, New Delhi where two progressive farmers – (i) Mr. H. Zirsangliana, Village & P.O. Siphir, District

– Aizawl (Mizoram), and (ii) Mr. Pumto Perme, Village – Ayeng, P.O. Mebo, District East Siang (Arunachal Pradesh) were awarded with prestigious “IARI Innovative Farmer Award–2018”.

- Two new KVKs- (i) KVK in South Garo Hills District of Meghalaya vide letter No.A.Etn.9-7/2005-AE-I, dated: June 2, 2017 of ICAR, New Delhi and (ii) KVK in East Garo Hills District of Meghalaya vide letter No.A.Etn. 9-15/2002-AE-I, dated: June 2, 2017 of ICAR, New Delhi sanctioned to Central Agricultural University, Imphal during the year. ■



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 staff to attend trainings, conferences, seminars and workshops 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.

5.1 Staff Details of Univeristy

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

Sl. No	Name of College	Administrative	Teaching	Non-Teaching		Total
				Tech.	Non-tech.	
1.	CAU Headquarters, Lamphelpat, Imphal, Manipur	15	-	31	78	124
2.	College of Agriculture, Iroisemba, Imphal, Manipur	02	39	37	54	132
3.	College of Post-Graduate Studies, Umiam, Meghalaya	02	30	21	40	93
4.	College of Agriculture, KyrdemKulai, Meghalaya	01	02 (contract)	-	-	03
5.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	02	32	36	57	127
6.	College of Horticulture, Bermiok, Sikkim	01	05 (contract)	Nil	03 (Contract)	09
7.	College of Fisheries, Lembucherra, Tripura	02	23	31	46	102
8.	College of Horticulure & Forestry, Pasighat, Arunachal Pradesh	01	36	46	65	148
9.	College of Agriculture, Pasighat, Arunachal Pradesh	01	05 (contract)	-	-	06
10.	College of Veterinary Sciences & Animal Husbandry Selesih, Aizawl, Mizoram	-	52	46	64	162
11.	College of Home Science, Tura, Meghalaya	-	18	32	44	94

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Sl. No	Name of College	Administrative	Teaching	Non-Teaching		Total
				Tech.	Non-tech.	
12.	College Of Horticulture Thenzawl, Mizoram	-	07 (contract)	-	6 (Casual Workers)	22
13.	College of Food Tech, Imphal, Manipur	-	06 (contract)	1	1	8
14	College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland	01	14 (including 6 contract)	1	4 (2 on contract)	20
Grand Total		28	269	282	462	1041

5.2 New Appointments

Table 5.2 List of newly appointed employees (Teaching/Non-Teaching)

Sl. No.	Name of the Employee	Designation	Date of Appointment	Date of Joining
(i) CAU Headquarters, Lamphelpat, Imphal, Manipur				
1.	Dr. R. K. Saha	Director of Extension Education	03/11/2017	10/11/2017
2.	Dr. S. Basanta Singh	Director of Instruction	03/11/2017	05/02/2018
3.	Ch. Malemnganba Meitei	Junior Engineer (Civil)	28/03/2018	31/03/2018
(ii) College of Agriculture, Iroisemba, Imphal, Manipur				
1.	Mr. Bonex Hijam	Junior Engineer	28/03/2018	31/03/2018
(iii) College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim				
2.	Dr. Sushma Gurumayum	Asst. Prof. (Micro Biology)	06/11/2017	24/11/2017
3.	Dr. Rakesh Kumar Raigar	Asst. Prof. (Dairy Engg.)	06/11/2017	18/12/2017
4.	Er. Th. Prem Kumar	Junior Engineer (Civil)	31/03/2018	31/03/2018
(iv) College of Horticulture and Forestry, Pasighat, Arunachal Pradesh				
5.	Dr. N. Yaiphabi Chanu	Asst. Prof. (AICRP) MAPB	22/01/2018	01/02/2018
6.	Dr. Helen Soibam	Asst. Prof. (AICRP) MAPB	22/01/2018	07/02/2018
7.	Ms. Nancy Lego	Asst. Prof. (AICRP) MAPB	22/01/2018	08/02/2018
8.	Ms. Tasso Yatung	Junior Horticulturist (AICRP) POTATO	22/01/2018	12/02/2018
9.	Mr. Kishor Singh	Junior CLERK (AICRP) FRUIT	14/02/2018	23/02/2018
10.	Mr. Getem Tamut	Laboratory Technician (AICRP) FRUIT	14/02/2018	23/02/2018
11.	Mr. Sangja Khandu Thungon	Field Technician (AICRP) FRUIT	14/02/2018	26/02/2018
12.	Ms. Akili Tagi	Mali (AICRP) FRUIT	14/02/2018	23/02/2018



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Sl. No.	Name of the Employee	Designation	Date of Appointment	Date of Joining
13.	Mrs. Topy Nyodu	Technical Assistant (AICRP) MAPB	14/02/2018	27/02/2018
14.	Ms. Jumbom Koyu	Library Assistant	13/02/2018	26/02/2018
15.	Mr. Subodh Kumar Dubey	Library Assistant	13/02/2018	06/03/2018
16.	Mrs. Angela Pangkam	LDC	16/02/2018	23/02/2018
17.	Mr. Kaling Taki	LDC	13/02/2018	23/02/2018
18.	Ms. Maloti Dai	LDC	13/02/2018	23/02/2018
19.	Mr. Deepak Gohain	LDC	13/02/2018	23/02/2018
20.	Ms. Ritu Medok	LDC	16/02/2018	23/02/2018
21.	Ms. Miranda Ering	LDC	16/02/2018	23/02/2018
22.	Ms. Toter Riba	LDC	13/02/2018	23/02/2018
23.	Mrs. Kami Deka	LDC	16/02/2018	23/02/2018
24.	Mrs. Ome Doruk	LDC	16/02/2018	24/02/2018
25.	Mr. Tobom Dai	LDC	13/02/2018	27/02/2018
26.	Smt. Sulochana Huidrom	LDC	16/02/2018	05/03/2018
(v) College of Veterinary Sciences & Animal Husbandry Selesih, Aizawl, Mizoram				
27.	Lalhumliana Tochwang	Asst. Professor	12/03/18	13/03/18
28.	Joy Lalmuanpuia Kataria	Asst. Professor	12/03/18	13/03/18
29.	Dibyajyoti Talukdar	Asst. Professor	12/03/18	19/03/18
(vi) College of Horticulture, Bermiok, South Sikkim				
30.	Dr. S.K. Sharma	Dean	06/11/2017	17/11/2017
31.	Dr. Pukhram Bhumita	Asst. Prof. (Contract)	29/07/2016	11/08/2016
32.	Dr. Diana Sagolsem	Asst. Prof. (Contract)	29/07/2016	27/08/2016
33.	Dr. Diganggana Talukdar	Asst. Professor (Contract)	29/07/2016	18/08/2016
34.	Dr. Dipika Sarmah	Asst. Professor (Contract)	18/08/2017	04/09/2017
35.	Dr. Sudip Das	Asst. Professor (Contract)	18/08/2017	31/08/2017
(vii) College of Agriculture, Pasighat, Arunachal Pradesh				
36.	Dr. B. N. Hazarika	Dean	-	10/11/17
37.	Dr. Abhinash Moirangthem	Asst. Prof. (Contract)	18/08/17	22/08/17
38.	Dr. L. Geetarani Devi	Asst. Prof. (Contract)	18/08/17	05/09/17

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Sl. No.	Name of the Employee	Designation	Date of Appointment	Date of Joining
(viii) College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland				
39.	Dr. Capt. G.D. Rao	Dean	06/11/2017	07/11/2017
40.	Dr. Gautam Samanta	Professor	24/06/2017	01/07/2017
41.	Dr. Abdul Lateef	Professor	01/09/2017	18/08/2017
42.	Dr. Subramanian	Professor	-	23/03/2018
43.	Dr. Imtiwati	Assistant Professor	09/03/2018	13/03/2018
44.	Dr. Malsawmkima	Assistant Professor	09/03/2018	13/03/2018
45.	Dr. Amrit Gogoi	Assistant Professor	09/03/2018	15/03/2018
46.	Dr. Uttarani Maibam	Assistant Professor	09/03/2018	20/03/2018
47.	Dr. Rajkumari Mandakini Devi	Asst. Prof.(Contract)	18/08/2017	15/09/2017
48.	Dr. Laltlankimi	Asst. Prof.(Contract)	18/08/2017	15/09/2017
49.	Dr. Papori Talukdar	Asst. Prof.(Contract)	18/08/2017	15/09/2017
(ix) College of Horticulture, Thenzawl, Mizoram				
50.	Dr. Saikhom Herojit Singh	Asst. Prof. (Contract)	18/08/17	28/08/2017
51.	Miss Yamuna Pandey	Asst. Prof. (Contract)	18/08/17	18/09/2017
52.	Dr. Chingtham Chanbisana	Asst. Prof. (Contract)	18/09/17	23/09/2017
(x) College of Food Technology, Imphal				
53.	Dr. Angam Raleng	Asst. Prof. (Contract)	18/09/17	22/09/2017

5.3. List of Resigned/Retired/Demised Employees

Sl. No	Name of employee	Designation	Date of Resignation/ Retirement/Demise
(i) CAU Headquarters, Lamphelpat, Imphal, Manipur			
1.	(L).P.G. Gaichungpou R. Naga	UDC	10/10/2017 (Expired)
2.	Th. Ibohal Singh	Head Assistant	28/02/2018 (Retired)
(ii) College of Agriculture, Iroisemba, Imphal, Manipur			
1.	Prof. N. Ram Singh	Prof. & Head (Econ)	31/5/2017 (Retired)
2.	N. Ibohal Singh	F.A.	31/10/2017 (Retired)
3.	Ch. Tomba Singh	Lab. Asst.	30/11/2017 (Retired)
4.	Ph. Ibomcha Singh	MTS	28/2/2018 (Retired)



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Sl. No	Name of employee	Designation	Date of Resignation/Retirement/Demise
5.	S. Mangi Singh	Sr. T.O.	31/3/2018 (Retired)
6.	(L) Md. Siraj Ahamad	MTS	18/8/2017 (Expired)
7.	(L) Ch. Sanjit Singh	MTS	5/11/2017 (Expired)
(iii) College of Horticulture and Forestry, Pasighat, Arunachal Pradesh			
1.	Dr. Rubee Lata	Assistant Professor	27/11/2017 (Resigned)
2.	Dr. Mukul Kumar	Assistant Professor	09/02/2018 (Resigned)
3.	Dr. Sanjeev Kumar	Assistant Professor	09/02/2018 (Resigned)
4.	Dr. Bhanu Prakash Mishra	Assistant Professor	09/02/2018 (Resigned)
5.	Dr. Dinesh Sah	Assistant Professor	21/12/2017 (Resigned)
6.	Mr. Krishna Singh	Student Welfare Officer	21/12/2017 (Resigned)
7.	Mr. Utpal Ghosh	Accountant	31/01/2018 (Retired)
8.	Dr. M. M. Kumawat	Assistant Professor	26/03/2018 (Resigned)
(iv) College of Veterinary Sciences & Animal Husbandry Selesih, Aizawl, Mizoram			
1.	D. Kathiresan	Dean	30/11/2017 (Retired)
(v) College of Home Science, Tura, Meghalaya			
1.	Dr. Anurag Chaturvedi	Dean	
2.	Dr. Jawaid Ashraf	Asst. Prof. (Stats & Compt Sc.)	
(vi) College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland			
1.	Dr. J.J. Chungath	Professor	19/11/2017

5.4. List of Transfers

Sl. No	Name of employee	Designation	Place of transfer	Date of Transfer
(i) College of Agriculture, Iroisemba, Imphal, Manipur				
1.	A. Goutam Sharma	Assistant Engineer	College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim	01/05/2017
(ii) College of Fisheries, Lembucherra, Tripura				
1.	Mr. Naveen Kumar Gupta	LDC	College of Agricultural Engineering & Post Harvest Technology, Ranipool, Sikkim	29/07/2017
2.	Md. Sheikh Nabi Hassan	MTS	College of Veterinary Science & A.H., Jalukie, Nagaland	16/01/2018

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Sl. No	Name of employee	Designation	Place of transfer	Date of Transfer
(iii) College of Post-Graduate Studies, Umiam, Meghalaya				
1.	Dr. Dileep Kr. Pandey	Associate Professor	College of Horticulture & Forestry, CAU, Pasighat	15/04/2016
(iv) College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim				
1.	Er. L. Bobby Singh	Assistant Engineer	College of Agriculture, Iroisemba, Imphal	29/04/2017
2.	Mr. Norendra Singha	UDC	College of Fisheries, Lembucherra, Tripura	25/07/2017

5.5. List of Promotions

Sl. No	Name of employee	Designation	Promoted to	Effective Date of promotion
(i) College of Agriculture, Iroisemba, Imphal, Manipur				
1.	Dr, A. Herojit Singh	Assoc. Prof.	Professor	01/01/2009
2.	Dr. Gangmei Sobha	Assoc. Prof.	Professor	01/01/2009
3.	Dr. Edwin Luikham	Assoc. Prof.	Professor	01/01/2009
4.	Dr. M. Sumarjit Singh	Assoc. Prof.	Professor	01/01/2009
5.	Dr. A.K. Bijaya Devi	Assoc. Prof.	Professor	01/01/2009
6.	Dr. R.K. Bhanisana Devi	Assoc. Prof.	Professor	01/01/2009
7.	Dr. Y. Chakrabarty Singh	Assoc. Prof.	Professor	01/01/2009
8.	Dr. R.K. Dilip Singh	Assoc. Prof.	Professor	01/01/2009
9.	Dr. M. Kunjaraj Singh	Assoc. Prof.	Professor	01/01/2009
10.	Dr. S. Jekendra Singh	Assoc. Prof.	Professor	03/06/2013
11.	Dr. N. Brajendra Singh	Assoc. Prof.	Professor	17/01/2015
12.	Dr. N. Okendro Singh	Assoc. Prof.	Professor	04/03/2016
13.	Dr. K. Nandini Devi	Assoc. Prof.	Professor	05/08/2016
14.	Dr. Ng. Joykumar Singh	Asst. Prof. (SS)	Asst. Prof. (SG)	20/07/2014
15.	Dr. Dayaram	Asst. Prof.	Asst. Prof. (SS)	11/9/2010
16.	Dr. N. Surbala Devi	Asst. Prof.	Asst. Prof. (SS)	05/08/2014
17.	Dr. Bireswar Sinha	Asst. Prof.	Asst. Prof. (SS)	21/08/2014
18.	Dr. Jamkhogin Lungdim	Asst. Prof.	Asst. Prof. (SS)	14/12/2010



Sl. No	Name of employee	Designation	Promoted to	Effective Date of promotion
(ii) College of Post-Graduate Studies, Umiam, Meghalaya				
1.	Dr. P.K. Bora	Assoc. Prof.	Professor	08/04/2012
2.	Dr. Mayank Rai	Assoc. Prof.	Professor	17/02/2015
3.	Dr. Wricha Tyagi	Assoc. Prof.	Professor	17/02/2015
4.	Dr. Vishram Ram	Assoc. Prof.	Professor	13/03/2015
5.	Dr. Dwipendra Thakuria	Assoc. Prof.	Professor	13/04/2015
6.	Dr. Ram Singh	Assoc. Prof.	Professor	03/11/2015
7.	Dr. Dipali Majumdar	Assoc. Prof.	PB-IV	17/03/2012
8.	Dr. T. Rajesh	Asst. Prof.	Asst. Prof. (SS)	09/09/2012
9.	Dr. Aditya Kr. Singh	Asst. Prof.	Asst. Prof. (SS)	03/10/2012
10.	Dr. N. Janaki Singh	Asst. Prof.	Asst. Prof. (SS)	23/03/2013
11.	Dr. Lala IP Ray	Asst. Prof.	Asst. Prof. (SS)	18/03/2014
12.	Dr. Devyani Singh	Asst. Prof.	Asst. Prof. (SS)	03/11/2013
13.	Dr. L. Devarani	Asst. Prof.	Asst. Prof. (SS)	22/10/2013
14.	Dr. Sheikh M. Feroze	Asst. Prof.	Asst. Prof. (SS)	04/11/2013
15.	Dr. R. Josmee Singh	Asst. Prof.	Asst. Prof. (SS)	30/06/2014
(iii) College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim				
1.	Dr. N. S. Chauhan	Assoc. Prof.	Professor	24/12/2014
2.	Dr. B. C. Kusre	Assoc. Prof.	Professor	01/02/2016
3.	Dr. Mahendra S. Seveda	Assoc. Prof.	Professor	04/02/2016
4.	Dr. Y. Ranjana Devi	Asst. Prof. (SS)	Asst. Prof. (SG)	03/10/2015
5.	Er. Shankar Swarup Das	Asst. Prof.	Asst. Prof. (SS)	30/10/2013
6.	Er. Nandita Das	Asst. Prof.	Asst. Prof. (SS)	01/11/2013
(iv) College of Horticulture and Forestry, Pasighat, Arunachal Pradesh				
1.	Dr. Tisu Tayeng	Asst. Prof.	Asst. Prof. (SG)	01/02/2016
2.	Dr. Bikram Singh	Asst. Prof.	Asst. Prof. (SS)	23/06/2012
3.	Dr. Dinesh Sah	Asst. Prof.	Asst. Prof. (SS)	25/06/2012
4.	Mr. Amit Kumar Singh	Asst. Prof.	Asst. Prof. (SS)	03/06/2014
5.	Dr. Ramesh Chandra Shakywar	Asst. Prof.	Asst. Prof. (SS)	21/04/2014
6.	Dr. Ngangbam Pilo	Asst. Prof.	Asst. Prof. (SS)	01/07/2012

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Sl. No	Name of employee	Designation	Promoted to	Effective Date of promotion
7.	Dr. P. Raja	Asst. Prof.	Asst. Prof. (SS)	26/09/2010
8.	Dr. Sunil Kumar	Asst. Prof.	Asst. Prof. (SS)	14/09/2010
9.	Dr. Vikas Singh	Asst. Prof.	Asst. Prof. (SS)	25/04/2013
10.	Dr. Nicolee Lyngdoh	Asst. Prof.	Asst. Prof. (SS)	04/05/2014
11.	Dr. Arunkumar Phurailatpam	Asst. Prof.	Asst. Prof. (SS)	19/04/2014
12.	Dr. Barun Singh	Asst. Prof.	Asst. Prof. (SS)	11/09/2010
13.	Mrs. Mongjam Bishwapati Devi	Asst. Prof.	Asst. Prof. (SS)	28/04/2016
14.	Dr. Raghubir Kr. Patidar	Asst. Prof.	Asst. Prof. (SS)	06/10/2012
15.	Mr. Siddhartha Singh	Asst. Prof.	Asst. Prof. (SS)	29/04/2016
16.	Mr. Anil Kumar	Asst. Prof.	Asst. Prof. (SS)	28/06/2014
17.	Mr. Nilay Kumar	Asst. Prof.	Asst. Prof. (SS)	17/04/2016
(v) College of Veterinary Sciences & Animal Husbandry Selesih, Aizawl, Mizoram				
1.	Dr. Tapan Kumar Dutta	Assoc. Prof	Professor	16/05/2013
2.	Dr. H. Prasad	Assoc. Prof	Professor	15/10/2014
3.	Dr. T.K. Rajkhowa	Assoc. Prof	Professor	07/10/2015
4.	Dr. P.C. Kalita	Assoc. Prof	Professor	08/10/2015
5.	Dr. K. Lalrintluanga	Assoc. Prof	Professor	01/12/2015
6.	Dr. Kalyan Sarma	Asst. Prof	Assoc. Prof	15/10/2015
7.	Dr. Arup Kumar Samanta	Assoc. Prof	Professor	13/03/2018
8.	Dr. Bedanga Konwar	Asst. Prof.	Assoc. Prof	12/03/2018
9.	Dr. Prava Mayengbam	Asst. Prof.	Assoc. Prof	12/03/2018
10.	Dr. Parimal Roy Choudhury	Asst. Prof.	Assoc. Prof	12/03/2018
11.	Dr. Shyamananda Mukherjee	Asst. Prof.	Assoc. Prof	12/03/2018
(vi) College of Home Science, Tura, Meghalaya				
1.	Dr. Puspita Das	Assoc. Professor	Professor	01/07/2014
2.	Dr. Kh. R. Aimol	Assoc. Professor	Professor	18/09/2008
3.	Dr. Veenita Kumari	Asst. Prof.	Asst. Prof. (SS)	29/04/2011
4.	Dr. Shipra Nagar	Asst. Prof.	Asst. Prof. (SS)	30/04/2011
5.	Dr. Lokesh Kumar Mishra	Asst. Prof.	Asst. Prof. (SS)	30/04/2014
6.	Ms. Natasha R. Marak	Asst. Prof.	Asst. Prof. (SS)	03/06/2014



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Sl. No	Name of employee	Designation	Promoted to	Effective Date of promotion
7.	Dr. Ranima Saikia	Asst. Prof.	Asst. Prof. (SS)	04/08/2015
8.	Ms. Mamoni P. Borah	Asst. Prof.	Asst. Prof. (SS)	21/04/2013
(vii) College of Fisheries, Lembucherra, Tripura				
1.	Dr. Ranendra Kumar Majumdar	Asst. Prof.	Professor	05/10/2013
2.	Dr. Mrinal Kanti Datta	Asst. Prof. (SS)	Asst. Prof. (SG)	13/09/2012
3.	Dr. Sagar Chandra Mandal	Asst. Prof. (SS)	Asst. Prof. (SG)	03/10/2015
4.	Dr. Anindya Sundar Barman	Asst. Prof.	Asst. Prof. (SS)	18/01/2014
5.	Dr. Janmejy Parhi	Asst. Prof.	Asst. Prof. (SS)	25/01/2014
6.	Dr. Pradyut Biswas	Asst. Prof.	Asst. Prof. (SS)	26/06/2016
7.	Dr. Prasenjit Pal	Asst. Prof.	Asst. Prof. (SS)	04/04/2016
8.	Dr. Radhakrishna K.V	Asst. Prof.	Asst. Prof. (SS)	03/04/2016
9.	Mrs. Bahni Dhar	Asst. Prof.	Asst. Prof. (SS)	15/01/2016
10.	Dr. Arman U. Muzaddadi	Asst. Prof. (SS)	Asst. Prof. (SG)	19/01/2011

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

Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
(i) College of Agriculture, Iroisemba, Imphal, Manipur						
1.	Seminar	ICAR RC for NEH region, Umiam, Meghalaya	Farming for enhancing input use efficiency, income and environmental security (SFEIES 2017)	3 days	19.09.17	21.09.17
2.	Seminar	Directorate of Agriculture, Govt. of Manipur, Imphal	Revitalizing the rain-fed agriculture integrated watershed management under rainfed Agriculture	1 day	20.07.17	20.07.17
3.	Brainstorming workshop	ICAR & CAU, Imphal	Rice Residue Burning in Manipur - Issues and Strategies for Sustainable Management	1 day	31.01.18	-
(ii) College of Post-Graduate Studies, Umiam, Meghalaya						
1.	Summer School	ICAR, New Delhi	Organic Farming and Conservation Agriculture for Management of Natural Resources, Environment, Energy and Livelihood Security	21 days	05.08.17	25 .08.17
2.	Satellite Workshop	ICAR, New Delhi and CAU, Imphal	Zero Budget Natural Farming for Sustainable Agriculture and Livelihood Security	03 days	23.08.17	25 .08.17

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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
3.	National Conference	Soil conservation society of India, New Delhi, CAU, Imphal and ICAR, New Delhi	Natural Resource Management for Climate Smart Sustainable Agriculture	03 days	11.09.17	13.09.17
4.	Training	DBT- Bio-tech-Hub, Gol, New Delhi	Biotechnological Techniques and Genetic Resources	3 days	16.02.18	18.02.18
5.	Training	CAU, Imphal	Management of Pest and diseases occurring on tomato	1 day	20.01.18	-
6.	Training	ICAR-TSP Project	Management of Stored grain pests	1 day	02.01.2018	-
7.	Training	CAU, Imphal	Management of subterranean pests and diseases on crop plants	1 day	30.06.2018	-
8.	Training	CAU, Imphal	Spawn Production	1 day	22.03.2018	-
9.	Training	CAU, Imphal	Management of pest and diseases occurring on rice	1 day	23.03.2018	-
10.	National Conference	CAU, Imphal, NEC, Gol, New Delhi, NABARD, Mumbai, ICSSR, New Delhi, ICAR-ATARI, Umiam, ICAR RC, Barapani, Meghalaya State Agricultural Marketing Board, GoM, Shillong, SBI, ICAR Complex Branch	77 th Indian Society of Agricultural Economics	3 days	12.10.2017	14.10.17
11.	Training	MANAGE, Hyderabad	Recent Advances in Agricultural Extension: Theory to Practice.	10 days	12.03.2018	21.03.18
(iii) College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim						
1.	Workshop	NRDMS Division of DST, Govt. of India	Water Resources Management and Scope for Research and Development in Sikkim	1 day	03.05.17	-
2.	Workshop	NEC, Ministry of DONER, Govt. of India	Regional Workshop on Environmental Science and Management Development	2 days	27.03.18	28.03.18
3.	Workshop	DBT, DST, Govt. of India	Scope of Food Processing and Biotechnology in Higher Education	1 day	08.11.17	-



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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
4.	F o c u s Group Meeting	Agricultural Education Division, ICAR, Govt. of India	Examination System in Agricultural Education in India	1 day	14.03.18	-
5.	Training	ATARI-ICAR, Govt. of India	Planning and Enhancing Water Use Efficiency with emphasis on efficient utilization of Agriculture water	5 days	08.12.17	11.12.17
6.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Livestock based Integrated Farming System	3 days	20.06.17	22.06.17
7.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Integrated Farming System for Sustainable Hill Agriculture	3 days	18.09.17	20.09.17
8.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Planning for enhancing water use Efficiency with emphasis on efficient utilization of agricultural water.	5 days	11.12.17	15.12.17
9.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Skill Development Training On Processing and Value Addition of Horticultural crops	5 days	19.03.18	23.03.18
10.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Training and Demonstration on Processing and Value Addition of horticultural crops	3 days	30.06.17	02.07.17
11.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Training and Demonstration on Processing and Value Addition of Root and Tuber Crops	2 days	24.05.17	25.05.17
12.	Training	Sub Mission on Agricultural Mechanization (SMAM), Govt. of Sikkim	Bakery and processing machineries for horticultural and spice crops	3 days	12.03.18	14.03.18
13.	Training	SSB, Geyzing (Govt. of India)	Processing and value addition of horticultural crops	5 days	19.03.18	23.03.18

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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
14.	Training	DBT, DST, Govt. of India	Techniques in Microbial analysis of foods	4 days	23.03.18	26.03.18
15.	Training	AICRP on PET, ICAR	Scope of vertical farming in polyhouse in Sikkim	1 day	19.03.18	-
16.	Training	AICRP on PET, ICAR	Construction of low-cost bamboo polyhouse	3 days	10.01.18	12.01.18
(iv) College of Horticulture and Forestry, Pasighat, Arunachal Pradesh						
1.	Training	CHF, CAU and KVK, East Siang.	Technology of Pickle Preparation	1 day	29.04.17	-
2.	Training	CAU-TSP Project	Post harvest management and Value Addition	1 day	26.02.18	-
3.	Training	College extension activities of CAU	Preservation and Processing of Horticultural Crops	3 days	05.03.18	07.03.18
4.	Training	College extension activities of CAU	Preservation and Processing of Horticultural Crops	3 days	22.03.18	24.03.18
5.	Training	CAU	Commercial Flower Production	3 days	22.02.18	24.02.18
6.	Training	CAU	Value addition of flowers	3 days	26.02.18	28.02.18
7.	Trainings	Directorate of Extension, CAU, Imphal	“Soil Testing and Organic Farming for Sustainable Agriculture Management in North East India	10 days	15.01.18	24.01.18
8.	Training	AICRP-Potato	Improved Production Technology of Potato	1 day	28.12.17	-
9.	Training	DEE, Imphal	CAU, Package of practices of Winter Vegetables	1 day	13.02.18	-
10.	Training	DEE, Imphal	CAU, Package of practices of Summer Vegetables	1 day	28.02.18	-
11.	Training	DEE, Imphal	CAU, Protected Cultivation of Vegetable Crops	1 day	09.03.18	-
12.	Training	DEE, Imphal	CAU, Production Technology of Exotic Vegetables	1 day	12.03.18	-
13.	Training	CHF, CAU, Pasighat	Forest Nursery and Plantation Technology	8 days	19.03.18	26.03.18
14.	Training	Directorate of Extension, CAU, Imphal	Rain water harvest and its management for horticulture crops	3 days	7.03.18	9.03.18
15.	Training	Directorate of Extension, CAU, Imphal	Package of Practices for commercial cultivation of Khasi mandarin (<i>Citrus reticulata</i> B)”	3 days	22.2.18	24.2.18



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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
16.	Trainings	DBT, Ministry of Science & Technology Government of India	Molecular Techniques	6 days	22.02.18	27.02.18
17.	Outreach programme	DBT, Ministry of Science & Technology Government of India	Biotechnological awareness	1 day	19.03.18	-
18.	Capacity building of Training	Directorate of Extension, CAU, Imphal	Capacity building on commercial Horticulture for Doubling farmer's incomes	4 days	12.03.18	15.03.18
(v) College of Veterinary Sciences & Animal Husbandry Selesih, Aizawl, Mizoram						
1.	Training	CAU, Imphal	'Sustainable Livestock Production in North-East Region and Extension Techniques	3 days	21.11.17	23.11.17
2.	Training	CAU, Imphal	Scientific management of pig	3 days	31.01.18	02.02.18
3.	Training	CAU, Imphal	Scientific management of poultry farm	3 days	23.01.18	25.01.18
4.	Training	DBT, Govt. of India	Molecular Detection and Characterization of Bacterial and Viral Pathogens of Veterinary Importance	5 days	14.03.17	18.03.17
5.	Training	CAU, Imphal	Sustainable livestock production in North East Region and Extension Techniques	3 days	21.11.17	23.11.17
6.	Workshop	CAU, Imphal	Role of animal husbandry in doubling the farmers income" for Veterinary officers of NER, India	1 day	30.10.17	-
(vi) College of Home Science, Tura, Meghalaya						
1.	Demonstration of New Technology	CAU, Imphal	Dye extraction: Source, application and its Sustainability	06	10/07/17	15/07/17
2.	Demonstration of New Technology		Value addition of jackfruit	10	13/07/17	22/07/17
3.	Demonstration of New Technology		Value added products from Squash	03	27/07/17	29/07/17
4.	Demonstration of New Technology		New technology of cashewnut processing	05	7/08/17	11/08/17

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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
5.	Demonstration of New Technology		Value chain on Cashewnut for farmers	03	21/08/17	23/08/17
6.	Demonstration of New Technology		Wood and Stone Craft	10 days	16/01/18	25/01/18
7.	Demonstration of New Technology		Preparation of different products from chayote Squash	03	31/01/18	2/02/18
8.	Demonstration of New Technology		Pumpkin processing & value addition	03	07/02/18	9/02/18
9.	Demonstration of New Technology		Hand Bag Making	06	12/03/18	17/03/18
10.	Training	CAU, Imphal	Basic of cooking & kitchen application	03	5/06/17	12/06/17
11.	Training		Value addition of locally available fruits & vegetables	03	14/11/17	18/11/17
12.	Training		Skill training on Decorative & Utility Items	10	15/11/17	24/11/17
13.	Training		Skill training on Artificial flower making	03	12/03/18	14/03/18
14.	Training of Line Department Personnel	CAU, Imphal	Educational empowerment of school teachers on health issues of adolescents	03	14/09/17	16.09.17
15.	Training of Line Department Personnel		Advance in growth monitoring & nutrition aspects of pre school child	03	7/03/18	9/03/18
16.	Training of Line Department Personnel		Advances in growth monitoring and nutritional aspects of pre-school children	03	7/03/18	9/03/18
17.	Training of Line Department Personnel		Developing stimulatory play materials for children	03	20/03/18	22/03/18
18.	Vocational Training	CAU, Imphal	Art, Crafts & Design Technology	31 days	22/11/17	22/12/15
19.	Vocational Training		Food preservation techniques for locally available food items	31 days	22/02/18	23/03/18



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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
20.	Training	Digital India Corporation, New Delhi	FMD Vaccination Program for Cattle	1 day	26/04/17	-
21.	Training		FMD Vaccination Program for Cattle	1 day	28/04/17	-
22.	Training		Disease and Pest Management of Kharif Rice Cultivation	1 day	07/07/17	-
23.	Demonstration	Digital India Corporation, New Delhi	Demonstration on mustard seed cultivation techniques	1 day	20/09/17	-
24.	Awareness programme	Digital India Corporation, New Delhi	Awareness programme on m4agrinei activities in collaboration with district horticulture department	1 day	12/05/17	-
25.	Awareness programme		Awareness programme on m4agrinei activities	1 day	07/07/17	-
26.	Awareness programme		Awareness programme on m4agrinei activities	1 day	07/10/17	-
27.	Awareness programme		Awareness programme on m4agrinei activities	1 day	13/10/17	-
28.	Awareness programme		Awareness programme on m4agrinei activities	1 day	14/10/17	-
29.	Awareness programme		Awareness programme on m4agrinei activities	1 day	18/11/17	-
30.	Awareness programme		Awareness programme on m4agrinei activities	1 day	27/11/17	-
31.	Awareness programme		Awareness programme on m4agrinei activities	1 day	29/11/17	-
32.	Awareness programme		Awareness programme on m4agrinei activities	1 day	05/12/17	-
33.	Awareness programme		Awareness programme on m4agrinei activities	1 day	08/12/17	-
(vii) College of Fisheries, Lembucherra, Tripura						
1.	Training	CAU, Imphal	Value added fish products' technology for empowerment of women	03	19/01/17	21/01/17
2.	National Conference	ASSOCHAM India, New Delhi	National Conference on Linking Startup's and SME's in Food Processing with Government Schemes & Markets	01	28/11/17	-
3.	Training for farmers of Tripura.	CAU, Imphal	Fisheries Resource management: A tool for enhancing fish production in N.E. region	03	04/12/17	06/12/17

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Sl. No.	Type of the Programme	Sponsored by	Title of the programme	Duration	From	To
4.	Training for farmers of Tripura.	CAU, Imphal	Pandeeet Deen Dayal Upadhyay Unnat Krishi Shiksha Yojana	04	27.03.17	01.04.17
5.	Training of students from NIT, Agartala, Tripura	DBT	A basic training on molecular biology techniques.	30	22.05.17	21.06.17
6.	Training for farmers of Tripura.	CAU, Imphal	Carp Seed Production through Eco-Hatchery	03	27/07/17	27/07/17
7.	Training for farmers of Tripura.	CAU, Imphal	Seed Production & larval rearing of Magur & Singhi	03	01/08/17	03/08/17
8.	Training for Line Dept. from North-east, India	CAU, Imphal	Seed Production and Larval Rearing of Giant Fresh Water Prawn	03	06/09/17	08/09/17
9.	Traning for Scientist & Faculties	ICAR	Recent Advances in Aquaculture Biotechnology	21	01/11/17	21/11/17
10.	Training of students from Veterinary College of Science & Animal Husbandry, Tripura	DBT	Hands on Basic Tools and Techniques of Biotechnology and Bioinformatics	07	23/02/18	01/03/18
11.	Training of Faculties from Different Institutes of Tripura	DBT	Molecular Techniques and Recent Advances in Genomics and Proteome Analysis	08	20/03/18	27/03/18
12.	Training for M.F.Sc. 1 st year students	DBT	Biotechnological Tools and Techniques	04	24/03/18	27/03/18
13.	Training	North East Rural Livelihood Project (NERLP)	Community managed intensification of table fish production in ponds of West Tripura	03	28/04/17	30/04/17
(viii) College of Agriculture, Pasighat, Arunachal Pradesh						
1.	Symposium	NABARD and ISMFM &AP	International Symposium on Minor Fruits, Medicinal &Aromatic Plants(ISMFM&AP)	02	05/12/17	06/12/17



Table 5.7 Details of various capacity building programmes attended by faculty and staff of the university.

Sl. No.	Name of College	Higher studies	Conference		Seminars		Workshop	Training	
			National	International	National	International		Long term(>3 weeks)	Short term(<3 weeks)
1.	College of Agriculture, Imphal, Manipur	1	-	1	10	-	1	-	3
2.	College of Post-Graduate Studies, Umiam, Meghalaya	1	1	0	2	1	13	4	0
3.	College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim	1	04	-	-	2	08	01	06
4.	College of Horticulture, Bermiok, Sikkim	-	2	-	-	-	-	-	-
5.	College of Fisheries, Tripura	-	4	-	3	-	5	2	-
6.	College of Horticulture and Forestry, Pasighat, Arunachal Pradesh	3	5	7	5	8	11	5	11
7.	College of Agriculture, Pasighat, Arunachal Pradesh	-	5	6	1	-	4	-	1
8.	CVSc & A.H., Selesih, Aizawl, Mizoram	2	6	2	4	2	2	5	7
9.	College of Home Science, Tura, Meghalaya	2	2	3	-	-	-	1 (overseas associate-ship)	-
10.	College Of Horticulture Thenzawl, Mizoram	-	1	-	-	-	-	-	3
Grand Total		10	30	19	25	13	44	18	31

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Table 5.8 Lectures/keynote address/invited talks delivered /chairperson etc.

Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
(i) College of Agriculture, Imphal, Manipur					
1.	Prof. Edwin Luikham	Water management through planning of optimized mix of crops.	Organic farming/ natural farming / cow based economy	20.03.17	Pt. Deen Dayal Upadhyay Unnat Krishi Siksha Yojana, Haraorou, Imphal
2.	Dr. Jamkhogin Lhungdim Asst. Prof	Study on integrated weed management under different sowing methods of rainfed rice	-	20.09.17	Directorate of Agriculture, Govt. of Manipur, Imphal
3.	Prof. M. Sumarjit Singh	Organic farming	Foundation Day of TMD-FC, Taothong	08.03.18	TMDFC, Taothong
		Organic farming	RCOF training programme	09.11.17	RCOF
4.	Indira Sarangthem Professor	Soil nutrient management for higher crop production	Organic farming/ natural farming / cow based economy	20.03. 18	Pandit Deen Dayal Upadhyay Unnat Krishi Shiksha Yojna
5.	N. Surbala Devi, Assistant Prof.	Integrated Nutrient Management	Farmers Awareness Programme	26.08.17	Institute of Co-operative Management (ICM), Lamphelpat
		Media: types, selection, sterilization and layout	Skill development training programme on "Green House Operation"	26.03. 18	PFDC, CAU, Imphal Centre
6.	Dr. N. Brajendra Singh, Professor	Importance of PPV & FRA for the farming community	Training on Provisions of Plant Varieties & Farmers' Right Act 2001 for creation of awareness among the farmers and stakeholders	27.03.18	ICAR Research Complex for N.E.H. Region, Manipur Centre, Lamphelpat, Imphal-795004
7.	Dr. Bireswar Sinha Asst. Prof.	Trichoderma- Effective Biocontrol Agent Against Soil Borne Diseases	Deliver Invited talk on National Symposium of Indian Phytopathological Society	10.10.17 & 11.10.17	ICAR-NEH Region Manipur Centre
			Co-Chairman in session of National Symposium of Indian Phytopathological Society	10.10.17 & 11.10.17	ICAR-NEH Region Manipur Centre



Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
(ii) College of Post-Graduate Studies, Umami, Meghalaya					
1.	Dr. Sanjay Swami Asst Prof.	Country Paper on Successful Models of Integrated Farming Systems for North Eastern Hill Region of India	Workshop on Successful Models of Integrated Farming	11.05.17	National Productivity Organization Ministry of Industries Shipla Bhaban (1 st Floor) 91, Motijheel Commercial Area, Dhaka - 1000, Bangladesh
		Innovation in organic, traditional and integrated farming systems	National Seminar on Smart Farming for Enhancing Input Use Efficiency, Income and Environment Security (SFEIES)	20.09.17	ICAR Research Complex for NEH Region, Barapani
(iii) College of Agriculture, Kyrdemkulai, Meghalaya					
1.	Dr. U.K. Behera, Dean	Rice-based integrated farming systems for livelihood security of small & marginal farmers & climate resilience	3 rd ARRW International Symposium "Frontiers of Rice Research for improving productivity, profitability and climate resilience	6.02.18 to 9.02.18	National Rice Research Institute, Cuttack, Odisha, India.
		Integrated Farming systems for enhancing productivity, doubling farmer's income & climate resilience	105 Indian Science Congress	16.02.18 to 20.02.18	Indian science Congress, Manipur University, Imphal, Manipur.
		Co-Chairman for Technical Session-III.	Agriculture & Forestry Section of Indian Science Congress	16.03.18 to 20.03.18	105 Indian Science Congress, Manipur University, Imphal.
		Co-Chairman for Technical Session-1	International Congress on Cotton and other fibre crops.	20.02.18 to 23.02.18	ICAR Complex for NEH Region, Umiam and Cotton Research and Development, Association.

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Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
		Lecture on “Integrated Farming System for enhancing productivity, doubling Farmers’ Income and Climate Resilience”	National Productivity Week on 14/02/2018	12.02.18 to 18.02.18	ICAR RC for NEH Region, Umiam
(iv) College of Agricultural Engineering and Post Harvest Technology, Gangtok					
1.	Dr. Mahendra S. Seveda Professor	Utilization of Renewable Energy Sources in Organic Farming	Pt. Deen Dayal Upadhyay Unnat Krishi SikshaYojana,	15.03.18	ICAR-NRC for Orchids, Pakyong, Sikkim
2.	Dr. G. T. Patle Asst. Prof.	Installation and maintenance of drip and sprinkler irrigation for hilly region	Training Programme on Sustainable water management for boosting productivity in hilly region	22.08.17 & 28.08.17	TMA, East Sikkim department of FS&ADD, Sikkim
		Water management through planning of optimized mix of crops and advanced method of water management	Pt. Deen Dayal Upadhyay Unnat Krishi SikshaYojana,	15.03.18	ICAR-NRC for Orchids, Pakyong, Sikkim
3.	Dr. Said Prashant Pandharinath, Asst. Prof.	TEDP talk on “Food laws”	Technology based Entrepreneurship Development Programme on Food Processing	20.11.17	Sikkim University, Gangtok, Sikkim
4.	Dr. Sujata Jena Assoc. Prof.	Post harvest management of horticultural crops in organic production system	Training program of VLWs on “Organic production of horticultural crops”	30.05.17	ICAR-National Organic Farming Research Institute, Gangtok
(v) College of Horticulture and Forestry, Pasighat					
1.	Dr. A.K. Pandey Dean	Strategies for Doubling farmers’ income through horticulture by 2022	Conclave Dream Change Arunachal, 2027	08.11.17 to 09.11.17	Govt. of Arunachal Pradesh on Nov.8-9,2017 at Itanagar
		“Polyhouse production of vegetables through micromode application of irrigation	Water conservation – per drop more crop	22.11.17	NABARD , Itanagar, Arunachal Pradesh



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Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
2.	Dr. T.S. Mehra, Associate Professor	Medicinal Plants of Arunachal Pradesh	Students Seminar on Medicinal Plants of Arunachal Pradesh	27.10.17	Jawahar Lal Nehru College, Rajiv Gandhi University, Itanagar (Doimukh), Arunachal Pradesh
		Field Visit and Practical on Succession, Natural regeneration, Enrichment plantings and rehabilitation	Forest Nursery and Plantation Technologies (8 th Day Training Programme) Forest official	24.03.18	Ruksin Forest Range, East Siang, Arunachal Pradesh
3.	Dr. Ng.Piloo Assistant Professor (PHM)	Training on value addition of Fruits and Vegetables for rural women	Seven days Special NSS Camp-2017on the theme "Youth for Clean Environment"	09.06. 17	Sibo-Siang Colony, East Siang district
		Technology of Pickling	Training of Farmers, entrepreneurs and scientists in areas related to postharvest technology	05.10. 17	Govt. of A.P,Office of DDAT, Farmers Training Centre, Pasighat (SAMETI hall)
		1. Raw materials and procedure of pickling 2. Practices for extraction of fruit juices	Gender friendly Food Processing and preservation techniques	30.11. 17	Govt. of A.P, Office of DDA(Agril. Education) Cum Director SAME-TI, Gramsewak-Training Centre, Pasighat
		Post harvest management of organic fruits and vegetables	Soil testing and organic farming for Sustainable Agriculture Management in North East India	19.01.18	CHF & KVK, East Siang District
		Post harvest management and Processing of fruits and vegetables	Seven days Special NSS Camp-2018on the theme "Youth for Smart village"	11.01. 18	Mirem village, East Siang, District
4.	Dr. P. Debnath, Associate Professor	Organic farming : prospect and opportunities	Organic farming	19.09.17	Assam Agriculture university, Jorhat
		Nutrient Management in Citrus	Buyer- Seller Meet -Cum-Workshop on Orange at dambuk	15.12.17 to 18.12.17	Department Horticulture, Govt of Arunachal Pradesh. Itanagar

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Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
(vi) College of Veterinary Sciences & A.H., Selesih, Aizawl, Mizoram					
1.	Dr. Fazal Ali Ahmed, Professor	Regulation and Manipulation of Reproduction for Augmenting Fertility in Pigs	National Symposium on "Use of Reproductive Technologies and Production Improvement in Livestock Species Aiming to Socio-economic Development of Rural Mass" and XXXIII Annual Convention of The Indian Society for Study of Animal Reproduction (ISSAR).	09.02.18 to 11.02.18	W.B. Veterinary Council Auditorium, 37, Belgachia Road, Kolkata-700037
2.	Prof. T. K. Dutta, Prof. & Head	Climate Change and Livestock: Impacts, Adaptation and Mitigation	One Day Awareness Program on Climate Change	22.01.18	ICAR-RC for NEH, Kolasib, Mizoram
		Antimicrobial Resistance and Its Public Health Significance	ICAR sponsored short course on Microbial Genomics and Proteomics in Diagnosis and control of Diseases of Veterinary Importacne	15.11.17 to 16.11.17	LUVAS, Hissar, Haryana
		Antimicrobial resistance in Animals	Training cum transfer of innovative in-house technology for state level animal disease diagnosis	07.11.17 to 09.11.17	ICAR Research Complex for NEH region, Barapani, Umium, Meghalaya
3.	Dr. Kalyan Sarma, Assoc. Professor	Chairperson on Poster session of Companion Animal Non-infectious diseases	36 th Annual Convention of ISVM.	01.02.18 to 03.02.18	College of Veterinary Science & A.H., Orissa University of Agriculture and Technology, Bhubaneswar, Odisha
4.	Dr Gunjan Das, Assoc. Professor	Chairperson on oral session of Farm animal non infectious diseases	36 th Annual Convention of ISVM.	01.02.18 to 03.02.18	College of Veterinary Science & A.H., Orissa University of Agriculture and Technology, Bhubaneswar, Odisha.



Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
5.	Prof. T. K. Rajkhowa	Porcine reproductive and respiratory syndrome: An emerging threat to the pig population of India	Lead paper in Asian Veterinary Pathology Congress - 2017 and International conference on "Emerging Horizons in Diagnosis in Animal and Poultry diseases- Towards Sustainable Production in Asian Countries.	09.11.17	Department of veterinary pathology, Veterinary College, KVAFSU, Hebbal, Bengaluru – 560024, Karnataka, India
		Molecular epidemiology of infectious bursal disease in NER, India	Invited lecture	25.01.18	One day seminar organized by Indian Association of Veterinary Pathology (IAVP), Eastern zone, at the Department of Veterinary Pathology, C, V, Sc., AAU, Khanapara.
(vii) College of Horticulture, Bermiok, South Sikkim					
1.	Dr. S.K. Sharma, Dean	Acted as Co-Chairman in the Tech. Session "Doubling farmer's income through horticulture/ floriculture "	National Conference on Floriculture for Rural and Urban Prospects in the scenario of climate	16.02.18 to 18.02.18	College of Agricultural Engineering and Post Harvest Technology, Ranipool organized by National Research Centre for Orchids, Pakyong
		Delivered a lead lecture on "Prospects and Potential of Spices Cultivation in Sikkim"	National Symposium on "Spices for doubling farmer's income"	15.03.18 to 17.03.18	SASRD, Nagaland University, Medziphema Campus, Nagaland
		Chaired the session on Farmers Interaction Session entitled "Protection aspects of spice crops"	National Symposium on "Spices for doubling farmer's income"	15.03.18 to 17.03.18	SASRD, Nagaland University, Medziphema Campus, Nagaland
(viii) College of Home Science, Tura, Meghalaya					
1.	Dr. L. D. Hatai	Marketing strategies of Jackfruit	Value addition on Jackfruit – farm to market (DBT) funded	18.07.17	IBDLP Ampati

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Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
		Marketing strategies of Horticultural & Agril. Production	Business and entrepreneurship program of IB-DLP	15.12.17	IBDLP Ampati
2.	Dr. Biswajit Lahiri	Recent Advancements in Rural Development	Orientation Programme	08.09.17	Department of Rural Development, School of Social Sciences & Humanities, USTM, Baridua, Meghalaya
		'Mobile Based Agro-Advisory System'	Awareness programme on ICT based Agro-Advisory System	12.05.17	District Horticulture Department, West Garo Hills, Tura, Meghalaya at Rongram Horti-Hub, West Garo Hills, Tura, Meghalaya
		"Development of Mobile Phone Based Fishery Advisory Prototype in North Eastern Himalayan Region of India: An Experience with Garo Tribal Fish Farming Communities"	11th Indian Fisheries and Aquaculture Forum (11th IFAF'2017)	21.11.17 to 24.11.17	ICAR Central Institute of Fisheries Technology (ICAR-CIFT), at Cochin, Kerala
(ix) College of Fisheries, Lembucherra, Tripura					
1.	Dr. R. K. Majumdar, Professor & Head	Advances in fish processing technology in the context of northeast India	Skill Upgradation Programme of Nagaland Fishery Officials	23.08.17 to 24.08.17	Kohima, Nagaland
		Indigenous fish preservation technology of northeast India – an overview	11th Indian Fisheries and Aquaculture Forum-2017,	21.10.18 to 24.10.18	ICAR-CIFT, Cochin
		Multiplying farmers' income – opportunities in fish processing & value addition	"Multiplying Farmers' Income: Opportunities in Animal Husbandry and Processing of Organic Pig and Fish Products – Potential for Exports – Focus North East"	05/01/18	Organized by PHD Chamber of Commerce and Industry, India, at Agartala, Tripura (W)



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Sl. No.	Name of faculty with designation	Topic of lecture delivered	Title of Programme	Date	Name of institution/ Organisation where the programme was held
2.	Dr. Sudhansu Shekhar Mahanand Asst.Prof	Application of Biofloc Technology for doubling farmer income	“Advanced Technique and practices for doubling Agricultural Income”	25.11.17	RamkrishnaMahavidyalaya Kailashahar, Unakoti, Tripura 799277
3.	Pradyut Biswas	Fish and Fisheries, Aquaculture, Commercial composite fish culture	10-days training on composite fish culture under Skill development training	18.01.18	Superintendent of Fisheries, Mohanpur, Tripura
		Breeding and seed production of ornamental fishes	Job Training Programme for students of Industrial Fish & Fisheries of Cachar College, Silchar	26.03.18 to 27.03.18	Cachar College, Silchar under Assam University, Silchar
4.	Dr. Sagar C. Mandal Associate Professor & Head	1. Techniques of ornamental fish breeding and culture 2. Trade regulation and wild life act in relation to ornamental fish 3. Breeding and seed production of pabda 4. Sensitization of UG / PG students for JRF / ICAR-NET examination	Expert Lecture	15.03.18 15.03.18 15.03.18 16.03.18	College of Fisheries, GADVASU, Ludhiana
(x) College of Agriculture, Pasighat, Arunachal Pradesh					
1.	Dr. B. N. Hazarika, Dean	Chairperson	4 st International Symposium on Minor Fruit, Medicinal & Aromatic Plants	05.12.17 to 06.12.17	CHF, Pasighat
(xi) College of Horticulture, Thenzawl, Mizoram					
1.	S a p a m Rajeshkumar Singh, Asst Prof	Mulching, green manuring & soil testing	Training programme for farmers on “Cow based Economy”	21.03.17 to 25.03.17	CoVSc & AH, CAU, Selesih, Aizawl held at Conference Hall, KVK, Aizawl

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Table 5.9 Faculty members who served as external examiners of outside university during 2017-18

Sl. No.	College	Name of Faculty	Served as External Examiners
1.	College of Post-Graduate Studies, Umiam, Meghalaya	Dr. Pradip K. Bora Professor	1. M.Sc Thesis evaluation (Soil Science) of Assam Agricultural University.
		Dr. V K Chowdhury Professor	2. M.Sc thesis (Biotech) at MPUA, Udaipur 3. Ph D thesis evaluation and Viva Voce at CCS, HAU, Udaipur 4. Ph D Comprehensive oral examination at CCS, HAU, Udaipur
		Dr. Mayank Rai Professor	1. MSc thesis (Biotech) at AAU, Jorhat 2. BSc. End term exam (ABT-323) at AAU, Jorhat
		Dr. Wricha Tyagi Professor	1. MSc (PMB) examination; subject BOT@304: Plant Physiology at NEHU, Shillong
		Dr. Ram Singh Professor	1. Visva-Bharati, Bolpur, W.B. 2. Acted as an expert member for selection of project staff at ICAR- ATARI, 3. Banda University of Agriculture & Technology, Banda-210001 (U.P.)
		Dr. S.M. Feroze Assistant Professor	1. Visva-Bharati, Bolpur, W.B. 2. UBKV, Coochbehar, WB
		Dr. L. Devarani Assistant Professor	End-term theory paper set for CoA, Agartala, Tripura
		Dr. L. Hemochandra Assoc. Prof.	Thesis viva- voce at UBKV, Pundibari, West Bengal,
		Dr. R. J. Singh Assistant Professor	Thesis viva- voce at BHU, Varanasi, U.P.
2.	College of Agricultural Engineering and Post Harvest Technology, Gangtok	Dr. Deepak Jhajharia Associate Professor	1. M. Tech. (SWCE) Paper Setting and Evaluation of MPUAT, Udaipur, Rajasthan 2. NEE-2017 Paper Setting of NERIST, Itanagar
		Prof. Mahendra S. Seveda	1. M. Tech. (REE) Paper Setting and Evaluation of MPUAT, Udaipur, Rajasthan 2. M. Tech. (REE) Thesis Evaluation of MPUAT, Udaipur, Rajasthan 3. NEE-2017 Paper Setting of NERIST, Itanagar
		Dr. Sujata Jena Associate Professor	M. Tech. (PFE) Paper Setting and Evaluation of MPUAT, Udaipur, Rajasthan
		Dr. G. T. Patle Assistant Professor	B. Tech. (AE) Paper Setting and Evaluation of UBKV, Coochbehar, West Bengal



Sl. No.	College	Name of Faculty	Served as External Examiners
3.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	Dr. S. Romen Singh, Assistant Professor	UBKV, West Bengal.
		Dr. N. Lyngdoh, Assistant Professor	Mizoram University
		Mr N. Devachandra, Assistant Professor	UBKV, West Bengal
		Dr. T.S. Mehra, Associate Professor	1. Banda University of Agriculture & Technology 2. Evaluation of Ph. D. Thesis of SHUATS, Allahabad
4.	College of Veterinary Sciences & A.H., Selesih, Aizawl	Dr. A.K .Samanta, Professor	1. SKUAST-J, Jammu, 2. OUAT, Orissa and 3. ASRB, New Delhi
		Dr. P. C. Kalita, Associate Professor	1. MAFSU, Nagpur and 2. OUAT, Odisha 3. College of Veterinary Sciences, Khanapara, Guwahati, Assam
		Dr. A. Kalita, Assistant Professor (SG)	Paper moderator at ASRB, New Delhi
		Dr. P. J. Doley, Assistant Professor	College of Veterinary Sciences, Khanapara, Guwahati, Assam.
		Dr. O. P. Choudhary, Assistant Professor	1. Anand Agricultural University, Anand. 2. College of Veterinary and Animal Sciences, RAJU-VAS, Bikaner
		Dr. E. Motina, Associate Professor	1. College of Veterinary Sciences &AH , Khanapara , Guwahati, Assam . 2. College of Veterinary Sciences &AH , Tripura.
		Dr. T. K. Dutta, Professor & Head	1. College of Veterinary Sciences & AH, Khanapara , Guwahati, Assam . 2. College of Veterinary Sciences &AH , Tripura.
		Dr. P. Roychoudhury, Asst. Prof (SS)	College of Veterinary Sciences & AH, Khanapara , Guwahati, Assam .
		Dr. T. K. Rajkhowa, Professor & Head	Selection committee member for promotion to the post of professor under CAS in AAU, Jorhat
		5.	College of Fisheries, Lembucherra, Tripura
Dr. Pampa Bhattacharya, Asstt. Prof. (SS)	External question paper setter and evaluator for OUAT, Rangeilunda, Odisha and WBUAFS, Kolkata, WB		

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Sl. No.	College	Name of Faculty	Served as External Examiners
		Dr. K.V. Radhakrishna, Asstt. Prof.	External question paper setter for Tamil Nadu Fisheries University and AAU, Raha, Assam
		Dr. S. C. Mandal, Assoc. prof. & Head	External question paper setter and evaluator for OUAT, Rangeilunda, Odisha; G.B. Pant Univ. of Agril. & Technology, Pantnagar, Uttarkhand and NDVSU, Jabalpur, MP and AAU, Raha, Assam
		Dr. Himanshu Priyadarshi, Asstt. Prof.	External question paper setter for WBUAFS, Kolkata, WB
		Dr. A. S. Barman, Asstt. Prof.	External question paper setter for College of Fisheries, NDVSU, Jabalpur, MP
		Dr. JanmejyParhi, Asstt. Professor	External question paper setter and evaluator for OUAT, Rangeilunda, Odisha
		Arun B. Patel, Professor	External question paper setter for CIFE, Mumbai
		Pradyut Biswas, Asstt. Prof.	External question paper setter for WBUAFS, Kolkata, WB and NDVSU, Jabalpur, MP
		Dr. Dibyendu Kamiya Asstt. Prof.	1. M.F.Sc. thesis viva-voce at WBUAFS, Kolkata, WB 2. External question paper setter for College of Fisheries, GADVASU, Ludhiana, Panjab; WBUAFS, Kolkata, WB; G.B. Pant Univ. of Agril. & Technology, Pantnagar, Uttarkhand and NDVSU, Jabalpur, MP
		Tanmoy Gon Choudhury Asstt. Prof.	External question paper setter for College of Fisheries, NDVSU, Jabalpur, MP
		Dr. A.D. Upadhyay Asstt. Prof.	External question paper setter for College of Fisheries, WBUAFS, Kolkata, WB; G.B. Pant Univ. of Agril. & Technology, Pantnagar, Uttarkhand and NDVSU, Jabalpur, MP
		Dr. Himanshu Priyadarshi Asst. Prof.	External question paper setter for College of Fisheries, GADVASU, Ludhiana, Panjab
6.	College of Home Science, Tura, Meghalaya	Dr. Puspita Das Professor	1. AAU, Jorhat 2. Expert of Assessment Committee for promotion through Carrer Advancement Scheme (CAS) of subject matter specialist of different KVK under Uttar Banga Krishi Viswavidyalaya
		Dr. L. D. Hatai Assistant Professor	College of Agriculture, OUAT, Bhubaneswar



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Sl. No.	College	Name of Faculty	Served as External Examiners
		Dr. Biswajit Lahiri Assistant Professor	1. College of Home Science, Assam Agricultural University, Jorhat, Assam 2. Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, Birbhum, West Bengal.
		Dr. R.K Dhanalaxmi Devi Assistant Professor	Member of selection committee for Junior Consultant, held at RVTI, Tura

Table 5.10 Faculty/Staff Members who were awarded Ph.D during 2017-18

Sl. No.	Name of College	Faculty/Staff Member
1.	College of Agricultural Engineering & Post Harvest Technology, Ranipool, Gangtok, Sikkim	Dr. A. I. Singh, Ph.D. (Process and Food Engineering)
2.	College of Fisheries, Lembucherra, Tripura	Dr. Pampa Bhattacharya, Ph.D. (Fisheries)
3.	College of Horticulture & Forestry, Pasighat, Arunachal Pradesh	Dr. Amit Kumar Singh Ph.D. (Agril. Biotechnology) Dr. Pramod Kumar Pandey (FCLA) Ph.D. (General Biotechnology)
4.	College of Agriculture, Pasighat, Arunachal Pradesh	Dr. Abhinash Moirangthem Ph.D. (Floriculture) Dr. Punabati Heisnam Ph.D. (Agronomy)
5.	College of Horticulture, Bermiok, Sikkim	Dr. Diana Sagolsem Ph.D. (Genetics)

Table 5.11 Guest lectures Organised

Sl. No.	Name of the guest lecturer with designation and organization attached	Date of guest lecture delivered	Topic
(i) College of Post-Graduate Studies, Umami, Meghalaya			
1.	Dr. Firoz Hossain, Senior Scientist, Division of Genetics, ICAR-IARI, New Delhi	30.08.2017	Bio-fortification of Maize for Nutritional Security
2.	Dr. Sailesh Tripathi, Principal Scientist, IARI, New Delhi	11.12.2017	Modern Breeding Tools for Pulses Improvement

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Sl. No.	Name of the guest lecturer with designation and organization attached	Date of guest lecture delivered	Topic
3.	Dr. G. J. N. Rao, IIT, Guwahati,	08.02.2018	Application of Biotechnological Tools for Rice Improvement
4.	Dr. A. K. Misra, NPBGR, ICAR (NEH)	19-02-2018	An Overview on PGR Management” and introduction to plant registration and cold storage facilities at NBPGR, Barapani
(ii) College of Agricultural Engineering and Post Harvest Technology, Gangtok			
1.	Interaction program of faculty of IIM Ahmedabad	14.08.2017	Scope for MBA from IIM Ahmedabad
(iii) College of Fisheries, Lembucherra, Tripura			
1.	Mr. Nilav Aich, Fishery Officer, Govt. of Tripura	13-05-17 to 14-05-17	Genetics and Biotechnology
2.	Mrs. Sampa Pal, Fishery Officer, Govt. of Tripura	20-05-17 to 21-05-17	Fish Health Management
3.	Mr. Deepayan Roy, Fishery Officer, Govt. of Tripura	27-05-17 to 28-05-17	Fish Processing Technology
4.	Dr. S. Munil Kumar Sr. Scientist, ICAR-CIFE, Kolkata	22-06-17	Live feed in Aquaculture
5.	Dr. T.J. Abraham Professor, WBUAFS, Kolkata	23-06-17	Fish Disease
6.	Dr. Sudip Kumar Majhi Sr. Scientist, ICAR-NBFGR	27-06-17	Stem Cell Research in Fisheries.
7.	Dr. G.K. Rao, Ex-Technical Officer, CIFE, Mumbai	28-11-17 to 03-12-17	Statistics
8.	Dr. Samiran Nandi Principal Scientist, FGB Division, ICAR-CIFA, Bhubaneswar	12-11-17	Fish Biotechnology
9.	Dr. Annam Pavankumar Scientist, FGB Division, ICAR-CIFE, Mumbai	10-11-17	Fish Nutrition
10.	Dr. Dijendra Nath Roy Assistant Professor, Dept. of Bio Engi- neering, National Institute of Technolo- gy (NIT), Agartala.	16-11-17 15-11-17 18-11-17	Fish Genetics Microsatellites in Genetic Conservation Effects of Pharmaceutical Waste in Aquatic Life: A serious Concern
11.	Dr. Jitendra Kumar Sundaray Director, CIFA, Bhubaneswar	18-11-17	Recent Advances in Aquaculture Bio- technology



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Sl. No.	Name of the guest lecturer with designation and organization attached	Date of guest lecture delivered	Topic
12.	Dr. S.P. Das Principal Scientist, ICAR RC NEH Region, Tripura Centre.	01-11-17	Application of Biotechnology in FW Aquaculture
13.	Dr. K. C. Majumder Former Scientist, CCMB, Hyderabad	10-11-17	A proven carp brood stock diet for quality seed production Transcriptomics
14.	Dr. Ravindra Kumar Principal Scientist & HOD, ICAR-NBFGR, Lucknow	04-11-17	Marker Assisted Breeding for developing stress tolerant crop varieties
15.	Dr. Aparna Choudhury Principal Scientist and Head, FGB Division, ICAR-CIFE, Mumbai	06-11-17 07-11-17	Transgenesis Genetically modified organisms:India's perspectives CRISPER Technology
16.	Dr. Priyabrata Swain Principal Scientist, ICAR-CIFA, Bhubaneswar	09-11-17	Genome sequencing in fishes
17.	Dr. (Mrs.) L. Sahoo Scientist, ICAR RC NEH Region, Tripura Centre.	10-11-17 06-11-17	Stem Cell Based Technologies for Fishery Resources Management Metabolomics
18.	Dr. (Mrs.) Rekha Das Scientist, ICAR RC NEH Region, Tripura Centre.	12-11-17 07-11-17	Gene Sequencing Tools: Application of RNAi and CRISPER Technologies in Aquaculture Research DNA Vaccines
19.	Ms. Arpita Ghosh Scientist, Eurofins Ltd., Bangalore	16-11-17 20-11-17	Biological application of nanotechnology & Serological techniques in diagnosis of microbial diseases of fish Transcriptomics

Table 5.12 Awards and recognition of faculty members

Sl. No.	Name of the Faculty	Details of Awards/recognition received
(i) College of Post-Graduate Studies, Umami, Meghalaya		
1.	Dr. Ram Singh Associate Professor	Vice-president of Indian Society of Agricultural Economics, Mumbai, (India) during 77 th Annual Conference at CPGS, CAU (Imphal), Umiam held on 12-14 th October, 2017
(ii) College of Agricultural Engineering and Post Harvest Technology, Gangtok, Sikkim		
1.	Dr. G. T. Patle Assistant Professor	Awarded Certificate of Appreciation from ICAR-NRC for Orchids, Pakyong, Sikkim. for the contribution towards the Development of a concept of drip irrigation in orchids cultivation on 05.10.2017

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Sl. No.	Name of the Faculty	Details of Awards/recognition received
		Received best paper (Poster Award) for the paper on “Ensuring the water security in Sikkim through climate smart water technologies: A training and field demonstrations approach” during the session on doubling the farmer’s income through horticulture/floriculture.
2.	Er. S. K. Satpathy Asst. Prof.	Certified as Trainer for the job role-Tractor Operator by ASCI
3.	Dr. Mahendra S. Seveda Professor	Certified as Trainer for the job role-Solar Pump Operator by ASCI
4.	Dr. Rakesh Kumar Raigar Assistant Professor	Awarded for Gandhian Young Technological Innovation Appreciation Award 2018. The award is given by Dr Harsh Vardhan, Hon’ble Minister of Science and Technology and Earth Sciences on March 19 2018 at Rastrapati Bhavan, New Delhi.
(iii) College of Horticulture & Forestry, Pasighat, Arunachal Pradesh		
1.	Dr. A.K. Pandey; Dr. S.K. Pattannaik; Dr. P. Sarma; Dr. P. Debnath Dean; Assistant Professor; Associate Professor; Associate Professor	Best Paper Award for the paper entitled Technology for conserving and utilizing rainwater for crop production presents in the 26 th National Conference on Natural Resource Management for Climate Smart Sustainable Agriculture (NRMCSSA-2017), organized by Soil Conservation Society of India, New Delhi in collaboration with Central Agricultural University, Imphal, Imphal at College of PG Studies, CAU, Barapani, Meghalaya from 11-13 September, 2017
2.	Dr. A.K. Pandey; Dr. P. Heisnam; Dr. P. Debnath; S.K. Pattannaik Dean; Assistant Professor; Associate Professor; Assistant Professor	Best Paper Award for the paper entitled Growth and Development parameters of vegetable cowpea (<i>Vigna unguiculata</i> (L.) Walp) as influenced by mulching in the 26 th National Conference on Natural Resource Management for Climate Smart Sustainable Agriculture (NRMCSSA-2017), organized by Soil Conservation Society of India, New Delhi in collaboration with Central Agricultural University, Imphal, Imphal at College of PG Studies, CAU, Barapani, Meghalaya from 11-13 September, 2017
3.	Dr. A.K. Pandey & Dr. S.K. Pattannaik	Banabihari Mohanty Memorial Award for the paper entitled “Deficit Irrigation under Drip System- A potential option for enhancing water productivity in fruit crop” by the Institution of Engineers , India, Odisha State Centre, Bhubaneswar during the 59 th Annual Technical Session held on 21 st January, 2018
4.	Dr. Anil Kumar Assistant Professor (Forest Products and Utilization)	Awarded 2 nd Position in Best Research Paper ward category along with Two Year membership of International Research Group on Wood Protection, Sweden (2017-19) Received Scientific assistance Programme (SAP) Award for IUFRO Div-5 Forest Product Conference, Vancouver, Canada
(iv) College of Veterinary Sciences & A.H., Selesih, Aizawl, Mizoram		
1.	Dr. Suvendu Kumar Behera Assistant Professor	1. Best Oral Presentation in 35th Annual Convention of ISVM 2. Overseas Associateship fellowship, DBT, India, 2017



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Sl. No.	Name of the Faculty	Details of Awards/recognition received
2.	Dr. Gunjan Das Assoc. Professor	Main Nominee of CPCSEA for the Institutional Animal Ethics Committee (IAEC) of CPCSEA of Mizoram University (MZU), Mizoram & Tripura University, Agartala Executive Committee member for Indian Veterinary Medicine Association (Mizoram Chapter) election held on 30 th May' 2015 during Annual General Body Meeting of IVA-Mizoram for the term 2017 – 2019.
3.	Dr. Kalyan Sarma Assoc. Professor	1. Executive member (Regional Secretaries, North East Region) of Indian Society of Veterinary Medicine 2. Member of Project Screening Committee of Govt. of Mizoram under RKVY 3. Level-II Expert for veterinary Medicine in project entitled "Development and Deployment of Mobile Based Agro-Advisory system in North-East India(m4agriNEI) - Phase II (Garo Hills)", funded by Media Lab Asia, MCIT, GOI, New Delhi 'which was commenced on 4th Ju1y'2015 at College of Home Science, CAU, Tura Meghalay
4.	Dr. Laltlankimi; Dr. T.K. Rajkhowa; Dr. R. Ravindran M.V.Sc. scholar ; Professor & Head; Assistant Professor	Dr. B. S. Raya award, 2016 for best non- oncology short communication in Indian journal of veterinary pathology.
5.	Dr. Y. Damodar Singh, Asst. Prof	Bharat Jyoti Purskar 2018 (From Best Citizen Publishing House, New Delhi)
6.	Dr Parthasarathi Behera Assistant Professor (SS)	"Best Oral Presentation award" at the national seminar on Opportunities and Challenges of Translational Research in the Frontier Areas of Animal Biotechnology held during 22 nd to 23 rd September 2017 at CVSc& A.H., OUAT, Bhubaneswar.
7.	Dr.N. Shyamsana Singh Assoc. Prof.	Awarded by ICAR for breed recognition of "Zovawk" Expert member for formulating Mizoram state pig breeding policy
8.	Dr. T.C. Tolenhomba Asst. Prof.	Expert member for formulating Manipur state pig breeding policy
(v) College of Horticulture, Bermiok, South Sikkim		
1.	Dr S.K. Sharma Dean	Nominated as member of Board of Studies for College of Horticultural and Forestry, Jhalwar, Rajasthan by Hon'ble Vice-Chancellor, Kota Agricultural University, Kota, Rajasthan Awarded fellowship by the International Society for Noni Science, Chennai in a function held at Pune on 24 th March 2018.
(vi) College of Home Science, Tura, Meghalaya		
1.	Dr. Lokesh Kumar Mishra Assistant Professor, BioChem	Mishra, L.K., Christopher, A.C., Sarkar, D., Shetty, K. "Aronia Berry Juice: antioxidant and anti-hyperglycemic properties and its comparison with other commercial juices, "3 rd International conference on Food for Health, July 16 th -19 th , 2017, North Dakota State University, Fargo, ND, USA. (Won Best Oral Presentation Award).

HUMAN RESOURCES DEVELOPMENT

Sl. No.	Name of the Faculty	Details of Awards/recognition received
(vii) College of Fisheries, Lembucherra, Tripura		
1.	Dr. Dibyendu Kamilya Asst. Professor	Dr. M.S Swaminathan award for Best Indian Fisheries Scientist awarded by Professional Fisheries Graduate Forum, India
2.	Dr. Arun B. Patel Prof. & Head	Invited Member of Expert panel "GAqP for Fresh Water Aquaculture' under Fish, Fisheries and Aquaculture Sectional Committee, FAD 12"
3.	Dr. N.K. Mehta Asst. Prof.	Best Ph. D. Thesis Award from CIFE, Mumbai.
(viii) College of Agriculture, Pasighat, Arunachal Pradesh		
1.	Dr. L. Geetarani Devi Assistant Professor (Contract)	Dr. N.A.Mujumdar Prize Award (By ISAE, Mumbai) for Best paper presenter award, 2017 Young Scientist Award (by Endling conference, 2018) for best presentation
2.	Dr. Punabati Heisnam Assistant Professor (Contract)	Best Paper Award (by Soil Conservation Society of India, 2017)

Table 5.13 Awards and recognition of Students of CAU, Imphal.

Sl. No.	Name of Student	Title of presentation	Event
College of Post Graduate Studies, Barapani, Meghalaya			
1.	Singyala Chiphang Ph.D. student	<i>Demonetisation and its Impact on Agriculture: Ev- idences from Meghalaya</i>	One of the ten best papers during the 77 th Annual Conference of the Indian Society of Agricultural Economics, College of Post Graduate Studies, Central Agricultural University (Imphal), Umiam, Meghalaya during October 12-14, 2017.
2.	Nivetina Laitonjam Ph.D. student	Impact of monsoon rainfall on yield of rice in Manipur	Best Paper Award during 26 th National Conference on Natural Resource Management for Climate Smart Sustainable Agriculture held at Barapani, Meghalaya during September 11-13, 2017.
		Meteorological Drought: Its Effect on Rice Yield and Farming Community	Best Oral Presentation Award during National Seminar on Smart Farming for Enhancing Input Use Efficiency, Income and Environmental Security held at Barapani, Meghalaya during September 19-21, 2017.
3.	Ms. Balguri Lavanya Sravani, M.Sc. Student	<i>Influence of different con- dition on Storage Insect Pests</i>	Third position for paper presentation during East Zone Student Research Convention held at I.E.T. Dr. Ram Manohar Lohia Avadh University, Faizabad (U.P.) during February, 2018
4.	Ms. M. Victoria Devi Ph.D Student		Best Paper Presentation in the "Indian Society of Extension Education" National Seminar held at BAU, Sabour, Bihar during November, 2017



Sl. No.	Name of Student	Title of presentation	Event
5.	Mr. Sao Evalwell Dkhar, Ph.D student		Best Paper Presentation during the National Seminar on “Smart Farming for Enhancing Input Use Efficiency, Income and Environmental” held at ICAR, RC, NEH Region, Umiam 19-21 September, 2017 Best paper presentation award during the 77th Annual Conference of “Indian Society of Agricultural Economics” which was held at CPGS during October, 2017
6.	Mr. Karma L. Bhutia Ph.D student	<i>Use of Sequence Specific Nucleases for Site Specific Modification of Plant Genome for Crop Improvement</i> <i>Root transcriptome derived genic markers based approach to understand phosphorous deficiency tolerance in acidic soil adapted rice genotypes</i>	Best paper presentation in International Journal of Agricultural Sciences and Research during October, 2017 Best Poster Award in the National Conference on Plant Breeding in Genomics Era held at GKVK, Bengaluru during September, 2017
7.	Mr. N.K. Meena Ph.D student		Best paper presentation Award during 77th annual conference of Indian Society of Agricultural Economics, held at under the auspicious of College of Post Graduate Studies CAU (I) Umiam, Meghalaya from 12 th to 14 th October 2017. Best paper presentation Award during 26 th National Conference on Natural Resource management for Climate smart Sustainable Agriculture organized by Soil conservation society of India at College of Post Graduate studies CAU (I), Umiam, Meghalaya during 11 th -13 th September 2017.

Table 5.14 MOU Signed/collaboration with other institutes during 2017-18:

Sl. No.	1 st Party	2 nd party	Date of signing
1.	ICAR-NIAP, New Delhi	Central Agricultural University, Imphal, Manipur (College of Post Graduate Studies, Umiam, Meghalaya)	12.12.2017

6

Infrastructure Development





6.I. Physical achievement for the year 2017-18

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
1.	(A) Extension of College of Agricultural Engineering & PHT, Ranipool.	Library including Deans' office(- PA-361sqm)	Casting of G+1 floor slab completed and brick work started	
		Transit House (PA-416 sq.m.)	Foundation work started	
		Type II(24 nos)	Casting of slab completed, brick works are in good progress	
		Type III(2 nos)	Laying of P.C.C for foundation started	
		Type IV(18 nos) quarter	Excavation of foundation works completed and reinforcement of columns are erected	

INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
		Boys' Hostel	Casting of ground floor, first floor, second floor and roof slabs are completed. Brick works are completed.	
		Girls' Hostel	Excavation of foundation works are in good progress	
		River Guard Wall	Completed	
		Multi-disciplinary Labs	Approval has been given	
		Fish Pond	To the Construction	
		Hostel for 20 students	Agency for tendering process	
		Office rooms		
		Lecture hall for 40 students		
2.	(A) Extension of College of Horticulture & Forestry, Pasighat.	Boys' Hostel (20 capacity)	Casting of ground floor slab completed & 2 nd floor slab is undergoing	
		Girls' Hostel (20 capacity)	First floor slab completed. 2 nd floor slab completed & brick work has started	
		Type II (20nos) quarter	Works for truss work are undergoing. Brick work almost completed and plaster work is undergoing	






Sl. No.	Name of the College	Name of the buildings	Achievements	Status
		Type III(16 nos) quarter	Brick work completed and plaster is undergoing	
		Type IV(14 nos) quarter	Works for roof beam and truss work are completed and plaster is undergoing. Brick work almost completed and plaster is undergoing	
		Type V(1 no) quarter	Brick work completed. Plastering works completed & painting work has started	
		Indoor sports arena	Slope roof beam works are undergoing. 90% brick works is completed	
	(B) Multi Technology Testing Centre	Multi-disciplinary Labs	Levelling & foundation work started	
	(C) Vocational Training Centre	Hostel for 20 students Office rooms Lecture hall for 40 students		

INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
3.	(A) Extension of College of Home Science, Tura.	Food Processing Laboratory (PA-1044sqm)	Casting of roof slab completed & brick work started	
		Nursery including Day Care (PA-306)	Foundation works completed and casting of grade beam completed	
		Library & Dispensary (PA-332 sq.m.)	Foundation works completed and columns are erected	
		Weaving & spinning (PA-152 sq.m.)	Casting of roof slab completed & brick work started	






Sl. No.	Name of the College	Name of the buildings	Achievements	Status
	(B) Multi Technology Testing Centre	Multi-disciplinary Labs Fish Pond	Approval has been conveyed to the construction Agency for tendering process.	
	(C) Vocational Training Centre	Hostel for 20 students Office rooms Lecture hall for 40 students		
4.	(A) Extension of College of Fisheries, Lembucherra, Agartala, Tripura.	PG Girls' Hostel	Already inaugurated.	
		PG Boys' Hostel	Already inaugurated.	
		Boys' Hostel extension	Construction of wall completed and plastering works in progress.	
		Library building	PCC flooring completed. Scaffolding for roof beam work in progress.	






INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
		Feed mill expansion	Plastering of walls completed. Roof beams completed and roofing work to be taken up very soon.	
		Swimming Pool	Reinforcement for side walls and foundation work in progress.	
		ATIC Building expansion (VTC)	Concreting of all columns completed and preparation of form work for roof beam and slab in progress	
		Extension of main Admn/Acad building	Concreting of all columns completed and preparation of form work for roof beam and slab in progress	
	(B) Multi Technology Testing Centre	Multi-disciplinary Labs Animal Shed	Estimated cost veted and yet to be approved by BOAM	



Sl. No.	Name of the College	Name of the buildings	Achievements	Status
5.	(A) Extension of College of Post Graduate Studies, Barapani, Meghalaya.	Expansion of Boys' Hostel (916.40 sq.m.)	RCC structure completed, brick work up to first floor completed, internal & external plastering work up to first floor completed.	 <p>Boys' Hostel Extension</p>
		Expansion of Girls' Hostel (707 sq.m.)	RCC roof beam in progress, brick work in ground floor and first floor completed and internal plastering of ground floor completed	 <p>Girls' Hostel Extension</p>
		Auditorium (464.50 sq.m.)	Piling work completed, pile cap & tie beam work completed & columns erected.	 <p>Auditorium</p>
		Type IV quarter (Block I & II)	RCC roof beam in progress, brick work in ground floor completed and internal and external plastering of ground floor completed	 <p>Type IV Qtrs. (Block-A)</p>
		Type III & Type II quarter	Piling works in progress	 <p>Type III Qtrs.</p>

INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
6..	(A) Establishment of new College of Agriculture, Pasighat.	Administrative & Academic block (Plinth area 6913sq.m.)	Casting of ground floor slab completed and casting of columns of 1 st floor are undergoing	
		Boys' Hostel (Plinth area 1472 sq.m.)	Casting of ground floor slab completed and casting of 1 st floor pillar are undergoing	
		Girls' Hostel (Plinth area 1472 sq.m.)	Casting of ground floor slab completed and brick works are started	
		Type-II Qtr. (2 nos.) Plinth area 120 sq.m.	Casting of ground floor slab completed. Brick works of ground floor are undergoing	
		Transit (Plinth area 1454 sq.m.)	Ground floor slab casting completed. Brick works of ground floor & casting of pillar of 1 st floor started	
		(B) Prefabricated Structure	Academic/Administrative Block & Labs Boys' Hostel Girls' Hostel	90% of foundation up to plinth completed Excavation work started Construction works completed and handed over to the College Authority








Sl. No.	Name of the College	Name of the buildings	Achievements	Status
7.	(A) Establish-ment of new College of Horti-culture, Bermiok, South Sikkim	Administrative & Ac-ademic Block (Plinth area 5980sq.m.)	Casting of ground floor is completed and rein-forcement of columns of first floor are com-pleted and brick works started	
		Boys' Hostel (Plinth area 1525sq.m.)	Foundation works completed and rein-forcement of columns are erected	
		Girls' Hostel (Plinth area 120sq.m.)	Levelling work com-pleted	
		Type-II Qtr. (2 nos.) Plinth area 1454 sq.m.	Excavation of founda-tion works started	
		Transit House (Plinth area 1508 sq.m.)	Foundation works in good progress	

INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
	(B) Prefabricated Structure	Academic/Administrative Block & Labs	Foundation work completed & erection of steel frame structure are under process	
		Boys' Hostel	Foundation work completed & pillars are erected	
		Girls' Hostel	Foundation work completed & erection of steel frame structure are under process	
8.	(A) Establishment of new College of Horticulture at Thenzawl, Mizoram	Administrative & Academic block	Roof beam casted and concreting of roof slab in some portion completed.	
		Hostel for men (1500 sq.m.)	RCC structures including roof slab completed.	
		Hostel for women (1500 sq.m.)	RCC foundation work completed. Erection and casting RCC columns in progress.	



Sl. No.	Name of the College	Name of the buildings	Achievements	Status
		Transit accommodation	RCC foundation work completed. Erection and casting RCC columns in progress.	
		Type-II Quarter	Foundation excavation completed	
		WBM road 2.2 km	Construction in progress	
(B) Prefabricated Structure		Academic/Admn. Blocks & Labs	90 % of plinth beam completed Steel trusses for pre-fab structure to erected soon.	
		Boys' Hostel	Side levelling completed and foundation work in progress	
		Girls' Hostel	Erection of prefab structure in progress	



INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
9.	(A) Establishment of new College of Veterinary Sciences & Animal Husbandry at Jalukie, Peren Dist. Nagaland.	Administrative & Academic block (8000 sq.m.)	Foundation works & erection of columns in progress.	
		Hostel for men (1500 sq.m.)	Column up to 1 st floor bottom of beam completed	
		Hostel for women (1500 sq.m.)	1 st floor slab & beam shuttering and rod binding in progress	
		Transit House	Casting of grade beam completed and erection of columns in progress	
		Type-II Quarter	Grade beam completed. Casting of RCC completed. Roof beam to be casted very soon	






Sl. No.	Name of the College	Name of the buildings	Achievements	Status
	(B) Prefabricated Structure	Academic/Admn. Blocks & Labs.	All the Prefabricated structures are completed and handed over to the college authority.	
		Boys' Hostel		
		Girls' Hostel		
		Multi Purpose Hall	Up to plinth beam completed	
10.	(A) Establishment of new College of Agriculture at Kyrdemkulai, Ribhoi Dist. Meghalaya.	Administrative & Academic block(6120 sqm)	Concreting of footings, tie beams and erection of column completed	
		Girls Hostel with dining (1359 sqm)	Footing completed and erection of columns completed	




INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
		Boys' Hostel	Site levelling works completed	
		Transit Hostel for faculty	Site levelling works completed	
	(B) Prefabricated Structure	Administrative & Academic block	Reinforcement of plinth in progress	
		Boys' Hostel	Foundation completed PCC flooring completed	
		Girls' Hostel	Foundation completed PCC flooring completed	
11.	(A) Extension of College of Agriculture, Imphal.	Transit House		
		P.G Hostel (PA-2055 sqm)	Pile load testing work started	
		Boys' Hostel (PA-2970 Sqm)	Pile load testing on pile in under process	
		Girls' Hostel (PA-2500 sqm)	Pile load testing work started	
		Type III (10 nos) quarter	Pile load testing completing	
		Type IV (10 nos) quarter	Excavation of test pile is under progress	



Sl. No.	Name of the College	Name of the buildings	Achievements	Status
	(B) Multi Technology Testing Centre	Multi-disciplinary Labs	Casting of RCC columns are in good progress.	
		Animal Sheds	Lay out started for excavation of foundation	
	(C) Vocational Training Centre	Hostel for 20 students	Excavation of foundation completed and casting of footings in good progress	
		Office rooms Lecture hall for 40 students	Casting of RCC column are in good progress.	
12.	(A) Extension of College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl, Mizoram.	PG Hostel for Men(1 Block- 1000 sqm) PG Hostel for Women(1 Block – 1000 sqm) Construction of New Roads Construction of water processing plant Construction of water reservoir Solar Power Plant.	Works awarded and initiatives taken to the start the work.	
	(B) Multi Technology Testing Centre	Multi-disciplinary Labs Animal Sheds		

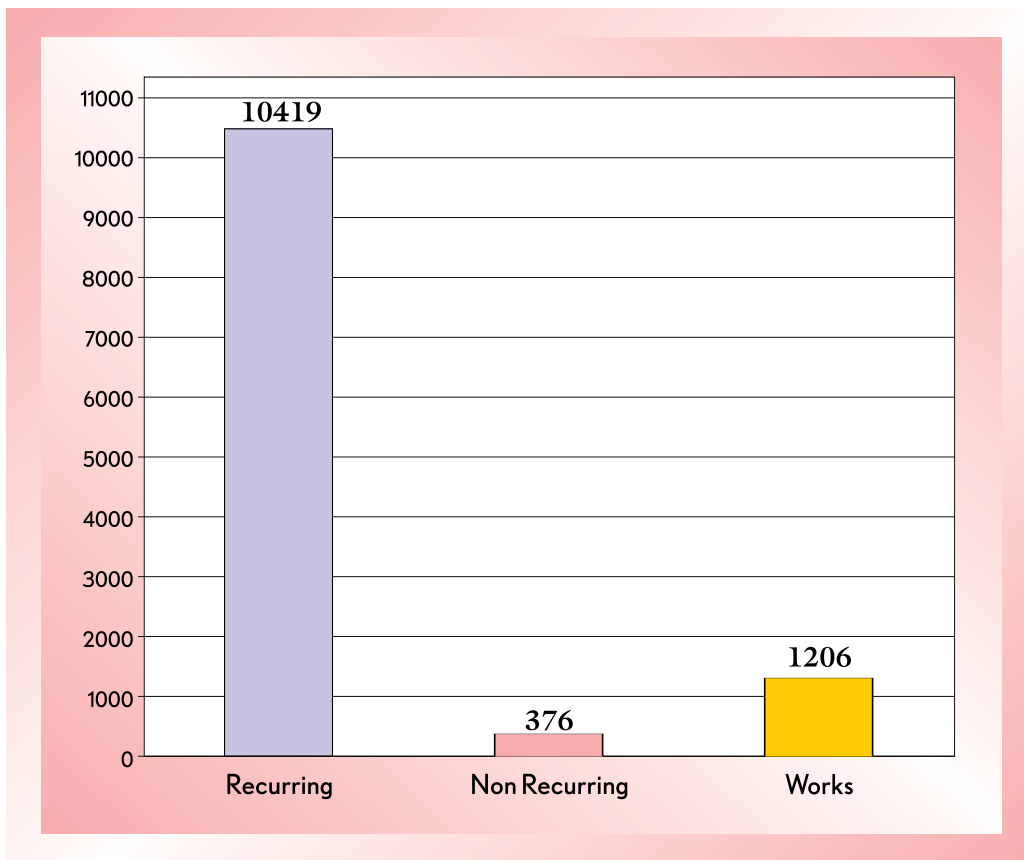
INFRASTRUCTURE DEVELOPMENT

Sl. No.	Name of the College	Name of the buildings	Achievements	Status
	(C) Vocational Training Centre	Hostel for 20 students Office rooms Lecture hall for 40 students	Estimates yet to be vetted.	
13	(A) Establishment of new College of Food Technology, Lamphelpat.	Administrative & Academic block, (Plinth area = 8000 sq.m.) Boys' Hostel with Dining (Plinth area = 1500 sq.m.) Girls' Hostel with Dining (Plinth area =1500 sq.m.) Type-II Qtr. (2 nos.) Plinth area = 120 sq.m. Transit Accommodation (Plinth area = 1500 sq.m.)	Tender process is going on by the construction Agency	
	(B) Prefabricated Structure	Academic/Admn. Blocks & Labs.	Completed and taken over by the University	
		Boys' Hostel	Completed and taken over by the University	
		Girls' Hostel	Completed and taken over by the University	



7

Finance





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Table: 7.1 Unit Wise Budget Allocation during 2017-18 (₹ In lakhs)

Sl. No	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	OHSC	COAE & PHT	COPGS	COFT Imp	COA Pasi-ghat	COH Sikkim	COA Bara-pani	COH Mizoram	COVSC land	COVSC Naga-	Total Receipt	Total for 2017-18
A. RECURRING EXPENDITURE																					
(i) Establishment Charges																					
a)	Pay & Allowances (inclusive other establishment charges)	605.42	105.00	120.00	110.00	1543.00	1560.00	748.13	905.00	555.00	904.82	805.00	35.00	24.51	33.40	13.84	30.00	25.00	25.00	8123.12	8123.12
b)	Retiral Benefits	274.20			5.80	68.00															348.00
(ii)	Travelling Allowance	48.00	1.50	3.00	2.00	9.00	10.40	6.00	13.00	5.00	11.30	5.00	4.00	1.00	2.72	1.30	2.00	2.00	2.00	127.22	127.22
(iii)	Recurring contingency																				0.00
a)	Miscellaneous Expenses	144.85	21.50	16.00	17.15	130.00	242.50	91.50	250.00	84.32	98.71	97.59	7.00	24.09	11.75	7.96	10.00	35.00	35.00	1289.92	1289.92
b)	Fellowship/Scholarship					48.00	32.50	19.00	25.00	5.00	14.06	38.19	2.00	1.50	1.30	0.20	2.00	2.00	2.00	190.75	190.75
c)	H.R.D	1.50				0.50	0.50	0.50	0.50	0.43										3.68	3.68
d)	Advertisement & Publicity	4.00			12.00	0.50	0.50	1.00	2.00	2.00	0.65	1.12		2.00	0.36			2.00	2.00	27.63	27.63
e)	Adjunct/Visiting Professor					5.00		2.00	3.00	0.50			1.00	0.48				1.00	1.00	12.98	12.98
B. Miscellaneous																					
	Research and Extension Programme	1.00		60.00	9.00	26.00	16.84	10.10	46.00	20.00	24.33	2.60		8.00	29.54	1.00	6.01	35.00	35.00	295.42	295.42

FINANCE

Sl. No	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	OHSC	COAE & PHT	COPGS	COFT Imp	COA Pasi-ghat	COH Sikkim	COA Bara-pani	COH Mizo-ram	COH COVSC	COVSC land	Total Receipt	for 2017-18
C. NON RECURRING EXPENDITURE																					
	(i) Equipment (including Machine, tools, live stock& land etc.)																				0.00
a)	General	2.48	1.00			1.00	1.50	1.10	2.00	7.37	4.58	6.00	8.10	32.37	10.00	117.00					194.50
b)	Experiential Learning					7.50															7.50
(ii)	Furniture & Fixture					3.50	6.50	24.00	5.00	1.68	5.00	3.00	14.94	5.08	4.99	5.00					83.69
(iii)	Vehicles																				0.00
iv)	Library Books					5.00	2.00	2.00	2.00	1.94	2.00	2.00	5.00	2.00	5.00	5.00					40.94
v)	Information Technology	4.00				10.00	1.00	1.00	6.68	8.09	2.42	6.00	2.48	2.25	2.00	2.00					49.02
D. WORKS/ CONSTRUCTION																					
I)	Land (Purchase/ Development)																				0.00
(ii)	Petty/Departmental/ ARMO	18.87				50.00	51.76	50.00	50.00	16.62	39.00	16.13	32.25	20.00	7.00	23.00					434.63
iii)	Major Works																				0.00
a)	Xth Plan Spill Over																				0.00
b)	XI Plan Works																				0.00
c)	XII Plan Works	771.00																			771.00
TOTAL AMOUNT		1875.32	129.00	199.00	155.95	1898.50	1933.50	956.08	732.50	1090.50	1002.50	82.13	93.52	86.00	79.00	254.00					12000.00



Table 7.2 Unit Wise Expenditure Incurred during 2017-18 (Rs. In lakhs)

Sl. No	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	COAE & PHT	COPGS	COFT Imp	COA Pa-si-ghat	COH Sikkim	COA Barapani	COH Mizoram	COVSC Nagaland	Total Expenditure up to March 2017
A. RECURRING EXPENDITURE																			
(i) Establishment Charges																			
a)	Pay & Allowances (inclusive other establishment charges)	549.87	97.71	129.18	125.25	1430.18	1425.67	747.63	1003.37	554.41	904.82	804.80	35.67	19.18	33.22	13.84	33.95	127.32	8036.07
b)	Retiral Benefits	416.33			5.80	56.62													478.75
(ii)	Travelling Allowance	24.53	0.94	4.30	1.06	7.23	10.57	6.00	14.37	3.24	11.29	4.32	2.85	0.70	2.72	0.92	0.51	2.92	98.47
(iii) Recurring contingency																			
a)	Miscellaneous Expenses	120.83	16.14	22.24	10.66	130.58	227.51	91.50	161.41	61.40	98.54	94.29	6.13	24.83	11.46	8.04	6.90	33.51	1125.97
b)	Fellowship/Scholarship				53.15	30.77	18.85	15.53	3.21	14.06	38.19	1.04	1.40	1.40	1.30	0.24	0.81	0.20	178.75
c)	H.R.D	0.29					0.32	0.14	0.18	0.20	0.43								1.56
d)	Advertisement & Publicity	11.75			11.30		0.09	0.71	0.02	0.99	0.65	1.23		0.36					27.10
e)	Adjunct/Visiting Professor				3.80		1.43			0.50				0.48					6.21
B. Miscellaneous Research and Extension Programme																			
			54.91	1.91	32.78	16.20	9.28	40.90	11.68	24.33	2.54			2.33	28.98	0.95	0.06	0.68	227.53
C. NON RECURRING EXPENDITURE																			

FINANCE

Sl. No	Head of Account	CAU (HQ)	DI	DR	DEE	COA	COVSC	COF	COHF	COHSC	COAE & PHT	COPGS	COFT Imp	COA Pa-si-ghat	COH Sikkim	COA Bara-pani	COH Mizoram	COVSC Naga-land	Total Expenditure up to March 2017
(i)	Equipment (including Machine, tools, live stock& land etc.)																		
a)	General	2.18	0.98			7.11	9.00	1.10	0.54	1.99	7.16	0.11		8.08	25.61	8.05	37.65	109.56	
b)	Experiential Learning																		0.00
(ii)	Furniture & Fixture	9.91				2.03	6.50	23.26	4.98	1.68	4.98		2.97	14.90	5.07	5.26	5.41	91.93	
(iii)	Vehicles																		0.00
iv)	Library Books					4.23	2.00	1.40	2.04	0.83	1.83	2.16	0.20	5.00	1.98	3.54	3.04	33.21	
v)	Information Technology	19.25				9.31	0.30	0.81	0.76	6.68	8.09	2.42	3.76	2.00	2.10	0.05	0.76	56.31	
D.	WORKS/CONSTRUCTION																		
i)	Land (Purchase/Development)																		0.00
(ii)	Petty/Departmental/ ARMO	20.88				58.52	51.75	46.87	55.45	38.86	16.62	20.21	16.59	9.70	15.43	0.40	7.13	380.05	
iii)	Major Works																		0.00
a)	Xth Plan Spill Over																		0.00
b)	XI Plan Works																		0.00
c)	XII Plan Works	1148.53																	1148.53
	TOTAL AMOUNT	2324.35	115.77	210.63	155.98	1795.54	1780.68	948.98	1299.55	683.49	1090.00	975.25	69.21	80.04	118.20	74.18	218.62	12000.00	



Table 7.3 Unit Wise Revenue Generation of the University for the year 2017-18 (Rs. In lakhs)

Sl. No.	Head of Account	CAU (HQ)	DI	DR	DEE	COA Imp	COV Aizawl	COF	COHF	COHSC	COAE & PHT	COPGS	COFT Imp	COA Pa-si-ghat	COH Sikkim	COA Ba-ra-pani	COH Mizoram	COVSC Nagaland	Total Revenue for 2017-18
1.	Academic Receipt	0.00				47.06	39.41	26.04	52.17	12.56	16.94	20.85	5.13		4.32	2.12		3.91	230.51
2.	Interest on Bank Account	127.01	0.69	1.46	1.18	0.60	0.95	2.90	3.48	3.93	6.15	3.66	0.02	1.14	1.95				155.12
3.	Sale Proceeds of farm Produce	0.00		3.26		6.08	21.74	0.67	3.82	0.34	2.01	0.02			0.26				38.20
4.	Miscellaneous Income					2.04	1.94	1.70	2.51	1.95	5.86	8.68							24.68
5.	Institutional Over-head Charges	31.62			1.17			8.08	22.19		1.45								64.51
6.	Other Income	17.42				2.05	8.04	2.96	5.92	3.42	1.97	4.32							46.10
	Total Amount	176.05	0.69	4.72	2.35	57.83	72.08	42.35	90.09	22.20	34.38	37.53	5.15	1.14	6.53	2.12	0.00	3.91	559.12

Note : Miscellaneous Income includes Income from Guest House, Xerox Charges, Licence fee, Water charges and Electricity Charges from staff.
 Other Income includes Institutional (Overhead) Charges of the Projects, Recruitment Fee, Registration Fee, Tender Fees and Fees from the students e.g. Migration Fee, Certificate.

University Publications





DURING the reporting year, faculties of constituent colleges of the university have published 733 research literatures comprising of 287 full length research and 29 digital object identifier articles, 36 seminar proceedings, 150 papers presented in seminars, symposia, 84 popular articles, 22 books, 40 book chapters and 85 manuals/pamphlets etc. They are listed as under:

List of Scientific publication during 2017-2018:

8.I. Research Papers

8.1.1 College of Agriculture, CAU, Imphal

- Athokpam, H.S., Vikramjeet, K., Chongtham, N., Devi, K.N., Singh, N.B., Singh, N.G., Sharma, P.T. and Heisnam, P. (2018). Micronutrient cations distribution in the profile of orange orchard of Tamenglong district, Manipur (India). *Journal of Experimental Biology and Agricultural Sciences*. 6(1):108-115
- Atom Anupama Devi, Naorem Brajendra Singh and Mutum Dinachandra Singh (2017). Classification and characterization of chilli (*Capsicum annuum* L.) found in Manipur using multivariate analysis. *Electronic Journal of Plant Breeding*, 8(1): 324-330
- Basudha Ch., N.G., Singh and Ngachan S.V. (2017). Studies on protein and lipid digestibility Co-efferent formulated aquatic weed based feeds for *Osteobrama belangeri* (Val.). *Fishery Technology*. (accepted for publication).
- Basudha Ch., Singh, N.G., Devi, N.S., and Sinthoileima Ch. (2017). Induced breeding and emplyronic development of an indigenous fish *Bangana Dero* (Hamilton) in captivity using wova FH. *International Journal of Fisheries and Aquatic studies*, 5 (1): 428-432.
- CNJS Arangba Mangang, K. Nandini Devi, Kh. Lenin Singh and A. Dorendro Singh. (2017)
- Seasonal incidence of insect pests on soybean in relation to weather parameters. *Legume Research*, 40(6) : 1139-40
- Daya Ram, R Tasri Marak and M.K. Singh (2017) Mass Media Exposure of the PG students in North-Eastern Hill University of Meghalaya. *Indian Res.J.Ext.edu* Vol-53 (1):78-83
- Deepa Thangjam, M. Kunjaraj Singh, Daya Ram & N. Okendra Singh (2017) Effectiveness of Training Programmes through perception of KVK Trainees in Imphal East District of Manipur. *Indian Res.J.Ext. edu*. 17 (4):93-98.
- Devarishi Sharma L. and Indira Sarangthem (2017). Characterization of Soil Acidity and Lime Requirement in Soils of Bishnupur Districts, Manipur. *Trends in Biosciences*.10(31): 6578-6585
- Devarishi Sharma L. and Indira Sarangthem (2017). Nature of Acidity and Lime Requirement in Acid Soils of Manipur. *International Journal of Advance Scientific Research and Engineering Trends*. 2 (1): 51-58
- Devi, L.S., H.S. Athokpam, Devi, A.K.B. and Singh, N.B. (2017). Characterization of some germplasm on physiology, yield and quality of greater yam (*Dioscorea alata* L.). *International Journal of Advance Research in Engineering Science and Technology*. 4(5): 86-92.
- H. Chandrajini Devi, V. Prasanna Kumari, Ph. Sobita Devi and Bireswar Sinha (2017). Screening of blackgram genotypes for molecular variability in reaction to *Mungbean Yellow Mosaic Virus (MYMV)*, *Indian Phytopathology*
- Indira Sarangthem, Pebam Bidyananda, Devarishi Sharma L. and Nivedita Oinam. (2017). Characterization of Acid Soil and Lime Requirement of Bishnupur Districts of Manipur *International Journal of Applied and Pure Science and Agriculture*. 3(2): 99-105
- Jekendra Singh Salam, N. Surbala Devi, Priyadarshini Salam and RK Dilip Singh (2017). Comparisons of major biochemical constituents and mineral composition in six cultivars of aromatic rice in Manipur. *Indian Journal of Plant Genetic Resources*, 30(1):61-65.
- K. Nandini Devi, Ksh. Manishwari Devi, J. Lhungdim, H.S Athokpam, Y. Bebila Chanu, Kh. Lenin Singh & A. Dorendro Singh. (2018). Foliar application of potassium under water deficit conditions improved the conditions and yield of wheat (*Triticum aestivum*). *The Bioscan* (Accepted).

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- Khedarani Koijam & Bireswar Sinha. (2018). Antagonistic potential and molecular characterization of *Trichoderma* spp. against *Rhizoctonia solani* infecting ghost pepper in Manipur. *Int.J.Curr. Microbiol.App.Sci* 7(2):2085321-2093.
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- Luikham, E; Kamalesh kumar and P.S. Mariam Anal (2018). Influence of phosphorus on yield and quality of promising varieties of soybean under rainfed condition. *Agric. Sci. Digest*, 38 (1): 65-67.
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- Manish Kumar, M. S. Jeberson, N. B. Singh and Ranjit Sharma (2017). Genetic Analysis of Seed Yield and Its Contributing Traits and Pattern of Their Inheritance in Field pea (*Pisum sativum* L). *Int. J. Curr. Microbiol. App. Sci.* 6(6): 172-181.
- Markidahum Biam, Bireswar Sinha, Ph Sobita Devi. (2017). Mass Production of *Trichoderma viride* with Locally Available Materials. *Environment & Ecology*, 34(4B):3099-3104.
- N. Surbala Devi and D. Saha (2017). Influence of organic matter vis-à-vis humic acid on the transformation of inorganic and organic forms of nitrogen in a Typic Haplustept soil. *Communications in Soil Science and Plant Analysis*, 48(9):1042-1051.
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- Okendro Singh N., N. G. Singh, A.K. Paul, Surinder Kumar and Gangmei Sobha (2017). Modelling of population growth for a seasonal incidence of mustard aphid, *Lipaphis erysimi*. *Journal of the Indian Society of Agricultural Statistics*, 71(2): 155-157
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- Ravi Raj Singh, M.S. Jeberson, N.B. Singh and Ph. Ranjit Sharma (2017). Effect Of Ems On M1 Parameters Of Field Pea (*Pisum sativum* L. var. *arvense*) *Journal of Global Biosciences*, 6(5):4966-4970.
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- T. Sanahanbi Devi and N. Surbala Devi. (2018). Influence of organic manures and moisture regimes on hydrolysable forms of nitrogen in an acid soil of Manipur, India. *International Journal of Current Microbiology and Applied Sciences*. 7(2):921-932.
- W. Tampakleima Chanu, Bireswar Sinha, Ph. Sobita Devi and Pramesh K.H. (2017). Management of soil borne diseases of Chickpea (*Cicer arietinum* L.) by native *Trichoderma* species in Manipur, *Eco. Env. & Cons.* 23 (2):904-908.
- Y. Bebila Chanu, S. Jawahar, K. Nandini Devi & Y. Sanatombi Devi. (2018). Weed Management Practices in transplanted Kodomillet (*Paspalum scrobiculatum*). *The Bioscan* (Accepted).
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8.1.2 College of Post Graduate Studies, Umiam, Meghalaya

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- Ajima, M.N., Pandey, P.K., Kumar, K. and Poojary, N., (2017). Neurotoxic effects, molecular responses and oxidative stress biomarkers in Nile tilapia, *Oreochromis niloticus* (Linnaeus, 1758) exposed to verapamil. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, 196: 44-52.
- Baidya, S. and Patel A.B.,(2018). Effect of Co-cultivation of *Wolffiaarrhiza* (L.) on flesh quality and organoleptic quality of Catla, Rohu, Mrigal, Grass carp, Puntius and Amur carp. *International Journal of Fisheries and Aquatic Studies*, 5: 327-333.
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- Chauvigné, F., Parhi, J., Ollé, J. and Cerdà, J., (2017). Dual estrogenic regulation of the nuclear progesterin receptor and spermatogonial renewal during gilthead seabream (*Sparusaurata*) spermatogenesis. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, 206: 36-46.
- Choudhury, T.G., Vinay, T.N., Gita, S. and Parhi, J., (2017). Advances in bacteriophage therapy for bacterial disease control in aquaculture. *Reviews in Fisheries Science & Aquaculture*, 25: 113–125.
- Debnath, D., Yengkokpam, S., Bhattacharjya, B. K., Biswas, P., Prakash, C., Kohli, M. P. S. and Sharma, A. P., (2016). Effect of Dietary Incorporation of Dry-powdered Water, C. Hyacinth (*EichhorniaCrassipes*) Meal on Growth and Digestibility of *Labeorohita* Fingerlings. *Proceedings of the Zoological Society*, 71: 74-82.
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- Ghosh, R., Upadhyay, A.D. and Roy, A.K., (2017). *In silico* analysis and characterization of fresh water fish ATPases and homology modelling. *Annals of Proteomics Bioinformatics*, 1: 018-024.
- Ghosh, R., Upadhyay, A.D. and Roy, A.K., (2017). *In Silico* Analysis, Structure Modeling and Phosphorylation Site Prediction of Vitellogenin Protein from *Gibelioncatla*. *Journal of Applied Biotechnology & Bioengineering*, 3: 55-61.
- Koyu, B., Sarkar, A., Singh, R. and Singh, R.J. (2017). Is MGNREGA a myth for Arunachal Pradesh? Field Evidence. *Economic affairs*, 62: 313-319.
- Ghosh, R., Upadhyay, A.D., Roy, A.K. and Acharjee, S., (2017). Structural Analysis of Cytochrome C Genes of Major Carp and Utility of Forensic Investigation. *Journal of Forensic Crime Investigation*, 1: 103.
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- Jena, A.K., Biswas, P., Patel, A.B. and Choudhury, T.G. (2017). Effects of temperature on the caudal fin regeneration of Flying Barb, *Esomusdanricus* (Hamilton, 1822). *International Journal of Fisheries and Aquatic Studies*, 5: 166-169.

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- Kamilya, D., Debbarma, M., Pal, P., Kheti, B., Sarkar, S. and Singh, S.T.(2017). Biofloc technology application in indoor culture of *Labeorohita* (Hamilton, 1822) fingerlings: The effects on inorganic nitrogen control, growth and immunity. *Chemosphere*, 182, 8–14.
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- Kaur, N., Kumar, R. and Kamilya, D. (2018). Modulation of systemic and mucosal immune responses of *Catlacatla* (Hamilton, 1822) experimentally challenged with gill monogeneans. *Fish and Shellfish Immunology*, 74: 567–572.
- Keer, N.R., Datta, M.K., Patel, A.B., Rathor, R.P., Kumar, M. and Das, S. (2018). Effect of stocking density on growth and survival of *Cirrhinusreba* (Hamilton, 1822) during spawn to fry nursing (outdoor). *Journal of Entomology and Zoology Studies*, 6: 640-645.
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- Kumar, S., Mahanand, S.S.amdNayak, P.K. (2017). Mathematical modelling and experimental analysis of broccoli (*Brassica oleracea* l.) in tray dryer. *Journal of Pharmacognosy and Phytochemistry*, 6: 1049-1052.
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- Majumdar, R.K., Roy, D., Shitole, S., and Bhaskar, N. (2017). Scientific evaluation of Shidal technology – An age old traditional practice of fish preservation of Northeast India. *Journal of Traditional and Folk Practices*, 5: 16-24.
- Maurya, P.K., Majumdar, R.K., Saha, A., Dhar, B., and Singh, A. S. (2018). Effects of Rosemary Extracts on Textural and Functional Qualities of Surimi Gel from Striped Catfish (*Pangasianodonhypophthalmus*) (Sauvage, 1878) during refrigerated storage. *Fishery Technology*, 55: 24-33.
- Mehta, N.K., and Nayak, B.B. (2017). Bio-chemical composition, functional, and rheological properties of fresh meat from fish, squid, and shrimp: A comparative study. *International Journal of Food Properties*, 20: S707-S721.
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8.2.6 College of Home Science, Tura, Meghalaya

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8.3. Conference/Symposium Proceedings

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8.3.2 College of Fisheries, Lembucherra, Tripura

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8.3.3 College of Post Graduate Studies, Barapani, Meghalaya

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8.3.5 College of Agriculture, Kyrdemkulai, Meghalaya

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

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8.3.7 College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

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8.3.8 College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl

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Tirupati, Andhra Pradesh

8.3.9 College of Home Science, Tura, Meghalaya

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8.4. Abstracts Presented and Published

8.4.1 College of Agriculture, Imphal

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Dinesh K, Bireswar Sinha, Ph Sobita Devi and Rahee Bui (2017): Understanding mycelial compatibility of *Sclerotium rolfsii* in Manipur. In National Symposium on Emerging and Re-emerging Plant Diseases in North East India-Challenges and Strategies 10-11th Oct., 2017 at ICAR-NEH Region , Manipur Centre. (Abstract pp-132).

Elizabeth Thokchom, Bireswar Sinha, Dinesh K, Nirmala Maibam, Sarda K and Ph Sobita Devi S K Sharma (2017). Characterization of native endophytic and rhizospheric plant growth promoting microorganisms from Chakhao (*Oryza sativa* L) and high yielding rice variety of Manipur, India. In 70th Annual Meeting, IPS, national Symposium on Plant Health Management: Embracing Eco-sustainable paradigm from 15-17th Feb., 2018 at Assam Agricultural University, Jorhal, Assam (Abstract Pp-41).

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K. Nandini Devi, Kh. Lenin Singh, Jamkhogin Lungdim, A. Dorendro Singh. (2017). Response of *rabi* maize to gravitational micro-irrigation under Manipur condition. Abstracts of *International Conference on Natural Resources Management and Technology Trends (ICNRM-17)* 27th-29th March, 2017, page 60.

Kh. Lenin Singh, K. Nandini Devi, CNJS Arangba Mangang and Bebila Y.(2017). Effect of gravitational drip irrigation on growth and yield of Indian mustard under Manipur condition. Abstracts of *International Conference on Natural Resources Management and Technology Trends (ICNRM-17)* 27th-29th March, 2017, page 61.

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Rahee Bui, Bireswar Sinha, Ph Sobita Devi, Elizabeth Thokchom and Dinesh K (2017). Molecular identification and in vitro management of mango stem rot disease in Manipur. In 70th Annual Meeting, IPS, national Symposium on Plant Health Management: Embracing Eco-sustainable paradigm from 15-17th Feb., 2018 at Assam Agricultural University, Jorhal, Assam (Abstract Pp-114).

W Tampakleima Chanu, Bireswar Sinha and Kh Pramesh (2017). Association of *Agaricales* spp in Chickpea wilt complex and its management by native *Trichoderma* spp in Manipur. In National Symposium on Emerging and Re-emerging Plant Diseases in North East India- Challenges and Strategies 10-11th Oct., 2017 at ICAR-NEH Region , Manipur Centre .(Abstract Pp-111).

Y Herojit Singh, Bireswar Sinha and S K Sharma (2017). Study on populations of *Candidatus liberibacter asiaticus* from North east India based on genome Locus of Short Tandem Repeat Variability. In 70th Annual Meeting, IPS, national Symposium on Plant Health Management: Embracing Eco-sustainable paradigm from 15-17th Feb., 2018 at Assam Agricultural University, Jorhal, Assam (Abstract Pp-41).

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8.4.2 College of Fisheries, Lembucherra, Tripura

Majumdar, R. K. (2017). Indigenous Fish Preservation Technology of Northeast India – An Overview. Presented in the 11th Indian Fisheries and Aquaculture Forum (11th IFAF) from 21-24 November 2017 held at ICAR-CIFT, Cochin.

Rawat, P and Biswas, P. (2018). Effect of dietary L-tryptophan on cannibalism, growth and survival of Pabda, *Ompok bimaculatus* (Bloch, 1794) fry. International Conference on recent trends in agriculture, food science, forestry, horticulture, aquaculture, animal sciences, biodiversity, ecological sciences and climate change (AFHABEC-2018). P. 49. 10th February, 2018. Jawaharlal Nehru University, New Delhi.

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8.4.3 College of Post Graduate Studies, Barapani, Meghalaya

National Conference (26th) on “Natural Resources Management for Climate Smart Sustainable Agriculture (NRMCSSA-2017)” at College of Postgraduate Studies New Delhi, India during 11 to 13th September 2017 (oral presentation) a paper entitled “Impact of organic mulching on soil nutrient and yield of French bean (*Phaseolus vulgaris* L.)”; (By: Yearbok Marwein and Lala I.P. Ray) CA-14 Page No 43.

National Conference (26th) on “Natural Resources Management for Climate Smart Sustainable Agriculture (NRMCSSA-2017)” at College of Postgraduate Studies New Delhi, India during 11 to 13th September 2017 (oral presentation) a paper entitled “Real-Time Open-Pan Based Irrigation Scheduling In Potato Under Mid Hills Of Meghalaya”; (By: M. Gogoi and Lala I.P. Ray) CA-14 Page No 43.

National Conference (26th) on “Smart Farming for Enhancing Input Use efficiency, Income and Environmental Security (SFEIES-2017)” held at ICAR Research Complex for NEH Region Umiam, Meghalaya in collaboration with Indian Association of Hill Farming (IAHF), Meghalaya, India during 19 to 21st September 2017 (oral presentation) a paper entitled “Performance of winter potato under varied dates of planting: a case study under mid hills of Meghalaya” (By: M. Gogoi and Lala I.P. Ray) Page No 37.

National Conference (26th) on “Smart Farming for Enhancing Input Use efficiency, Income and Environmental Security (SFEIES-2017)” held at ICAR Research Complex for NEH Region Umiam, Meghalaya in collaboration with Indian Association of Hill Farming (IAHF), Meghalaya, India during 19 to 21st September 2017 (oral presentation) a



- paper entitled "Comparison of different reference evapotranspiration (ET_0) models and crop-coefficients of early summer potato in mid hill region of Meghalaya" (By: M. Tahashildar, P.K. Bora, Lala I.P. Ray and Gagan Timsina) Page No 48.
- National Conference (26th) on "Smart Farming for Enhancing Input Use efficiency, Income and Environmental Security (SFEIES-2017)" held at ICAR Research Complex for NEH Region Umiam, Meghalaya in collaboration with Indian Association of Hill Farming (IAHF), Meghalaya, India during 19 to 21st September 2017 (oral presentation) a paper entitled "Effect of varying N levels on nitrogen economy in maize + legume intercropping in acidic soils of midhills of Meghalaya" (By: Saphina Mary Kurkalang, A.K. Singh and Lala I.P. Ray) Page No 48.
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Bikram Singh, Sanjeev Kumar, Mukul Kumar, BR Phukan, Rajan Bawa and A.K. Pandey (2017). Nursery technique and management of forest tree species. College of Horticulture and Forestry, CAU, Pasighat, Arunachal Pradesh. Manual. No.01/2017. Pp.137.

Nicolee Lyngdoh, Mukul Kumar, Siddhartha Singh, A.K. Pandey. (2017). "Wild Edible Fruit Trees of Arunachal Pradesh". Technical Bulletin No.-02/2017, College of Horticulture and Forestry, Central Agricultural University, Pasighat-791102, Arunachal Pradesh.

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

Rahman, S., and Sarma, K., (2017). Training manual on capacity building programmed on Sustainable Livestock Production in North-East Region and Extension Techniques. College of Veterinary Sciences & A.H., Central Agricultural University, Selesih, Aizawl, Mizoram. Pages: 74.

Zosang Puii, Saikia, P., Rahman, S. (2018). Training Module-I on Certificate Course on Piggery Farming (Mizo Language). College of Veterinary Sciences & A.H., Central Agricultural University, Selesih, Aizawl, Mizoram. Pages: 16.

Zosang Puii, Saikia, P., Rahman, S. (2018). Training Module-II on Certificate Course on Piggery Farming (Mizo Language). College of Veterinary Sciences & A.H., Central Agricultural University, Selesih, Aizawl, Mizoram. Pages: 20.

8.8.6 College of Home Science, Tura, Meghalaya

Folder on Dye Extraction: Source, Application and Its Sustainability (2018).

Manual booklet on "Hand Bag Making" (2018).

UNIVERSITY PUBLICATIONS

Shipra Nagar (2018) Training manual on Educational empowerment of school.

Shipra Nagar (2018) Training manual on Developing stimulatory play materials for children.

8.9. Any Other (Laboratory Manuals, Pamphlets etc)

8.9.1 College of Agriculture, Imphal, Manipur

J. Lungdim and E. Luikham (2017). Study manual on production technology of field crops (kharif).

J. Lungdim (2017). A Study Manual on Agron-353 (Field crops-I (Kharif).

J. Lungdim (2017). A Practical Manual on Agron-353 (Field crops-I (Kharif).

J. Lungdim (2017). A Study Manual on Agron 243 (Field crops-II (Rabi).

J. Lungdim (2017). A Practical Manual on Agron 243 (Field crops-II (Rabi).

J. Lungdim (2017). A Reading manual on crop production technology (Field crops), Course: FT-117 (Food Tech.)

8.9.2 College of Fisheries, Lembucherra, Tripura

A. S. Barman, H. Priyadarshi & Atom A. Singh (2017). Seed Production and Hatchery Management of *ClariasBatrachus*, College of Fisheries, CAU (I), Lembucherra, Tripura (W). (In Bangali Language).

J. Parhi, S. C. Mandal, B. Debbarma & Atom A. Singh (2017). Seed Production Technology of Fresh Water Prawn *Macrobrachiumrosenbergii*, College of Fisheries, CAU (I), Lembucherra, Tripura (W). (In Bangali & kokborok Language).

J. Parhi, H. Priyadarshi, Sagar C Mandal, J. Choudhury (2017). Practical manual on " Molecular Biology Techniques" Biotech Hub, College of Fisheries, CAU (I), Lembucherra, Tripura (W), Published by Dean, College of Fisheries, CAU (I), Lembucherra, pp. 77.

8.9.3 College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland

Practical manuals for Livestock Production Management (2017) Published by Dean, CoVSc &AH, Jalukie,

CAU (I).

Practical manuals for Veterinary Anatomy(2017) Published by Dean, CoVSc &AH, Jalukie, CAU (I).

Practical manuals for Veterinary Physiology(2017) Published by Dean, CoVSc &AH, Jalukie, CAU (I).

Practical manuals for Veterinary Pathology(2017) Published by Dean, CoVSc &AH, Jalukie, CAU (I).

Practical manuals for Veterinary Microbiology(2017) Published by Dean, CoVSc &AH, Jalukie, CAU (I).

Practical manuals for Animal Genetics & Breeding(2017) Published by Dean, CoVSc &AH, Jalukie, CAU (I).

Practical manuals for Animal Nutrition(2017) Published by Dean, CoVSc &AH, Jalukie, CAU (I).

Practical manuals for Veterinary Biochemistry Published by Dean, CoVSc &AH, Jalukie, CAU (I).

8.9.4 College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

Bikram Singh (2017). *Practical Manual: Introduction to Forestry (SA-1101)*. No. SAF(TM)-01. Pp: 172.

Bikram Singh (2017). *Theory Manual: Theory and Practice of Silviculture (SA-1203)*. No. SAF(TM)-02. Pp: 207.

Bikram Singh (2017). *Theory Manual: Nursery Management (part) (FB-2204)*. No. SAF(TM)-03. Pp: 130.

Bikram Singh (2017). *Theory Manual: Forest Protection (part) (NR-1203)*. No. SAF(TM)-04. Pp: 88.

Bikram Singh (2017). *Theory Manual: Silviculture of Indian Trees (SA-2207)*. No. SAF(TM)-05. Pp: 186.

Bikram Singh (2017). *Theory Manual: Plantation Forestry (SA-3209)*. No. SAF(TM)-06. Pp: 179.

Bikram Singh (2017). *Practical Manual: Forest Range Training Programme (FOWE)*. No. SAF(PM)-07. Pp: 180.

Bikram Singh (2017). *Practical Manual: Nursery Management (part) (FB-2204)*. No. SAF(PM)-08. Pp: 90.

Bikram Singh (2017). *Practical Manual: Plantation Forestry (SA-3209)*. No. SAF(PM)-09. Pp: 116.

Bikram Singh (2017). *Practical Manual: Forest Protection (part) (NR-1203)*. No. SAF(PM)-10. Pp: 63.

Bikram Singh (2017). *Practical Manual: Seed collection, storage and testing (PT-521)*. No. SAF(PM)-11. Pp: 41.

Bikram Singh (2017). *Practical Manual: Silviculture of*



Indian Trees (SA-2207). No. SAF(PM)-12. Pp: 86.

Bikram Singh (2017). *Theory Manual: Silviculture* (FOR-501). No. SAF(TM)-13 Pp: 143.

Bikram Singh (2017). *Theory Manual: Seed collection, storage and testing* (PT-521). No. SAF(TM)-14. Pp: 124.

Bikram Singh (2017). *Theory Manual: Energy plantation and biofuels* (PT-525). No. SAF(TM)-15. Pp: 124.

Bikram Singh (2017). *Nakshatra Trees*. No. SAF(NT)-16. Pp: 12

8.9.5 College of Veterinary Science & Animal Husbandry, Selesih, Aizawl, Mizoram

P. C. Kalita, Arup Kalita, P. J. Doley and O. P. Choudhary. *Veterinary Anatomy*. Published by Dean, CoVSc &AH, Aizawl, CAU (I).

Practical Manual on VPT-311 (General and Systemic Pharmacology).

Practical Manual on VPT-321 (Neuropharmacology).

Practical Manual on VLD-421 (Vet. Clinical Biochem. & Laboratory Diagnosis-II).

Laboratory Manual on Veterinary Biochemistry –VBC Unit-1.

Laboratory Manual on Veterinary Biochemistry –VBC Unit-2.

Laboratory Manual on Veterinary Biochemistry –VBC Unit-3.

Veterinary Clinical Biochemistry and Laboratory Diagnosis-I (VLD-411).

Laboratory Manual on Veterinary Physiology – Unit I and Unit II.

Laboratory Manual on Veterinary Physiology – Unit III and Unit IV.

Laboratory Manual on Veterinary Physiology-III (VPB-221).

8.9.6 College of Home Science, Tura, Meghalaya

Dr. Rajkumari Dhanalaxmi (2017). *Laboratory manual on Textile Science And Fabric Care*.

Shipra Nagar (2017). *Teachers on Health Issues of Adolescents*.

8.9.7 College of Horticulture, Bermiok, South Sikkim

Dipika Sarmah. (2018). *Package and Practices of Growing Anthurium (Anthurium Andreanum)*.

Dipika Sarmah.(2018). *Package and Practices of Growing Cymbidium Orchid (Cymbidium sp.)*.

Dipika Sarmah. (2018). *Package and Practices of Growing Marigold (Tagets sp.)*.

Diana Sagolsem. (2018). *Package and Practices of Chilli (Capsicum annum) Cultivation in Sikkim*.

Diana Sagolsem. (2018). *Package and Practices of Chayote (Sechium edule) Cultivation in Sikkim*.

Diana Sagolsem. (2018). *Package and Practices of Tomato (Solanum lycopersicum) Cultivation in Sikkim*.

M. R. Gurung. (2018). *Package and Practices of Guava (Pisidium guajava L.) Cultivation*.

Diganggana Talukdar. (2018). *Important Diseases of Mandarin (Citrus reticulata) in Sikkim and its management*.

Diganggana Talukdar. (2018). *Important diseases of Large Cardamom (Amomum subulatum) in Sikkim and its Management*.

Diganggana Talukdar. (2018). *Important diseases of Turmeric (Cucurma Longa L.) in Sikkim and its Management*.

Pukhram Bhumita. (2018). *Integrated Management of Insect Pest of Large Cardamom (Amomum subulatum Roxb.)*.

M. R. Gurung. (2018). *Kiwi fruit / Chinese Gooseberry (Actinidia deliciosa)*.

M. R. Gurung. (2018). *Management of Sikkim Mandarin Orchard*.

Pukhram Bhumita. (2018). *Major insect pests of tomato (Lycopersicon esculentum) and their management*.

Sudip Das. (2018). *Greenhouse production of Tomato (Solanum lycopersicum L) in Sikkim*.

Pukhram Bhumita. (2018). *Major insect pests of Citrus: A Field Diagnostic Aid*.

8.9.8 College of Horticulture, Thenzawl, Mizoram

S. Herojit Singh (2018). *Ornamental Horticulture (FLS-221)- Practical Manual cum Record*.

9

Visitors





CENTRAL AGRICULTURAL UNIVERSITY ANNUAL REPORT 2017-18

T HE university witnessed the visits of 106 eminent personalities at different college campuses located in seven states of the north East hill region of India during the year 2017-18. The visitors included eminent administrators, scientists, faculties, meritorious students and progressive farmers of varied experiences.

Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
(i) College of Agriculture, Imphal, Manipur					
1.	Shri Shankar Lal Meena	Joint Secretary	Ministry of DoNER, Govt. of India	Visit at Central Agricultural University, Imphal	02.05.17
2.	Shri. Naveen Verma	Secretary	DoNER, Govt. of India	Meeting with V.C. Directors, Scientists, Teachers & Student.	23.05.17
3.	Shri Yumnam Khemchand	Hon'ble Speaker	Manipur Legislative Assembly, Govt. of Manipur	New India Manthan-Sanklap Se Sidhi	26.08.17
4.	Shri Y. Joykumar Singh	IPS (retd.) Hon'ble Deputy Chief Minister	Govt. of Manipur	Input distribution programme under Tribal Sub Plan	19.04.17
5.	Shri Karam Shyam Singh	Hon'ble Minister, PDS, Consumer Affairs, Weights & Measures, Revenue & Relief & Rehabilitation	Govt. of Manipur	4 th Inter Collegiate Youth festival	15.01.18
6.	Shri Th. Radheshyam Singh	Hon'ble Minister of Education	Govt. of Manipur	Chaired the Pony Show	29.01.18
7.	Shri P. Renedy Singh	Former Captain	Indian Football Team	Annual Games & Sports	01.02.18
(ii) College of Post Graduate Studies, Umiam, Meghalaya					
1.	Dr. Tej Pratap	Former Vice-Chancellor	SKUAST, Srinagar (J&K)	Official	12.05.17
2.	Dr. S.S. Baghel	Former Vice Chancellor	CAU, Imphal, Manipur	Official	14.06.17 - 16.06.17
3.	Dr. M.P. Singh	Former Vice Chancellor	CAU, Imphal, Manipur	Official	
4.	Dr. K. Pradhan	Former Vice Chancellor	O.U.A.T., Bhubaneswar	Official	
5.	Sh. Banwari Lal Purohit	Hon'ble Governor	Meghalaya	Official	11.09.17
6.	Shri. Ronnie V. Lyngdoh	Minister for Soil and Water Conservation	Meghalaya	Official	13.09.17

VISITORS

Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
7.	Prof. Pradeep K. Sharma	Vice-Chancellor	SKUAST of Jammu	Official	11.09.17
8.	Shri A. H. Scott Lyngdoh	Chairman Law Commission	Shillong, Meghalaya	Official	30.08.17
9.	Padamshree Subhash Paleka			Official	23.08.17
10.	Dr. R. S. Paroda	Former Secretary, DARE and Director General, ICAR and former Chairman, Haryana Farmer's Commission, Govt. of Haryana, Chandigarh	Chairman of TAAS, New Delhi and Senior Advisor, Asia Pacific Association of Agricultural Research Institutes (APARRI), Bangkok, Thailand	Official	12.10.2017
11.	Prof. Y.K. Alagh	Former Union Minister, Govt. of India &	Hon'ble Chancellor, Gujarat Central University and former Hon'ble Vice-Chancellor, JNU	Official	12.10.2017
(iii) College of Agricultural Engineering & Post Harvest Technology, Gangtok, Sikkim					
1.	Prof. N. S. Rathore	DDG (Education)	ICAR, New Delhi	Fifth Deans' Committee Review Meeting of Agricultural Engineering, Food Technology, Dairy Technology & Bio Technology	02.06.17 to 03.06.17
2.	Dr. G. Venkateshwarlu	ADG (EQR)	ICAR, New Delhi	Fifth Deans' Committee Review Meeting of Agricultural Engineering, Food Technology, Dairy Technology & Bio Technology	02.06.17 to 03.06.17
3.	Dr. M. B. Chetti,	ADG (HRD),	ICAR, New Delhi	Fifth Deans' Committee Review Meeting of Agricultural Engineering, Food Technology, Dairy Technology & Bio Technology	02.06.17 to 03.06.17
4.	Dr. P. S. Pandey,	ADG (EP&HS)	ICAR, New Delhi	Fifth Deans' Committee Review Meeting of Agricultural Engineering, Food Technology, Dairy Technology & Bio Technology	02.06.17 to 03.06.17



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Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
5.	D . R. P. Kaachru	Former ADG	ICAR, New Delhi	Board of Studies of CAEPHT, Gangtok	04.05.17 to 06.05.17
6.	Dr. W. R. Reddy	IAS & Director General	National Institute of Rural Development and Panchayati Raj, Hyderabad	Visited ATIC of college	21.03.18
7.	Dr. R. M. Pant	Director	National Institute of Rural Development and Panchayati Raj, North Eastern Regional Centre, Guwahati	Visited ATIC of college	21.03.18
(iv) College of Horticulture & Forestry, Pasighat, Arunachal Pradesh					
1.	Brig. (Dr.) B.D.Mishra	Hon'ble Governor	Govt. of Arunachal Pradesh	official	14.03.18
2.	Shri Gegong Apang	Hon'ble Ex Chief Minister	Govt. of Arunachal Pradesh	Arunachal Agri Expo 2018	17.03.18
3.	Shri Sunil Kumar Singh	Additional Secretary & Finance Advisor, ICAR, New Delhi	ICAR, New Delhi	Laid the foundation stone of Indoor Sports Complex and inaugurated Plant Health Clinic	25.05.17
4.	Dr. Jitender Chauhan	Technical Advisor to Union Minister of Agriculture and Farmers' Welfare, New Delhi	Govt. of India, New Delhi	Guest of Honour on Scientific Advisory Committee Meeting	01.02.18
5.	Shri C. Roul	Additional Secretary (DARE) and Secretary (ICAR), New Delhi	Government of India New Delhi	Official	24.05.17
6.	Dr. J. S. Sandhu	DDG (Crop Science)	ICAR, New Delhi	Official	24.05.17
7.	Shri A. Barua	Commissioner & Secy. Dept. of Agriculture, Govt. of Assam	Government of India New Delhi	Official	24.05.17
8.	Shri SurajitDutta	IFS (Red.) Dehradun	ICFRE, Dehradun,	Member of Accreditation Team	31.05.17 to 01.06.17
9.	ShriShivakumar	C.M. IFS, ADG (Edu. & R.B.), IC-FRE, Dehradun	ICFRE, Dehradun	Member of Accreditation Team	31.05.17 to 01.06.17

VISITORS

Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
10.	Shri K. K. Mittal	Addl. Chief Secy. and APC Govt. of Assam	Govt. of Assam	Official	24.05.17
11.	Dr.A.K.Tripathi	Director, ATARI Guwahati	ATARI, Guwahati	Visit and Attended the Scientific Advisory Committee Meeting	24.05.17 and 01.02.18
12.	Prof. M.A.Rahim	Secretary, ISMF, M&AP	Secretary, ISMF, M&AP	Guests of Honor on 4 th International Symposium on Minor Fruits, Medicinal & Aromatic Plants.	05.12.17 to 06.12.17
13.	Prof. Tamo Mibang	Vice-Chancellor	Rajiv Gandhi University, Itanagar	Chief Guest on 17 th Annual College Week-2017	18.10.17
14.	Prof. Solaiman Ali Fakir	Joint Secretary	International Society of Minor Fruits, Medicinal & Aromatic Plants, Bangladesh	Attended the 4 th International Symposium on Minor Fruits, Medicinal & Aromatic Plants.	05.12.17 to 06.12.17
15.	Prof. S.N. Ghosh	President,	International Society of Minor Fruits, Medicinal & Aromatic Plants, Bangladesh	Attended the 4 th International Symposium on Minor Fruits, Medicinal & Aromatic Plants.	05.12.17 to 06.12.17
16.	Prof. M.N. Naugraiya	Professor	IGKV, Raipur;	Attended the 4 th International Symposium on Minor Fruits	05.12.17 to 06.12.17
17.	P. Manivel	Director	DMAPR, Anand, Gujarat	Attended the 4 th International Symposium on Minor Fruits	05.12.17 to 06.12.17
18..	Dr. B.L. Saraswat	Director	National Bee Board, New Delhi	Attended the 4 th International Symposium on Minor Fruits	05.12.17 to 06.12.17
19.	Prof. A. N. Maurya	Ex- Director	Banaras Hindu University, Varanasi	Attended the 4 th International Symposium on Minor Fruits and attended Interface Meeting for state of Arunachal Pradesh	05.12.17 to 06.12.17
20.	Dr. K.K. Jindal	Ex -Director of Research	Central Agricultural University, Imphal, Manipur & UHF	Attended the 4 th International Symposium on Minor Fruits	05.12.17 to 06.12.17



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Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
21.	Mr. TamiyoTatak	Deputy Commis-sioner	Pasighat, Arunachal Pradesh	Chief Guest of Honour on Interface Meeting for state of Arunachal Pradesh	04.12.17
22.	Shri John Neihlaia	Deputy Inspector General (DIG)	Central Zone, Pasighat	Guest of Honour on 17 th Annual College Week-2017	18.10.17
23.	Dr Y. R. Darang	Medical Superinten-dent	BakinPertin General Hospital Pasighat	Guest of Honour on 17 th Annual College Week-2017	18.10.17
24.	Prof. V.K. Mishra	Ex-Dean,	College of Horticul-ture and Forestry, Pasighat	Attended the 4 th International Sym-posium on Minor Fruits, Medicinal & Aromatic Plants and attended on Interface Meeting for state of Arunachal Pradesh	04.12.17 to 06.12.17
25.	Shri Prashant Gautam	Superintendent of Police, East Siang District	Pasighat, East Siang District	Guest of Honour on Arunachal Agri Expo-2018.	17.03.18
26.	Smt. Y.J. Lego	Deputy Director of Agriculture	Pasighat, East Siang District, Arunachal Pradesh	Guest of Honour on Arunachal Agri Expo-2018	17.03.18
27.	Shri Tasing SitangEko	Chief Conservator of Forest	Pasighat, East Siang District, Arunachal Pradesh	Chief Guest on Valedictory function of Arunachal Agri Expo-2018	18.03.18
(v) College of Veterinary Sciences & Animal Husbandry, Selesih, Aizawl					
1.	Shri Chhabilendra Roul	Addl. Secretary (DARE) & Secretary (ICAR)	KrishiBhawan, New Delhi	48 th Board of Man-agement Meeting of Central Agricultural University, Imphal	31.10.17
2.	Dr. O.P. Chaudhary	Joint Secretary (ANLM)	Deptt. of Ani-Hus, Dairying & Fish-eries, Ministry of Agricul-ture, Govt. of India, New Delhi	48 th Board of Man-agement Meeting of Central Agricultural University, Imphal	-do-
3.	Dr. Arvind Kumar KAB-II, Pusa, New Delhi	Vice-Chancellor, Rani Lakshmi Bhai, CAU, Jhansi, Uttar Pradesh.	Camp Office : Room No.213,	48 th Board of Man-agement Meeting of Central Agricultural University, Imphal	31.10.17

VISITORS

Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
4.	Dr. Vijay Singh Thakur Pradesh	Ex-VC & Director of Research	Dr. Y.S. Parmar University of Horticulture Forestry, Nauni, Solan, Himachal	48 th Board of Management Meeting of Central Agricultural University, Imphal	31.10.17
5.	Shri Omkar Singh	Principal Chief Conservator of Forests	Govt. of Arunachal Pradesh, Itanagar	48 th Board of Management Meeting of Central Agricultural University, Imphal	31.10.17
6.	Dr. Mohan Bhattacharya	Ex-Director, NRC on Yak, A.P)	Geetanjali House No.13 Bye Lane 01, Sreenagar, Guwahati	48 th Board of Management Meeting of Central Agricultural University, Imphal	31.10.17
7.	Dr.(Mrs.) Labanya Mazumdar	Ex-Chairperson, Child Welfare Committee, Jorhat, & Ex-Dean, AAU	Joy Nagar, Jail Road, Jorhat	48 th Board of Management Meeting of Central Agricultural University, Imphal	31.10.17
8.	Shri Haokholet Kipgen	President	Feed/KVK-Sylvan Hengbung, PO – Kangpokpi, Senapati District, Manipur.	48 th Board of Management Meeting of Central Agricultural University, Imphal	31.10.17
9.	Shri Jokut Modi	Member	Napti Village, East Siang District Arunachal Pradesh	48 th Board of Management Meeting of Central Agricultural University, Imphal	31.10.17
10.	Dr. Daniel	Ex-Joint Director, Department of Veterinary & Animal Husbandry, Mizoram&President,	Indian Veterinary Association, Mizoram	Training programme on "Practices of Hygiene in Quality Milk Production and Safety Issues"	-do-
(vi) College of Horticulture, Bermiok, South Sikkim					
1.	Prof. K. K. Jindal	Member, Board of Studies (Faculty of Horticulture and Forestry) CAU, Imphal and Ex-Director of Research, CAU, Imphal	Surya Vihar, Solan, Himachal Pradesh	Interaction with Staff and Students of College of Horticulture, Bermiok, South Sikkim	24.01.18
2.	Dr. Y.C Gupta	Professor and Head	Department of Floriculture and Landscape Architecture College of Horticulture Dr Y S Parmar University of Horticulture and Forestry, Nauni, Solan	Interaction with Staff and Students of College of Horticulture, Bermiok, South Sikkim	15.02.18



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Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
(vii) College of Home Science, Tura, Meghalaya					
1.	George B. Lyngdoh	Jt. Mission Director	SRCS, Meghalaya	Official	27.04.17
2.	Dr. M. M. Adikary	Former Vice Chancellor	BCKV, WB	Official	29.05.17
3.	Dr. Manoshi BaruahDeka	Professor ECM	AAU Jorhat	Official	29.05.17
4.	Mr. B. Syiem	Asst. Direct of Agriculture	Govt of Meghalaya	Official	20.06.17
5.	Mr. A. Dkhar	Asst. Director of Agriculture	Govt of Meghalaya	Official	20.06.17
6.	Mr. S. S. Basak	GM(C) E-III	Bridge & Roof. Co. India Ltd	Official	11.08.17
7.	Mr. Chittaranjan Debnath	Engineer	Bridge & Roof. Co. India Ltd	Official	11.08.17
8.	Dr. K R. Devi	Dy. Director	RMRC	Official	07.10.17
9.	Mr. S. Jojowan	Sr. Audit Officer	AG. Audit, Meghalaya	Official	15.11.17
10.	Ms. Binita Hazarika	Jr. Horticulture	Citrus Research Station, AAU TSK	Official	26.11.17
11.	Dr. Rajappa J J	Scientist	ICAR Umiam Shilong	Official	28.12.17
12.	Mr. P. Sen	Architech	Skematic Consultants, Salt Lake City Kolkatta	Official	19.01.18
13.	Dr. Y Rohumani Singh	Asst. Prof	Dept. Earth Science, Manipur University	Official	14.02.18
(viii) College of Fisheries, Lembucherra, Tripura					
1.	Shri Sankar Prasad Datta	Hon'ble Member of Parliament Lok Sabha	Govt.of Tripura	CAU Agri-Fair 2017-18	05.11.2017
2.	Padma Bhushan Dr. R. B. Singh	Chancellor	CAU, Imphal	CAU Agri-Fair 2017-18	05.11.17
3.	Dr. Bidyut C. Deka	Director	ICAR-ATARI, Meghalaya		05.11.17
4.	Dr. A. K. Tripathi	Director	ICAR-ATARI, Guwahati		05.11.17
5.	Dr. Narendra Prakash	Director	ICAR RC-NEH Region, Meghalaya		05.11.17

VISITORS

Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
6.	Shri Aghore Debbarma	Hon'ble Minister of Agriculture	Govt. of Tripura	Closing ceremony of CAUAgri-Fair 2017-18	07.11.17
7.	Shri Dilip Kr. Das	Hon'ble Sabhadhipati	Pachim Tripura Zilla Parisad		
8.	Dr. Dilip Kumar	Chairman Ex-vice chancellor / Director	CIFE, Mumbai	4 th Scientific Advisory Committee meeting of CoE-FAB	08.12.17
9.	Dr. Vindhya Mohindra	Pr. Scientist & Head	ICAR-NBFGR		
10.	Dr. Lal Krishna	Senior Consultant	CAAB NER-BPMC DBT GOI		
11.	Shri Tathagata Roy	Governor	Govt. of Tripura	National Conference on Linking Start-ups and SMEs in Food Processing with Government Schemes & Markets	28.11.17
12.	Shri S.N. Nundy	Co-Chairman	ASSOCHAM Eastern Region Committee		
13.	Shri S.N. Nundy	Co-Chairman	ASSOCHAM Eastern Region Committee		
14.	Shri V.G. Jenner	Director Department of Industries & Commerce	Government of Tripura		
15.	Shri Y. Kumar	IAS, Secretary, Department of Agriculture	Government of Tripura		
16.	Shri S.K. Panda	Chairman, Executive Committee	Tripura Skill Development Mission Government of Tripura		
17.	Shri Arun j247 Debbarma	Director of Horticulture	Government of Tripura		
18.	Shri P C Roy	Senior ZM	NERAMAC, Guwahati		
19.	Shri S. Prabhu	Director, Skill Development, Directorate of Skill Development	Department of Industries & Commerce Government of Tripura, Tripura		
20.	Shri Sujon Krishna Roy	General Manager	PRAN Beverages (India) Pvt. Ltd.		
21.	Dr. B.K. Kandpal	Joint Director, ICAR	Tripura Centre		
22.	Shri Sunil Kumar	General Manager	NABARD, Tripura		



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Sl. No.	Visitors' Name	Designation	Organisation/ address	Purpose of Visit	Date of Visit
23.	Shri Sanjeeb Kumar Nath	Chief Manager Credit	State Bank of India		
24.	Shri Mahendra Dohare	DGM & Chief Regional Manager	United Bank of India, Tripura		
25.	Shri Manoj Kanti Deb	Minister for Youth Affairs & Sports, Food, Civil Suppliers & Consumer Affairs	Govt. of Tripura	Training on "Organic Farming / Natural Farming / Cow Based Economy" under Pandit Din Dayal Unnat Krishi Shiksha Yojana	20.03.18
26.	Shri Krishnadhan Das	Member of Legislative Assembly, Bamutia Constituency	Govt. of Tripura		
27.	Dr. D. L. Bijwal	Principal	College of Veterinary Sciences & Animal Husbandry, R.K Nagar, West Tripura	Valedictory function of "Hands on Basic Tools and Techniques of Biotechnology and Bioinformatics"	01.03.18
28.	Dr. Sanjay Kumar Panda	IAS (Retd.) Chairman	Tripura Skill Development Mission, Govt. of Tripura	Inaugural Guest of 5-days Training Programme on Application Skills of Communication Technologies for Extension Functionaries	12.03.18
29.	Mr. Prabhu	IFS, Directorate of Skill Development Indranagar, Agartala	Govt. of Tripura Tripura (W)	Inaugural guest of training programme on "Post Harvest Management of Fish and Value Addition"	19.03.18
30.	Dr. B. Palit	Director	Directorate of Higher Education	Training on "Molecular Techniques and Recent Advances in Genome and Protein Analysis"	27.03.18

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APPENDIX



Board of Management

The list of members of the Board of Management is given below:

Ex-officio Chairman

Dr. M. Premjit Singh
Vice-Chancellor,
Ex-Officio Chairman under sub-clause (i)

Members

- 1. Secretary (Agriculture)**
Government of Manipur, Imphal
Ex-Officio Member under sub-clause (ii)
- 2. Secretary (Forests)**
Government of Arunachal Pradesh, Itanagar
Ex-Officio Member under sub-clause (ii)
- 3. Secretary (Fisheries)**
Government of Meghalaya, Shillong
Ex-Officio Member under sub-clause (ii)
- 4. Dr. Durg Singh Chauhan**
(Former Vice-Chancellor, UPTU, Lucknow)
Vice-Chancellor, G.L.A. University,
17Km Stone, NH-2, P.O. Chaumuhan,
Mathura-281406
E-mail: pdschauhan@gmail.com
Member under sub-clause (iii)
- 5. Dr. Arvind Kumar**
Vice-Chancellor,
Rani Lakshmi Bai Central Agricultural
University,
Jhansi, Uttar Pradesh
E-mail: vcrlbcau@gmail.com
Member under sub-clause (iii)
- 6. Dr. Mohan Bhattacharya**
Former Director,
National Research Centre on Yak,
Arunachal Pradesh
Member under sub-clause (iii)
- 7. Dr. Natraj Hazong**
Vill. Andharkona, P.O. Garobhada
Via-Tura, Dist. South West Garo Hills,
Meghalaya 794105
Member under sub-clause (iv)
- 8. Deputy Director General (Edn)**
ICAR, Krishi Anusandhan Bhavan-II, Pusa,
New Delhi 110 012
Tel: 011 – 25841760(O) 25843932 (F)
Email: ddgedn@icar.org.in,
ddgedn@gmail.com
Ex-Officio Member under sub-clause (v)
- 9. Secretary**
North Eastern Council, Shillong, Meghalaya
Tel: 0364 – 2522644, 2522645 (O)
2522643 (F) 9436103348 (Mobile)
Email: secy-nec-meg@nic.in,
sect-nec-meg@nic.in
Ex-Officio Member under sub-clause (vi)
- 10. Dr. Ajay Kumar Pandey**
Dean, College of Horticulture & Forestry, CAU,
Pasighat, Arunachal Pradesh
Tel: 0368 – 2224887 (O) 2225066 (F)
Email: pandey.ajai1@gmail.com
Ex-Officio Member under sub-clause (vii)
- 11. Dr. S. Basanta Singh**
Director of Instruction
Central Agricultural University, Imphal
Secretary under sub-clause (vii)
- 12. Shri Haokholet Kipgen**
President, Feed/KVK-Sylvan, Hengbung,
PO – Kangpokpi, Senapati District, Manipur
Mobile: 9436021458 Tel. +91-3871-201001
E-mail: sylvankvk@rediffmail.com,
feedsmanipur@yahoo.co.in
Member under sub-clause (viii)
- 13. Shri Jakut Modi**
Napti Village, East Sinag District,
Arunachal Pradesh
Mobile: 9862348243
Member under sub-clause (viii)
- 14. Dr. (Mrs.) Labanya Mazumdar**
Ex-Chairperson, Child Welfare Committee,
Jorhat & Ex-Dean, AAU, Joy Nagar, Jail Road,
Borbheta, Jorhat – 785004 (Assam)
Mobile: 9435090441

APPENDIX

- E-mail: Imazumdar@rediffmail.com
Member under sub-clause (x)
- 15. Dr. J.P. Mishra**
Advisor (Agriculture),
NITI Aayog, NITI Aayog Bhawan
National Institution for Transforming India
Government of India
Parliament Street, New Delhi 110 001
Telefax: 011-23096796
E-mail: adviser.agri-pc@gov.in,
mishrajaip@gmail.com
Ex-Officio member under sub-clause (xi)
- 16. Dr. Vijay Singh Thakur**
Vice-Chancellor & D.E.E.
Dr. Y.S. Parmar University of Horticulture
& Forestry,
Nauni, Solan, Himachal Pradesh
E-mail: vcuhf@yahoo.com
Member under sub-clause (xii)
- 17. Dr. O.P. Chaudhary**
Joint Secretary (ANLM)
Department of Animal Husbandry,
Dairying & Fisheries, Ministry of Agriculture,
Govt. of India,
Krishi Bhavan, New Delhi – 110001
Tel: 011-23382354 Fax: 23386674
E-mail: jsdiary-ahd@nic.in,
jsdiary64@gmail.com
Member under sub-clause (xiii)
- 18. Dr. S.K. Malhotra**
Horticulture Commissioner
Department of Agriculture & Cooperation
Ministry of Agriculture, Govt. of India,
New Delhi – 110001
E-mail: hortcommissioner@gmail.com
Member under sub-clause (xiii)
- 19. Shri. Chhabilendra Roul**
Addl. Secy. (DARE) & Secy (ICAR)
Krishi Bhavan, New Delhi – 110001
E-mail: dsdair2016@gmail.com
Member under sub-clause (xiv)

Dr. K. Mamocha Singh

Registrar, Central Agricultural University, Imphal.
Email: regcau@yahoo.com, regcau@gmail.com
Ex-Officio Secretary under sub-clause (xv)

Academic Council

The list of the members of the Academic Council of the University is as under:

Dr. M. Premjit Singh
Vice-Chancellor,
Central Agricultural University, Imphal
Ex-officio Chairman Under sub-clause (i)

Members

- 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 Home Science
Tura, West Garo Hills, Meghalaya
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
Barapani, Meghalaya
Member under sub-clause (ii)
8. **Director of Research**
Central Agricultural University,
Imphal
Member under sub-clause (iii)
9. **Director of Extension Education**
Central Agricultural University,
Imphal
Member under sub-clause (iv)
10. **Director of Instruction**
Central Agricultural University,
Imphal
Member under sub-clause (v)
11. **Librarian**
College of Horticulture & Forestry
Pasighat, Arunachal Pradesh
Member under sub-clause (vi)
12. **Dr. Nawab Ali**
Ex-DDG (Engg), ICAR
H.No. 40, Super Deluxe, Menal Residency
J.K. Road, Bhopal-462013,MP
Member under sub clause (vii)
13. **Dr. Gaj Raj Singh**
Ex-DI & Dean
College of Veterinary & A.H, Aizawl,
Flat. No.501, Surya Apartments
Sector-55,Gurgaon-122002,Haryana,
Member under sub-clause (vii)
14. **Head**
Department of Vegetable Science
College of Horticulture & Forestry
Pasighat, Arunachal Pradesh
Member under sub-clause (viii)
15. **Head**
Department of Agronomy
College of Agriculture
Iroisemba, Imphal, Manipur
Member under sub-clause (viii)
16. **Head**
Department of Livestock Production and
Management
College of Veterinary Sciences & A.H.
Selesih, Aizawl, Mizoram
Member under sub-clause (viii)
17. **Head**
Department of Fish Processing
Technology,
College of Fisheries
Lembucherra, Agartala, Tripura
Member under sub-clause (viii)
18. **Head**
Department of Home Science Extension
Education.
College of Home Science
Tura, West Garo Hills, Meghalaya
Member under sub-clause (viii)
19. **Head**
Department of Soil & Water Engineering,
College of Agril. Engineering & P.H.
Technology
Marchak, Gangtok, Sikkim
Member under sub-clause (viii)
20. **Head/In charge**
Department of Crop Improvement
College of Post Graduate Studies
Barapani, Meghalaya
Member under sub-clause (viii)
21. **Nominee of North-Eastern Council,**
Shillong, Meghalaya
Member under sub-clause (ix) .

Ex-officio Secretary

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:

Ex-officio Chairman

Prof. M. Premjit Singh

Vice-Chancellor,
Central Agricultural University,
Imphal, Manipur.

Ex-officio Chairman Under sub-clause (i)

Members

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 & Animal
Husbandry, Aizawl, Mizoram
Ex-officio Member under sub-clause (iv)
6. **Dean**
College of Fisheries, Lembucherra,
Agartala, Tripura
Ex-officio Member under sub-clause (iv)
7. **Dean**
College of Home Science, Tura, west
Garo Hills, Meghalaya
Ex-officio Member under sub-clause (iv)
8. **Dean**
College of Agril. Engg. & Post Harvest
Technology, Gangtok, Sikkim
Ex-officio Member under sub-clause (iv)
9. **Dean**
College of Post Graduate Studies,
Barapani, Meghalaya
Ex-officio Member under sub-clause (iv)
10. **Director**
Directorate of Agriculture, Government
of Manipur, Imphal
11. **Director**
Directorate of Horticulture, Government
of Arunachal Pradesh, Itanagar
12. **Director**
Directorate of Fisheries,
Government of Tripura, Agartala
13. **Director**
Directorate of Animal Husbandry &
Veterinary, Government of Mizoram,
Aizawl
14. **Addl. Principal Chief Conservator of
Forests (R&T)**
Govt. of Meghalaya, Shillong
Nominee under sub-clause (v)
15. **Director**
Directorate of Food Security &
Agricultural Development,
Government of Sikkim,
Gangtok
Nominee under sub-clause (v)
16. **Research Co-ordinator & Member
Secretary,** College Research Advisory
Committee (CRAC) College of
Agriculture,
Iroisemba, Imphal
17. **Research Co-ordinator & Member
Secretary,** CRAC, College of Horticulture
& Forestry,
Pasighat, Arunachal Pradesh
18. **Research Co-ordinator & Member
Secretary,** CRAC, College of Veterinary
Science & A.H.
Selesih, Aizawl, Mizoram



19. **Research Co-ordinator & Member Secretary**, CRAC, College of Fisheries, Lembucherra, Agartala, Tripura
20. **Research Co-ordinator & Member Secretary**, CRAC
College of Home Science, Tura, West Garo Hills, Meghalaya
21. **Research Co-ordinator & Member Secretary**, CRAC
College of Agril. Engineering & P.H. Technology, Marchak, Gangtok, Sikkim
22. **Research Co-ordinator & Member Secretary**, CRAC
College of Post-Graduate Studies Barapani, Meghalaya
23. **Director**
ICAR Research Complex for NEH Region, Barapani, Meghalaya
Special Invitee
24. **Joint Director**
ICAR Research Council for NEH Region, Arunachal Pradesh Centre, Basar, Arunachal Pradesh
Co-opted Members
25. **Joint Director**
ICAR Research Council for NEH Region, Manipur Centre, Lamphel, Imphal
26. **Joint Director**
ICAR Research Council for NEH Region, Mizoram Centre, Kolashib, Mizoram
27. **Joint Director**
ICAR Research Centre for NEH Region, Nagaland Centre, Medziphema, Nagaland
28. **Joint Director**
ICAR Research Centre for NEH Region, Sikkim Centre, Gangtok, Sikkim
29. **Joint Director**
ICAR Research Centre for NEH Region, Tripura Centre, Lembucherra, Tripura
30. **Dr. N.K. Krishna Kumar**
Regional Representative, South & Central Asia, Biodiversity International India, G-1, B-Block, NASC Complex, DPS Marg, Pusa Campus, New Delhi- 110012
E-mail : k.kumar@cgiar.org
Member under sub-clause (vii)
31. **Dr. A.C. Varshney**
Director General (Former Vice-Chancellor) Ayurved Ltd., 1st Floor, K.M. Trade Tower, Plot NO. H-3, Sector-14, Kaushambi, Ghaziabad- 201010 (U.P.)
E-mail : varshneyac@gmail.com/
acvarshney@ayurved.com

Ex-officio Secretary

Dr. C.A. Srinivasamurthy
Director of Research, Central Agricultural University, Imphal, Manipur.

Extension Education Council

The members of the Extension Education Council of the University are as under:

Ex-officio Chairman

Dr. M. Premjit Singh
Vice-Chancellor, Central Agricultural University, Imphal, Manipur

Members

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)

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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 Home Science
Tura, West Garo Hills, Meghalaya
Member under sub-clause (iv)
8. **Dean**
College of Agril. Engineering & P.H.
Technology, Marchak,
Gangtok, Sikkim
Member under sub-clause (iv)
9. **Dean**
College of Post-Graduate Studies
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. **Director of Agriculture**
Govt. of Manipur, Imphal
Member under sub-clause (v)
12. **Director of Horticulture**
Govt. of Arunachal Pradesh, Itanagar
Member under sub-clause (v)
13. **Director of Fisheries**
Govt. of Tripura, Agartala
Member under sub-clause (v)
14. **Director of Animal Husbandry & Veterinary**
Govt. of Mizoram, Aizawl
Member under sub-clause (v)
15. **Chief Conservator of Forests**
Research & Planning,
Govt. of Meghalaya, Shillong
Member under sub-clause (v)
16. **Director**
Food Security & Agriculture Development
Govt. of Sikkim, Gangtok
Member under sub-clause (v)
17. **Director of Animal Husbandry & Veterinary**
Govt. of Nagaland, Kohima
Member under sub-clause (v)
18. **Shri Pumte Perme**
Village Ayeng
East Siang District
Arunachal Pradesh
Member under sub-clause (vi)
19. **Shri Potsangbam Devakanta**
Kwakeithel Thokchom Leikai
Potsangbam Leirak, Imphal West- 795001
Member under sub-clause (vi)
20. **Mrs. Rose Mary Bhoirymbong**
Village : Bhoirymbong,
District Ri Bhoi (Meghalaya)
Member under sub-clause (vi)
21. **Mr. Lalsawmzuala, (Rtd. IRS Officer)**
Chairman, L.S. Agro-industries
Development Institution, Saitual,
B-16, Industry Mual, Ramhlun North
Aizawl – 796012 (Mizoram)
E-mail : lalsawmzuala@msn.com
Member under sub-clause (vi)
22. **Shri Shesir Kharka**
S/o Shri. Krishna Kumar Kharka,
Village : Marchak, Ranipool
P.O. & P.S. Ranipool, East Sikkim – 737135
E-mail : shishirkharka@gmail.com,
sundersikkim@gmail.com
Member under sub-clause (vi)



23. **Shri Gourang Pal**
C/o Shri. Baigya Saha
B.K. Road, Palace Compound
Opposite Women's College, Agartala,
West Tripura
Member under sub-clause (vi)
24. **Mr. Ranglia Thou**
Ngwlwa Village,
Peren District,
Nagaland- 797110
E-mail : thouenterprises@gmail.com
Member under sub-clause (vi)
25. **Dr. S. Prabhu Kumar**
Ex-Director (ATARI)
No. 25, DUO Residency, Jakkur Plantations,
Bangalore – 560064
E-mail : prabhukumar@gmail.com
Member under sub-clause (vii)
26. **Dr. Manas Mohan Adhikary**
Ex-Vice-Chancellor
B2/289, Near Shiv Mandir
P.O. Kalyani, Nadia – 741235, West Bengal
E-mail : dradhikary@gmail.com,
mma_bckv@yahoo.co.in
Member under sub-clause (vii)

Ex-officio Secretary

Dr. M. Premjit Singh/His Nominee
Director of Extension Education, Central Agricultural University, Imphal, Manipur.

Finance Committee

The members of the Finance Committee of the University are given below:

Ex-officio Chairman

Dr. M. Premjit Singh/ His nominee
Vice-Chancellor, Central Agricultural University, Imphal, Manipur

Members

1. **Financial Advisor**
Department of Agricultural Research and Education Government of India,
Krishi Bhavan, New Delhi
2. **Dr. P.K. Goswami**
Former Vice-Chancellor
Assam Science and Technology University, Guwahati-781022
3. **Dr. N.S. Rathore**
Deputy Director General (Education)
I.C.A.R. KAB-II, PUSA, New Delhi-12
4. **Dr. B.S. Bisht**
Former Vice-Chancellor
GBPUA&T, Director, Birla Institute of Applied Sciences,
Bhimtal (Uttarakhand) -263136

APPENDIX

5. **Shri B.S. Ramaswamy**
Additional Secretary & Financial Advisor (Retd.)
Ministry of Steel & Mines, (GOI), 140, Madakini Enclave
Alaknanda, New Delhi-110019
6. **Shri A.R. Sengupta**
Deputy Secretary, Department of Agricultural Research and Education
Ministry of Agricultural and Farmers Welfare,
Krishi Bhawan, New Delhi-110001
7. **Ms. Marwein**
Former Finance Officer, North Eastern Hill University,
Shillong (Meghalaya)-793022

Ex-Officio Secretary

8. **Shri M.C. Jublani**
Comptroller
Central Agricultural University,
Imphal

Statutory Officers

The list of Statutory Officers of the university is cited underneath:

Chancellor

Dr. R.B. Singh
President, NAAS & Former Director, IARI

Vice-Chancellor

Dr. M. Premjit Singh

Director of Instruction

Dr. S. Basanta Singh

Director of Research

Dr. C.A. Srinivasamurthy

Director of Extension Education

Dr. R.K. Saha

Registrar

Dr. K. Mamocha Singh



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Comptroller

Shri M.C. Jublani (I/C)

Deans of Colleges

Dr. J.M. Laishram

College of Agriculture, Imphal, Manipur

Dr. (Mrs.) L. Hmar (I/c)

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

Dr. H. Prasad

College of Horticulture, Thenzawl, Mizoram

Dr. P.K. Pandey

College of Fisheries, Lembuchera, Agartala, Tripura

Dr. Ajay Kumar Pandey

College of Horticulture & Forestry, Pasighat, Arunachal Pradesh

Dr. B.N. Hazarika

College of Agriculture, Pasighat, Arunachal Pradesh

Dr. (Ms.) Pushpita Das (I/c)

College of Home Science, Tura, Meghalaya

Dr. P.P. Dabral

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

Dr. S.K. Sharma

College of Horticulture, Bermiok, South Sikkim

Dr. N.B. Singh

College of Post Graduate Studies, Umiam (Barapani), Meghalaya

Dr. U.K. Behera

College of Agriculture, Kyrdemkulai, Meghalaya

Dr. (Capt.) G. Dhanan Jaya Rao

College of Veterinary Sciences & Animal Husbandry, Jalukie, Nagaland

