

Institutional Development Plan



Assam Agricultural University
Jorhat-785013
www.aau.ac.in



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Foreword

An institutional development plan (IDP) refers to a plan of action or a set of directives based on which an institute functions to achieve academic and professional milestones. The IDP-AAU, a strategic document is meticulously prepared with plans to achieve short-term, medium-term, and long-term goals by following the guidelines of UGC and ICAR. This IDP has been prepared when Assam Agricultural University marks its 55th anniversary, with its College of Agriculture and College of Veterinary Science complete their 75 years of establishment. The University is committed in its quest for excellence. AAU proudly marks its rise to 14th position in the National Institutional Ranking Framework (NIRF) in 2024. Besides the set of academic programs, AAU is also offering ODL courses, entrepreneurship development programs for guiding students in developing start-ups, introduction of "Earn While You Learn" scheme enabling students to balance academics and practical work experiences. Besides these students also have access to Academic Bank of Credits for registration as per the mandates of NEP-2020.

The AAU-IDP has been prepared through several consultations with faculties, students, and other stakeholders in the meeting of the Board of Studies, Academic council and at different micro levels involving members of IQAC, PME and S&T cells. The AAU IDP is a working document, that would help to provide clear direction, structured growth, proper resource allocation, performance tracking, innovation, and adoption to changes and stay competitive in the academic landscape to shape the AAU's future in a systematic and sustainable way.

I on behalf of the AAU family extend my heartfelt gratitude to the Government of Assam, ICAR, DBT, DST and other supporting organizations for their invaluable contributions. We are also thankful to the farming community for their generous support and guidance. AAU remains committed to its mission of '*Vigyanam Lokasevaratam*', dedicated to serving the needs of society.

I am thankful to the IQAC team of AAU for their sincere effort in preparing this document. Thanks goes to all the members of PME and S&T Cell of AAU for their collaboration with IQAC in preparing this document.

With Regards


(Bidyut C. Deka)

Institutional Development Plan, AAU

1. Preamble:

Assam Agricultural University, the pioneer institution in the field of agricultural education in the entire north-eastern region of India was established on 1st April 1969, by ‘The Assam Agricultural University Act’, 1968 with its headquarters at Jorhat. The establishment of two rice research stations, one at Karimganj in 1913 in the Barak Valley and the other at Titabor in 1923 in the Brahmaputra Valley sowed the seeds of agricultural research & training in the north-eastern parts of the country. The trainees produced by these two research stations were not enough to meet the growing demand of scientifically trained manpower in the agricultural and allied sectors in this part of the country. Consequently, the Assam Agricultural College at Jorhat and Assam Veterinary College at Nagaon came into existence in 1948 due to the relentless efforts of Bharat Ratna Late Gopinath Bordoloi and others. Both the colleges were affiliated to Gauhati University prior to the establishment of Assam Agricultural University in 1969. Currently, Assam Agricultural University has nine constituent colleges, viz., College of Agriculture, Jorhat (1948), College of Veterinary Science, Khanapara (1948), College of Community Science, Jorhat (1973), Lakhimpur College of Veterinary Science (1987), College of Fisheries, Raha (1988), Biswanath College of Agriculture, Biswanath Chariali (1988), Sarat Chandra Sinha College of Agriculture, Dhubri (2010), College of Horticulture & Farming System Research, Nalbari (2014) and College of Sericulture (2014).

Research on areas related to agriculture and community science are looked after and managed by the Directorate of Research (Agriculture) while research relating to veterinary & fishery science are under the purview of the Directorate of Research (Veterinary). At present, there are in total 11 research stations under the university, viz., AAU- Zonal Research Station, Shillongani, AAU- Zonal Research Station, North Lakhimpur, AAU- Zonal Research Station, Gossaigaon, AAU- Zonal Research Station, Diphu, AAU- Zonal Research Station, Karimganj and AAU-Rice Research Institute, Titabor, Citrus and Plantation Crops Research Station, Tinsukia, AAU-Sugarcane, Medicinal, and Aromatic Plants Research Station, Buralikson, AAU-Horticulture Research Station, Kahikuchi, AAU-Goat Research Station, Byrnihat and AAU- Zonal Livestock Research Station, Mandira. Under the Directorate of Extension Education, a total of 23 KVKs under Assam Agricultural University located in different districts of the state are rendering extension services throughout the state.

A. Social and Academic Mission:

AAU aims to take agricultural education to a level where it can address not only the contemporary but also the future needs of agriculture and allied sectors. The aim of the academic mission of the University is to create a pool of quality human resources for revitalizing and rejuvenating agriculture ensuring both production and environmental sustainability and targeting sustained agricultural growth. It also endeavors to address the issues of household food and nutritional security, farmers' distress, commerce in agriculture as well as regional, national and global food crises taking advantage of innovative technologies, market reforms and liberalization. Assam Agricultural University is planning to actively implement the recommendations of National Education Policy 2020 and prepare the roadmap for proper execution of the same. Besides imparting education, the University is involved in research and extension programs to promote science and technology led agriculture in the state for enhanced household income, employment opportunities, sustainable rural livelihood and ultimately achieve the shared dream of a "*Viksit Assam and Viksit Bharat @2047*".

As a part of its social obligation, AAU is relentlessly engaged in -

- Imparting technical education in agriculture and allied sciences.
- Undertaking innovative research in agriculture and allied sciences relevant to the needs of the farmers and entrepreneurs of Assam.
- Taking the technologies to the stakeholder's doorstep with a mission to increase production and harness profitability and permanency in agriculture.
- Providing training for skill development & awareness in the areas of agriculture and allied sectors.
- Enhanced support to government campaigns and development programs.
- Enhancing the internal revenue of the University.

B. Basic Principles

- Filling up the talent gap in agriculture and allied sectors to combat the emerging challenges in agriculture.
- Ensuring higher productivity in agri-horti-animal-fish crops in the face of shrinking/fragmented land holdings, ailing soil health, diminishing water resources and increased human population.
- Aligning teaching, research and extension in the fields of agriculture and allied sectors in conformity with changing time and scenario.

- Empowering the farming community by imparting skill and awareness to enhance farmers income in the challenging scenario of climate change.
- Creating an ecosystem of agribusiness with the motto ‘vocal for local’ with a global outreach.

C. Objectives and goals to be achieved by IDP:

- ✧ To enhance the ability of AAU to face challenges while progressing towards multidisciplinary approach in the spirit as per NEP 2020 by integrating the academic plans of AAU and translating to fruitful outcomes.
- ✧ To facilitate institutional performance for continuous development of AAU, IDP will be a support system, over a long period up to 2050.
- ✧ To make the internal governance of AAU more accountable, decentralized, transparent and responsive to the changing scenario of the University and society.
- ✧ To enhance institutional performance through the implementation process of the plans/ actions proposed.
- ✧ To produce quality human resources in agriculture and allied sciences for appropriate manpower backup to the sector while continuously evolving state-of-the-art research/ technological outputs to fit into the local, regional and global agricultural production systems for profit sustainability using appropriate extension delivery mode and methods.

D. Strategic Goals and Development Objectives:

- Developing and accessing modern tools and technologies for enhancing agricultural productivity, increasing farm income, and accelerating agricultural growth on a sustainable basis while conserving the ecologically sound, economically viable natural resource bases.
- Building competitiveness within the university manpower, to face the current and future challenges confronting agriculture and allied sectors like environmental stress, soil fatigue and, food crisis while extending it down the line among the stakeholders.
- The institution has a vision to impart global orientation to various academic and research-oriented programs of the University updating human resources and technologies on new ICTs in teaching-learning process, research and extension activities.

SWOC matrix AAU:

I. Strengths

- 1) Strong academic reputation
- 2) Globally competent manpower with optimal student-teacher ratio
- 3) Robust academic & research platform
- 4) Diversified curriculum catering to the need of the region
- 5) Inbuilt policy support for university governance

II. Weaknesses

- 1) Inadequate financial resources
- 2) Low numbers of International Students
- 3) Inadequate marketing linkage and infrastructure
- 4) Inadequate entrepreneurial aptitude

E. Operationalization:

The University has currently four faculties, viz., Agriculture, Veterinary Science, Community Science and Fishery Science with nine constituent colleges, three in the fields of agriculture, two in veterinary science and one each in community science, fishery science, horticulture and sericulture. The colleges have state-of-the-art facilities for imparting education. The Dean is the official head of each Faculty and Chairperson of the Board of Studies of the respective Faculty. The Director of Post Graduate Studies coordinates post-graduate studies across the faculties. To coordinate the research activities, the University has two full-fledged Directorates of Research, one for agriculture and community science headed

III. Opportunities

- 1) Increased demand for higher education
- 2) Growing demand for online and blended learning platform
- 3) Emerging scopes for education and research collaboration at National and International level
- 4) Prospects of establish AAU as an academic hub for Southeast Asia
- 5) Emerging scopes for research collaborations in the light of NEP 2020
- 6) Expanded possibilities for the “AAU Select” as a reputed brand
- 7) Potential for development of entrepreneurship/ start up ecosystem for graduates and budding entrepreneurs of the region

IV. Challenges

- 1) Facilitating gainful engagement for the graduates
- 2) Overcoming conservative & compartmentalized approach
- 3) Shrinking resources to deal with emerging demands

by the Director of Research (Agriculture) and the other for veterinary and fishery science headed by the Director of Research (Veterinary). All the extension activities of the University along with twenty-three KVKs are being managed under the Directorate of Extension Education. The University has a Director of Students' Welfare, a Director of Physical Plant and a Chief Librarian and other officers as per the Statute. The Director of Students' Welfare is responsible for the arrangement of housing for students, student counseling and placement besides supervising the extra-curricular activities and general needs of the students. The Director of Physical Plant is responsible for all construction-related activities and repair/renovation of the facilities in the University. In addition, the University has an Extension Education Institute (EEI), Agro-Economic Research Centre (AERC), Open and Distance Learning (ODL) Directorate, Project Monitoring & Evaluation (PME) Cell, a Science & Technology (S&T) Cell, an Internal Quality Assurance (IQAC) Cell, an Agricultural Knowledge Management and Information Technology (AKMIT) Cell, Agricultural Technology Information Centre (ATIC) and an Intellectual Property Right (IPR) Cell besides having a robust technology incubation center 'North East Agriculture Technology Entrepreneurs Hub' (NEATEHUB). The in-house IDP Strategy team is comprised of members of the IQAC which works in association with S&T Cell and PME Cell.

2. Institutional Development Plan (IDP) Framework:

National Education Policy 2020 attempted to shape India's education system to a holistic system emphasizing on inculcating problem-solving abilities among the learners over memorization and traditional grading methods. Keeping in conformity with NEP 2020, AAU is working for implementation of the principles and practices envisioned in the policy in its system, facilitating creation of a teacher-learner-centric environment conducive for quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process. AAU aims to disseminate agricultural education in a multidisciplinary and holistic manner. The Indian Council of Agricultural Research (ICAR) acts as a Professional Standard-Setting Bodies (PSSBs) and a member of the General Education Council (GEC) for guiding education in agricultural universities. To maintain the benchmark of the quality of education, research and extension, AAU regularly invites Peer Team of ICAR for accreditation. Various dimensions in which University students are expected to excel include innovative thinking, logical & analytical skills, intellectual curiosity,

trustworthiness, environment & energy consciousness, social responsibility, ethics & moral values and gaining an overall development of mind, body, and intellect.

A. PHYSICAL INFRASTRUCTURE

Assam Agricultural University is a multi-campus university with 41 campuses spread across the state covering 1971.33 ha of land in total, of which 847.87 ha is institutional land with its headquarters located at Jorhat. All the AAU colleges have well-constructed physical infrastructure accommodating and meeting all administrative and teaching needs with all the basic amenities like furniture, adequate water supply and electricity. In addition, big meeting halls, auditoriums and farmlands are also available. To get hands-on experience with the latest technologies, all the colleges have good infrastructure with advanced laboratories equipped with state-of-the-art equipment, etc. All colleges are now equipped with latest computer facilities and internet connectivity. Additional resources such as printers including Wi-Fi connectivity is also provided to the students in the college campuses. Smart classrooms have state-of-the-art audio-visual gadgets accessible to teachers and students.

In addition to this, the following facilities are also available in the University:

- Smart classrooms
- State-of-the-art College Library facilities
- National and International Guest houses in Khanapara & Jorhat campus
- Roof-top solar power plant of 1MW production capacity at Jorhat Campus
- Solar-powered fence in the P.G. Research plot at BNCA
- Swimming pool at Jorhat campus
- Faculty Club
- 24hr campus security service
- *Amrit Sarovar* projects for water-harvesting
- Modern auditorium
- Medical Unit
- Seamless internet and free Wi-Fi connection in college premises
- Sports and Games facilities - indoor and outdoor games
- Gymnasium
- Ecotourism etc.

Plans for future Physical Infrastructures:

Activity	Short term, 2030	Medium term, 2040	Long term, 2050
Academic/Teaching-learning and Research Infrastructure	<ul style="list-style-type: none"> • State-of-the-Art smart Classrooms, Auditorium and Central library. Seminar and Conference halls, Research and Tutorial Blocks, in all College Campuses. • Establishment of new College buildings for College of Agricultural engineering and & Organic farming and College of Dairy Science and technology 	<ul style="list-style-type: none"> • Differently able, transgender friendly Classroom Blocks, International standard Seminar Rooms, Conference Halls etc. • Continuation and up gradation with increased intake capacity 	<ul style="list-style-type: none"> • Automated infrastructures for various academic processes of the University • Introduction of innovative systems for wider use of digital communication tools • Addition of more Colleges
Veterinary Clinical Complex/other infrastructures	<ul style="list-style-type: none"> • Setting of a blood bank • Eye surgery unit with phaco machine • Laser therapy unit • Cardiology Unit • Laparoscopic surgery unit • Neo-natal ICU unit • Histopathological unit • Artificial insemination and dog breeding unit 	<ul style="list-style-type: none"> • Continuation and up gradation with latest technological intervention 	<ul style="list-style-type: none"> • Continuation and up gradation with latest technological intervention in a broader perspective.
	<ul style="list-style-type: none"> • Development of Automated feeding, milking, waste management and carcass disposal system 	<ul style="list-style-type: none"> • Use of IoT devices, sensors to monitor animal health, behavior and productivity 	
	<ul style="list-style-type: none"> • Development of protocol of livestock shelter and health management during and after flood 	<ul style="list-style-type: none"> • Development of climate resilient shelter management practices for livestock that can thrive well under changing climatic conditions. 	

Aquatic Animal Clinical Complex/Fish Hospital	<ul style="list-style-type: none"> • Setting up of Laboratory for rapid disease diagnosis • Setting up of Mobile Aqua Clinic • Setting up of Serological and Histopathological unit • Setting up of Virus Laboratory for screening viral disease outbreak in the state 	<ul style="list-style-type: none"> • Continuation and up gradation with latest technological intervention 	<ul style="list-style-type: none"> • Continuation and up gradation with latest technological intervention in a broader perspective.
Aquarium House	<ul style="list-style-type: none"> • Setting up of modern Aquarium house with all sophisticated tools and techniques • Showcasing of indigenous and exotic varieties of ornamental as well as food fishes 	<ul style="list-style-type: none"> • Continuation and up gradation with latest technological intervention 	<ul style="list-style-type: none"> • Continuation and up gradation with latest technological intervention in a broader perspective.
Green campus initiative	<ul style="list-style-type: none"> • Campus lawns, piped gas network and solar Power systems in all campuses • Expansion of ecotourism in all AAU campuses. Re-cycling of waste • Increase in green cover within campus and addition of more recreational areas with proper sitting areas for constructive outdoor activities. Working out plans with concerted effort to recycle waste in the workplace can help to reduce carbon footprint. • Institute Community Garden 	<ul style="list-style-type: none"> • Promotion of eco-friendly transportation options like biking, carpooling, electric vehicle charging station, thus reducing carbon emission. Implement energy efficient technology in buildings such as LED lighting, smart heating and cooling systems and insulation to reduce energy consumption and greenhouse gas emissions 	<ul style="list-style-type: none"> • Transformation of all the campuses of the university into carbon negative by significantly reducing greenhouse emissions. Solar energy generation units in all campuses of AAU

Clean and safe drinking water	<ul style="list-style-type: none"> Up gradation of water filtration unit for safe drinking water in all college Campus 	<ul style="list-style-type: none"> Up gradation of water filtration unit for safe drinking water in all other campuses 	<ul style="list-style-type: none"> Proper maintenance and up gradation of water filtration units
Health Infrastructure	<ul style="list-style-type: none"> Basic Health Care Unit (Medical Unit), sick room for students and Faculties in all the College campuses Establishing Yoga centre in college campuses 	<ul style="list-style-type: none"> Improvising Health care Units with first aid and emergency facilities in all campuses of AAU Establishing Yoga centre in all the campuses 	Establishing Health care Units with all these facilities and ICU in all the college campuses of AAU. Continued functioning of Yoga centres with latest perspective
State-of-the-Art studio	For Agri educational content creation and audio-video production	Podcasting for mass communication and outreach programs	For short film production
Counselling centre Infrastructure	Student counselling for better mental health and for promoting holistic development in all College campuses	Counselling centre in all College campuses from different perspective	In all campuses
Creation of Infrastructure for girl students, especially able and transgender	<ul style="list-style-type: none"> Washroom units for especially able person and washroom facilities for transgender Installation of sanitary napkin-disposal machine. 	Establishment of infrastructure for especially able person and for transgender in all college campuses of AAU	Expansion of these infrastructure for especially able person and for transgender in all campuses of AAU
Residential Infrastructure	<ul style="list-style-type: none"> Boys' and Girls' Hostels to accommodate 4000 students. Renovation of residence for Teaching and non-teaching Staff 	<ul style="list-style-type: none"> Boys' and Girls' Hostels with all modern gadgets to accommodate 5000 students comfortably with guest room facility. Renovation of residence for 	State-of-the-art hostel and campus, with facilities such as food service, recreational room etc. to accommodate 8,000 students.

		Teaching Staff	
		<ul style="list-style-type: none"> • Renovation of residence for Non-Teaching Staff. 	
Convention centre	<ul style="list-style-type: none"> • Facilities to have concurrent meetings of 800-1000 people with auditorium, conference hall, cafeteria etc. 	<ul style="list-style-type: none"> • Expansion of convention centres to all its constituent colleges • International students' centre at Jorhat & Khanapara campus 	<ul style="list-style-type: none"> • Up gradation of convention centres in all the constituent colleges • Expansion of International students' centre at Jorhat, Khanapara and Biswanath campus
Sports and Student Recreation Infrastructure	<ul style="list-style-type: none"> • Upgrading Sports Complex, Canteen, Food Centre, Swimming Pool, Extension of the Eco-Park at Jorhat campus • Organizing and encouraging students' participation in state and national events 	<ul style="list-style-type: none"> • Establishing Sports Complexes and Swimming pools in other College campuses. Establishment of state-of-the-art, self-sustaining green park at BNCA and SCSCA. • Organizing and encouraging students' participation in state, national and international events 	<ul style="list-style-type: none"> • Establishing recreation centres for entertainment such as theatre and movie nights, comedy shows, and live performances in the College Campuses • Organizing and encouraging students' participation in state, national and international events
Security Infrastructure	Round the clock Security surveillance, CCTV monitoring in important places of the campus.	Creation of AI based all-weather security surveillance system at Jorhat & Khanapara campus.	Establishing these services in all the campuses of AAU

Utility Infrastructure	In-campus SBI bank branch, parking, photocopy shops, marketing complex, 24/7 pharmacy within university premises or Biponi complex	In-campus SBI bank branch, covered parking space, printing and photocopy shops, self-served marketing complex.	State-of-the-art printing facility and binding equipment in all the college campuses
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B. DIGITAL INFRASTRUCTURE

The digital infrastructure meant for digital information and communication technology is managed by Agricultural Knowledge Management and Information Technology (AKMIT) cell, originally funded by the ICAR as Agricultural Research Information System (ARIS) which was set up in 1998 at Jorhat campus as a central facility for the entire University for providing IT support to all departments, research and extension units, and the colleges under the Assam Agricultural University. Additionally, each constituent college has a unit of AKMIT Cell to cater to the ICT needs of the college. Currently, the AKMIT Cell is providing several services to the University community, which can be broadly defined under three categories:

1. **Software Solutions**
2. **Networking Services**
3. **Server Provisioning**

SOFTWARE SOLUTIONS

The entire AAU official website (www.aau.ac.in) has been developed and being maintained by the AKMIT Cell. The website is dynamic one where all data are console driven. The most important part of the website is the content management system for the admin users, departments, KVKs, RARS and Faculty / Scientists without compromising the data security and privacy.

- ◆ **Departmental Panel:** Each establishment/department has been provided with an admin panel through which they can upload the necessary information on the website and validate the data uploaded by the people under their control.
- ◆ **Faculty/Scientists Panel:** A well-defined admin portal is provided for all the faculties/scientists for updating their profile information.

The AKMIT Cell has implemented the Google Workspace for Higher Education and Microsoft 365 cloud services to provision Windows operating system and office software as well as Collaborating platforms in the university and is responsible for the regular maintenance of the systems. The AKMIT Cell had introduced a cloud-based storage system, similar to Dropbox, Google Drive etc., named AAU Cloud, for all the establishments and the faculty members and employees, so that data belonging to the university can be kept securely.

SOFTWARES IN SERVICE

1. **Online Admission System:** The online admission portal for admission into all 9 (nine) constituent colleges and all the degree programs has been developed and is maintained by the AKMIT cell. This portal permits the applicants to get themselves registered and fill-up the application form online. Admit cards for appearing the entrance examination is also issued through this system.

2. **Counseling System:** The entire admission process in the colleges of AAU is software driven, starting from allocating the seats based on credentials of the candidate, collection of fees, report generation of the whole admission cum counseling process. This counseling software has been developed and is being implanted by the AKMIT cell.

3. **Online Payment System:** The AKMIT cell, in collaboration with the SBI, has established a module for the online payment of fees. This module can collect fees to any account of any establishment using the pooling account distribution system with the mapped accounts.

4. **Online Grievance System:** This cell had developed an online Grievance Management System for the University through which any stakeholder can lodge his/her grievances to the concerned authority.

5. **Online ID card Application System:** An online application system has been created for providing ID cards to all employees and students at the university. The cards are issued as and when a validated request is received.

6. **Online AAU IT Inventory:** This cell has also developed a system for collecting and storing all IT equipment details e.g., Computers, Network Printers, Printers etc.

7. **AAU Library Attendance system:** Attendance system for Rev. BM Pugh Library, AAU, Jorhat was created by using AAU ID card-based authentication for entering the user attendance.

8. Academic Management System: Academic Management System enables all the students, teachers and administrators to digitally manage all academic activities seamlessly. The students can register for their courses, the teachers can plan the classes and conduct exams and offer grades to the students. The administrators process the results and declare the same in real time and upload on the national platform like ABC Portal (Academic Bank of Credit) and Digi locker

9. Online Recruitment System: This system provides a platform for online filling of the application forms by the prospective candidates, online scrutiny of the application forms and preparation of the summary statements for use of the concerned authority.

10. E-file management system: The e-file management system of AAU represents a pivotal step towards modernizing administrative processes within the institution. Tailored to the unique needs of an agricultural academic environment, this system seamlessly integrates digital document management with the university's day-to-day operations. By digitizing files and streamlining workflows, the AAU's e-file management system has enhanced efficiency, accelerates decision-making, and promotes collaboration among faculty, staff, and administrators. Moreover, it offers security measures to safeguard sensitive information and ensures compliance with regulatory standards. With features such as role- based access control, the system provides a transparent and accountable platform for managing documents across departments and campuses. Thus, the AAU's e-file management system serves as a cornerstone for fostering innovation, productivity, and excellence in agricultural education, research, and extension.

NETWORKING SERVICES

Administrative and academic buildings of all the campuses of the university are connected through the Campus Area Network. The Jorhat, Khanapara, and Raha Campuses are connected to the Internet through the National Knowledge Network (NKN). Locally available broadband connections are being used in other college campuses, Research Centres and KVKs. In Jorhat Campus, 21 numbers of buildings are connected through Optical Fibre connectivity. All the 14 hostels are connected through Wi-Fi. The day-to-day maintenance of the Campus LAN is handled by the AKMIT Cell, AAU.

Besides these the following are some of the additional facilities functioning under Digital Infrastructure of AAU:

Smart Classrooms:

AAU campuses are equipped with network-connected smart classrooms equipped with laptop, camera, printers, projectors, interactive panel boards readily accessible to teachers and students.

Language Lab

The Language Lab of AAU is an initiative under the Institutional Development Plan, National Agricultural Higher Education Project (IDP, NAHEP) to cater to the needs of the students of nine colleges of AAU. The lab is aimed at functioning as a platform to enhance linguistic and communication skills as well as practice soft skills. It is equipped with 20 nos. of computers driven by language lab software for German, French, Spanish and English with necessary peripherals like headphones, microphones, monitoring switches etc.

Online Exam Centre

The AAU online exam centre is equipped with 150 nos. of computers with complete network solutions with CCTV surveillance and security system. The centre is used to hold various competitive exams conducted by NTA.

AAU library Online Public Access Catalogue (OPAC)

AAU library's catalogue of books and other reading material can be accessed through library intranet and internet OPAC

Online Literature

AAU is a member of DBT e-learning consortium (DelCON). As a DelCON consortium beneficiary faculty members, researchers and student of all the campuses of AAU have access to more than 927 peer reviewed journals and bibliographic database (Scopus Database).

Academic Bank of Credit (ABC):

The provision of ABC will help to deposit credits awarded by the University to student's account facilitating credit transfer through digital mode in case the student moves to another institute/ if a student resumes the study after a gap period.

Access to Digi locker Facility:

Student's academic details are being stored digitally through National Academic Depository (NAD) in Digi locker. Students can access their degree certificate transcript, grades, migration certificates etc. through online mode.

Development of e-learning Video:

Faculties at Departmental level is engaged in development of e-learning videos. A total of 100 interactive e-learning videos for theory and practical courses of UG programme have been prepared and uploaded in Agri-Diksha portal. Students can access these e-learning videos.

Open Distance Learning (ODL) Platform:

For dissemination of knowledge and skill through distance education using online platform to provide opportunities for self-employment and entrepreneurship development. Three levels of courses viz. Diploma courses (1 year), Certificate Courses (3-6 months) and short-term Training Courses (14-45days) are offered. Faculties are involved in vocationalization of these skill oriented practical courses for different stake holders (So far, we have 88 Courses under AAU ODL).

Launch of 'AAU *select*' brand:

Launching of 'AAU *select*' Products on Online Network for Digital Commerce (ONDC) platform

Software Platforms currently under Development stage are:

- Digital Directory: To furnish AAU employee's contact details
 - Pensioners' Corner: To make the superannuation phase hassle free, the online pensioners' corner is currently under the development phase
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- **Establishing a Centre for Artificial Intelligence and Machine Learning (CAIML):**

The establishment of a Centre for Artificial Intelligence and Machine Learning (CAIML) at each faculty of Assam Agricultural University (AAU) is poised to revolutionize agricultural practices through cutting-edge technology. This initiative aims to integrate AI, machine learning, automation, drone technology, and robotics into various aspects of agriculture, enhancing efficiency and productivity. The CAIML will focus on key areas such as precision crop and soil monitoring, advanced disease diagnosis and prediction, accurate crop yield forecasts, and real-time alerts on weather changes and market trends. These efforts will empower farmers with timely, data-driven advisories specific to their crops and local conditions. Additionally, the CAIML will facilitate the automation of farming operations using drones and Agri-bots, while also developing e-market platforms, bridging the gap between farmers and markets. The centre will boast state-of-the-art laboratory facilities for AI & ML, IoT, computational biology, cloud computing, big data analysis and a fabrication lab for

designing and developing autonomous sensors, IoT devices, and machinery. This visionary approach not only will elevate AAU's educational and research standards but also promises a transformative impact on the agricultural sector, promoting sustainable, informed, and technologically advanced farming practices. The CAIML will offer certificate programme initially for students on Artificial Intelligence and Machine Learning.

Plans for future Digital Infrastructures:

Activity	Short term, 2030	Medium term, 2040	Long term, 2050
Facilities for IELTS & TOEFL coaching in Language Lab	On campus: 1000 nos. Off campus: 200 nos.	On campus: 5000 nos. Off campus: 1000 nos.	On campus: 10,000 nos. Off campus: 2500 nos.
Coaching for NET, SRF and other competitive exams	500 nos.	1000 nos.	2000 nos.
Introduction to French, German, Spanish and Russian language	On campus: 500 nos. Off campus: 100 nos.	On campus: 1500 nos. Off campus: 500 nos.	On campus: 3500 nos. Off campus: 1500 nos.
NABL accredited Central Instrumentation Laboratory	Acquiring NABL accreditation in Jorhat and Khanapara campus	Acquiring NABL accreditation in other college campuses	Acquiring NABL accreditation- in all other campuses of AAU
AI powered chatbot and voice Bot assistance in the AAU website	Dissemination of information to the aspirants/ applicants about the Institution, programs and courses	Implementation of AI in terms of GPS and GIS including farm planning, field mapping, soil sampling, yield mapping etc.	Implementation of GPS and GIS in modern mechanized agriculture
Library facilities	<ul style="list-style-type: none"> • Introduction of Kiosk in Library and updating this platform with the latest thesis • Enhancing the accessibility of library thesis in form of soft and hard copy. 	Direct access of PG students to anti-plagiarism tools	Library will work as a center of self-directed learning, providing full use of its services to everyone in every condition.

C. ACADEMIC INFRASTRUCTURE:

Assam Agricultural University is the first institution of its kind in the whole of north-eastern region of India. The main goal of this institution is to produce globally competitive human resources in the farm sector and to carry out research in both conventional and frontier areas for production optimization as well as to disseminate the generated technologies as public good for benefiting the food growers/producers and traders involved in the sector while emphasizing on sustainability, equity and overall food security at household level.

The University has the following faculties under which various colleges are imparting education in agriculture and allied sciences:

The degree programs offered by the Faculty of Agriculture are as follows:

- B.Sc. (Hons) Agriculture of 8 semesters
- M.Sc. (Agri) of 4 semesters
- M. Sc. (Seed Science & Technology) of 4 semesters
- M. Tech. (Food Technology) of 4 semesters
- M. Tech (Agri. Engineering) of 4 semesters
- MBA (Agri-Business) of 4 semesters
- Ph.D. in Agriculture of 6 semesters

The degree programs offered by the Faculty of Veterinary Science are as follows:

- B. V. Sc & A. H of 5 and half years
- M. V. Sc of 4 semesters
- Ph. D in Veterinary Science of 6 semesters

The degree programs offered by the Faculty of Community Science are as follows:

- B. Sc. (Hons) Community Science of 8 semesters
- B. Sc. (Hons) Food Nutrition and Dietetics of 8 semesters
- M. Sc (Community Sc) of 4 semesters
- Ph. D. of 6 semesters

The degree programs offered by the Faculty of Fishery Science are as follows

- B. F. Sc of 8 semesters
- M. F. Sc of 4 semesters
- Ph. D in Fishery Science of 6 semesters

The degree programme offered by the College of Sericulture is as follows

- B.Sc. (Hons) Sericulture of 8 semesters

The degree programme offered by the College of Horticulture is as follows

- B.Sc. (Hons) Horticulture of 8 semesters

1. College of Agriculture

Presently, the college has

- 18 departments, 5 instructional cum research farms and a central library
- 15 hostels - 6 for boys, 9 for girls
- 153 faculty members in teaching

- A multipurpose sports complex, gymnasium, auditorium and a medical unit
- An AKMIT (Agricultural Knowledge Management & Information Technology) Cell to provide the teachers and the students' easy access to information through 24-hr high-speed internet connectivity
- The intake capacity of the college is:
 - B.Sc. (Agri) : 215 per batch
 - M.Sc. (Agri) : In 18 Departments: 5 - 15 students per department
 - Ph.D.. : In 14 Departments: 5 - 15 students per department

2. Biswanath College of Agriculture

The College has total intake capacity of 61 students per year. The college has launched postgraduate programs from 2011-12 academic sessions. Presently, the college offers PG courses in the department of Horticulture, Agricultural Economics and Farm Management, Extension Education, Agronomy, Plant Pathology, Plant Breeding and Genetics and Entomology.

3. Sarat Chandra Sinha College of Agriculture

The college has intake capacity of 48 students per year in B.Sc. (Agri.)

4. College of Veterinary Science

The college has 21 departments. Presently, the number of students enrolled in the first year BVSc. & A.H. degree is 100 students per year and the enrolment capacity of each department in M.V.Sc. and Ph.D. degree programme is 10 and 4 students per year respectively.

5. Lakhimpur College of Veterinary Science

The college has a total intake capacity of 46 per year in BVSc. and A.H.

6. College of Community Science

The College has 5 departments and offers B.Sc. (Hons), M.Sc. and Ph.D. programs in all the disciplines with an intake capacity of 55, 38 and 25 students per year respectively. A four-year degree programme on Food Nutrition and Dietetics recommended by ICAR, New Delhi is also being offered in the College from the year 2019 with an intake capacity of 35 students.

7. College of Fisheries

The College has 7 departments. The intake capacity of the College is 25/50 students per year. The college also offers M.F.Sc. courses and Ph.D.

8. College of Horticulture and Farming System Research

The College has an intake capacity of 30 students per year in B.Sc. (Hort).

9. College of Sericulture

The College has an intake capacity of 25 students per year in Bachelor of Science in Sericulture.

Other Academic Facilities Available:

- Training and Placement Cell
- Directorate of Open and Distance Learning
- Smart/Virtual classrooms. Blended learning
- Integration of vocational education in curriculum
- NEATE Hub- start-ups programs based on AAU-generated technology
- Modern and well-equipped Laboratories in all the departments
- Greenhouse, glass house, net house and poly house facilities are available in different campuses to facilitate teaching-learning, research & extension activities under AAU
- Research/Demonstration Farm located in different outstations under AAU

Futuristic pedagogical initiatives:

AAU has planned to implement the new academic curriculum prepared by the 6th Deans' Committee as per NEP, 2020 under the supervision of ICAR to remove the rigid boundaries of degree completion years and improve the GER to ascertain no academic loss during exiting in between. Keeping this in mind the committee proposed the undergraduate degree to be 4 years duration with multiple entry multiple exit (MEME) options, e.g.

- ✧ A certificate after completing 1 year in a discipline.
- ✧ A diploma after 2 years of study
- ✧ A bachelor's degree after a 3-year programme
- ✧ Degree with honours after completion of 4 years

To infuse the concept of 'Dignity of Labour' in the impressionable minds of the students, the University has started an '*in situ*' internship programme, 'earn while you learn' for the students where the students are offered part-time jobs in their leisure hours in different University establishments. Interested students can be engaged in the part-time jobs for a maximum of 40 hours per month per student so that their academic activities are not compromised.

The changing global scenario has made the AAU realize the necessity to put its efforts into creating an eco-system for entrepreneurship development by constantly trying to upgrade

the skills and capacities of its students and teachers through various skill-oriented academic programs. The mission is to bring a change in the student psyche to make them believe that they can also become “Job-creators” instead of merely being “Jobseekers”. Faculty members are being trained at the Entrepreneurship Development Institute of India (EDII), Ahmadabad for mentoring the students. The student-entrepreneurs will be simultaneously pursuing their studies as well as working on their entrepreneurial goals. Necessary support infrastructure for the fabrication lab, robotics lab, simulation space, prototyping, etc will be set up speedily for the use by these interested students. As the student’s graduate, at the end of the four years, they may find a place in the market due to this structured mentoring and facilitation process. Seed money in the form of grant-in-aid will be provided for deserving student-entrepreneurs.

The Indian Knowledge System (IKS) is a component in the Course Curriculum of Agricultural Education. The University has been pursuing different research and extension programs for the re validation, development and up-scaling of the ITKs.

Futuristic approaches in agricultural education

1. Multidisciplinary and holistic education:

The education in AAU is heading towards multidisciplinary and holistic in nature. The Certificate course on Climate Resilient Agriculture (Meteorology, Agronomy, Soil Science, Agricultural Biotechnology, Nanotechnology) is multidisciplinary in nature. More multidisciplinary courses are going to be introduced phase-wise. All the master’s and Ph. D programs are formulated in a multidisciplinary approach where the students, apart from their major course, are allowed to choose courses from other departments. Besides implementing IDEA, the students showing aptitude towards entrepreneurship, are mentored from 2nd year onwards. AAU has also started implementing program like ‘Earn while you learn (EWYL)’, scholarship for foreign students, exemption of tuition fees of economically and socially challenged students etc. The University has an NCC and NSS wing and Yoga will also be introduced soon.

2. Skill development and employability

The University has programs for the skill development of the undergraduates’ students in its five faculties. In its endeavour for skill development of persons engaged in agricultural and allied sectors, the University has been offering certificate courses in various agricultural fields like-Production of bio-fertilizer, Plant tissue culture, Tea Production Technology & Management, Pig Production, Poultry Production Technology, Dairy Farming and Fodder

Production, Bakery, Dyeing & Printing Technology, Food Preservation, Aquaculture Production and Management etc. More such courses will be introduced phase-wise in the coming years. With an aim to disseminate agricultural education to the masses, AAU has launched a new initiative Open and Distance Learning (ODL) mode of education to provide holistic agricultural knowledge and skill to different categories of learners lacking the opportunity of exposure to conventional education in relevant areas of agriculture and allied sectors. The aspiring learners will be offered various need-based programs under the faculties of Agriculture, Veterinary Science, Community Science and Fishery Science through Distance Learning Mode. The wide ranges of programs covered under this learning mode are expected to help the learners in self-employment. Development and offering a holistic curriculum that combines technical knowledge with entrepreneurial skills, to empower students to become job creators rather than job seekers. To produce industry-ready graduates and post-graduates capable of taking leadership in agriculture and allied sectors globally by transforming information intensive education to skill intensive education as envisioned in the National Education Policy 2020 (NEP 2020). Focus on experiential learning and skill development through internships, apprenticeships, and hands-on projects for developing leadership skills essential for entrepreneurial success in agriculture.

3. Equitable and inclusive education

The University has been taking extra care for disseminating education to all section of students. Reservations in admission are as per the government regulation. The University has also built ramps in the classroom blocks, departments, library, and administrative blocks to facilitate easy and trouble-free access to those places for the physically challenged students. Lifts are also being installed in the Central Library and Administrative Building for trouble-free access to the floors above. As far as gender equality in admission is concerned, more than 50% of the students are girls.

Besides the normal course curriculum, the University has also introduced courses in the areas of waste management, climate change, conflict management and peace studies, sustainable development, law, health care, etc. Emphasis on holistic development of students through establishing yoga, meditation and wellness centre with trainer for all students. Incorporation of Indian Knowledge system (IKS) into the curriculum, as per NEP 2020. Guiding students for preparation of competitive exams and arranging regular coaching for the same.

4. Internationalization of higher education

The University has been facilitating the students and scholars to pursue higher studies/advanced training in foreign higher education institute. Development of strategic partnerships with international universities of repute for student exchange and credit sharing programs. Promoting of innovation and exchange of ideas by attracting international students for collective development and progress of science and technology. AAU has signed more than 300 MOU with foreign institutes for student exchange programme and funding agencies for sponsorship in higher education. Exploration of new avenues for student support-fellowships for higher education in national and international universities. The University is also planning to offer scholarships to the deserving foreign students for pursuing their studies at AAU.

Establishment of an International Training Centre on tea cultivation, manufacturing and quality control is on high priority.

Industry Collaboration:

Industry Collaboration and Internships by working closely with industry professionals where students gain valuable insights into market trends, business practices, and technological innovations, preparing them for entrepreneurial roles in the agriculture.

Plans for future Academic Infrastructures:

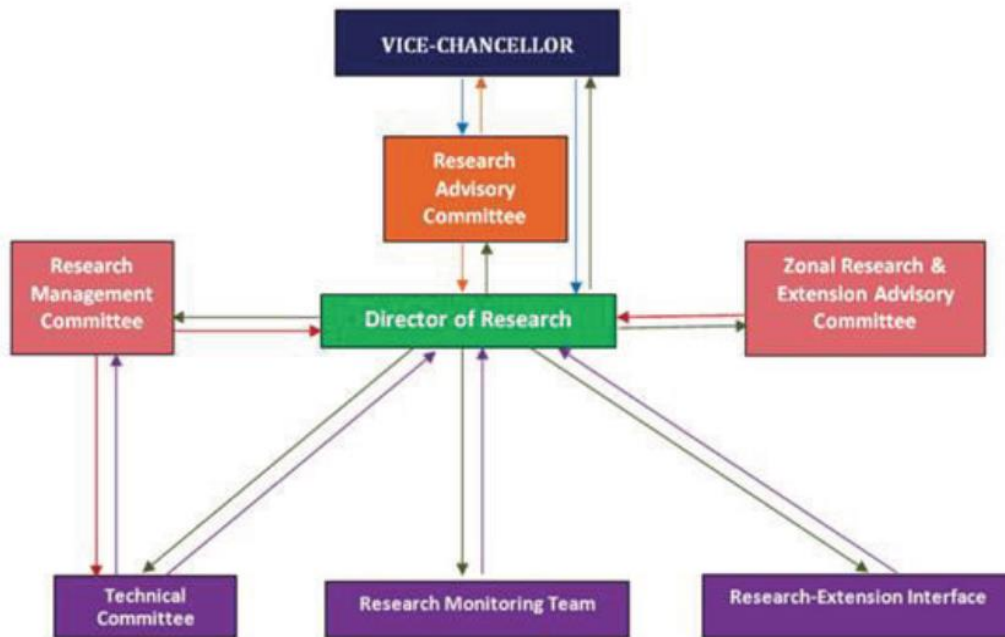
Activity	Short term, 2030	Medium term, 2040	Long term, 2050
Enhancement of Gross Enrolment Ratio by addition of new colleges and increase in enrolment	College of Dairy Science and Technology, College of Agricultural Engineering & Organic farming -UG Programme	Master's Programme	Master's and PhD Programme in both the colleges
Addition of new Degree Programs in departments that can attract students outside the traditional boundary of agricultural science like life science, statistics, economics, biotechnology, biochemistry, microbiology, public health, epidemiology, nutrition, remote sensing and robotics etc. as	UG Programmes	Master's and PhD Programmes	Master's and PhD Programmes with increased intake

envisaged in NEP 2020.			
Inculcating human values and professional ethics:	Strengthen existing programs by introducing courses in areas of waste management, climate change, conflict management and peace studies, sustainable development, law, health care, etc.	Introducing Human values and Professional Ethics Programs in Research and Extension activities of AAU	Continuing with and expanding area of these programs throughout the AAU campuses
Adoption of Integrated model of education	<ul style="list-style-type: none"> Exposing 50 per cent of the students to Vocational education and its integration to formal education. (NEP 2020) Training of teachers for skill updating 	<ul style="list-style-type: none"> Continuing with increased exposure of students in a broader perspective Continue with need-based training of teachers for skill updating 	Continuing with these programs in a broader perspective
Manpower recruitment, faculty and others	120 nos.	150 nos.	160 nos.
ODL and online interdisciplinary program to encourage cross disciplinary learning	86 tailor-made modules targeting approx. 5,000 participants per year	100 tailor-made modules with intake capacity 10,000 participants per year	150 tailor-made modules with an intake capacity of 20,000 participants per year
Inclusivity and sponsorship for Ph.D. scholars	Inclusion of Ph.D. scholars in Govt. sponsored programs for specialized training abroad.	50% Sponsorship for PG students to participate in international training programs, seminars or conferences	Sponsorship for PG students to participate in international events
Promoting multilingualism and Indian languages: Provide programs in regional languages using AI for translation of programs.	3 Indian languages	6 Indian languages	12 Indian languages

Developing online digital question banks	UG Programme	UG, PG Programme	For competitive exams: JRF, SRF, ADO, NET, ARS, etc.
Access to about 5,000 International scholarships from 400 institutions.	Accessing/ targeting 10 per cent of AAU students in both PG and UG	Accessing/ targeting 30 per cent of AAU students in both PG and UG	Accessing/targeting 50 per cent of AAU students covering both PG and UG
Alumni engagement: establish alumni networks and involve alumni in mentoring and career development initiative	20 per cent of alumni	30 per cent of alumni	40 per cent of alumni
Alumni Centre	Proposal for construction of Alumni centre	Construction of Alumni centre in Khanapara and Jorhat campus	Construction of Alumni centre in other college campuses of AAU
Industry partnerships: explore partnerships with the industry to offer certifications with real- world value	State and national level	International level	International level
Global virtual classroom: collaborate with universities worldwide to create virtual classrooms	2 Universities	8 Universities	10 Universities
Joint degree/dual/ Twinning degree programs: with international partners combining resources and expertise.	2 Universities	8 Universities	10 Universities
Create micro-credential programs in collaboration with industry experts	UG	UG and PG	UG and PG
Implement block chain technology protected by cryptographic encryption for secure and tamper-proof academic records and transcripts	Jorhat campus	Khanapara and Raha campus	All other constituent colleges of AAU
Development of virtual laboratory to minimize the handling/sacrifice of live animals/insects for demonstrations	In Khanapara and Jorhat campus	In all campuses	In all campuses with increased capacity

RESEARCH AND INTELLECTUAL PROPERTY INFRASTRUCTURE

I. Research Management System:



Research Management System of Assam Agricultural University

The University follows a well-defined Research Management System to carry out need-based research. Under the current management system, the research problems are identified based on the information collected by the scientists from the farmers' fields and also based on the feedback received from the line departments of the state government. The system encourages research programs based on the needs of the stakeholders and effective monitoring of the programs to make them sharply focused on the relevant problems.

The research problems for each of the six Agro-climatic zones are identified through Rapid Rural Appraisal/Participatory Rural Appraisal etc., based on the feedback received from the line departments and extension network (KVKs). The problems thus identified are discussed in the Zonal Research & Extension Advisory Committee (ZREAC)/ Research & Extension Advisory Committee (REAC) for confirmation, prioritization and categorization as short-term and long-term research needs. The research problems identified in the ZREAC/REAC meeting are forwarded to the Research Advisory Committee (RAC) and Technical Committee (TC) via the Directorate of Research (Agriculture) and Directorate of Research (Veterinary) for further discussion and finalization of the research problems to be addressed by the University as short-term and long-term goals. The recommendations of the

RAC and TC meetings are placed before the Research Management Committee (RMC) by the respective Directors of Research. The respective Director of Research invites detailed technical programs from the selected scientists on the specified projects.

AAU has eleven research stations engaged in various research activities. The research stations are in different places of the state.

These are:

- AAU-Assam Rice Research Institute, Titabor
- AAU-Citrus and Plantation Crops Research Station, Tinsukia
- AAU-Horticulture Research Station, Kahikuchi
- AAU-Sugarcane, Medicinal and Aromatic Plants Research Station, Buralikson
- AAU-Zonal Research Station, Diphu
- AAU-Zonal Research Station, Gossaigaon
- AAU-Zonal Research Station, Karimganj
- AAU-Zonal Research Station, North Lakhimpur
- AAU-Zonal Research Station, Shillongani
- AAU-Goat Research Station, Byrnihat
- AAU-Zonal Livestock Research Station, Mandira

II. Research and Extension:

A) Research:

The Director of Research (Agri) coordinates the research activities in the field of agriculture and community sciences. The research activities in agriculture and community sciences are being undertaken in different departments of the constituent colleges belonging to the two faculties as well as in the six Zonal Agricultural Research Stations (ZARS) and three Commodity Research Stations (CRS). Constant efforts are being made to address the demand-driven issues in all possible areas. Presently, more than 150 research projects including the AICRP/AINP are in operation in the Faculty of Agriculture and Community Science.

The Director of Research (Veterinary) coordinates the research activities of Veterinary Science and Fisheries. Besides, outside funded research projects, two research stations namely AAU-Zonal Livestock Research Station, Mandira and 2) AAU-Goat Research Station, Byrnihat have been placed under the administrative control of the Director of Research (Veterinary). In the year 1988, the Director of Research (Veterinary) was entrusted with the responsibility of organizing and coordinating fishery research of the University. Fishery research under this Directorate is conducted at College of Fisheries, AAU, Raha and Fishery

Research Centre, AAU, Jorhat. Besides, research activities on fisheries are also conducted at AAU-ZLRS, Mandira. At present, 72 externally & internally funded projects are being implemented.

The research works of the University are oriented as per the needs of the stakeholders. The scientists under the five faculties of the University are currently engaged in 223 research projects in different establishments. High-yielding varieties of rice, finger millet, sesame, toria, mungbean, field pea and uradbean developed by AAU have been notified by the Central Variety Release Committee (CVRC) for cultivation in the state of Assam.

Technology transfer is a regular feature of this University. In the last two years itself, AAU has transferred six technologies – AAU-Xaj, Labanya, AAU Vet Mumb, AAU Vet Dog Loaf, AAU Vet Chicken Powder and Thermostable live lentogenic Newcastle disease virus formulation to private sector industries with a license fee and royalty. More transferable technologies are in the pipeline. AAU has already started natural and organic farming research works are in progress for the establishment of a model unit.

AAU has funded 41 research projects under competitive mode to the faculty members in the last couple of years for the benefit of farming community and agripreneurs.

Assam Agricultural University's initiative in the *carbon market*, through the formation of a *Carbon Finance Potential* committee in March 2023 has been the pioneer in the agriculture sector from this part of the country. The *Carbon Finance Potential* committee had already started functioning and the follow-up action includes the signing of MoU among AAU, TERI and ReNew Power Synergy Pvt. Ltd. This project aims to harness the *carbon credit* from a minimum of 10 million trees across the state covering as many districts as possible and farm families with the involvement of AAU through its constituent Colleges, Zonal Research Stations and KVK's.

AAU has established the best-in-class Innovation hub to facilitate absorption and commercialization of various agricultural and allied-agricultural technologies to promote ventures and businesses in the Northeast region. The Assam Agricultural University Incubator has been recognised as an “Atal Incubation Centre” by NITI Aayog, Government of India and as a “Knowledge Partner under the RKVY-RAFTAAR scheme” by the Department of Agri Cooperation & Farmers Welfare, Govt. of India.

Promotion of Innovation and Research by providing support for research projects, technology incubators, and start-up accelerators, which can nurture entrepreneurial ventures that have the potential to transform the agricultural landscape. Advocating the policies that support research and development in veterinary and animal science including increased funding

and incentive for precision research and innovation. Regulatory reforms of veterinary education in context of changing scenario to ensure quality and entrepreneurial education emphasising the States veterinary land scape.

During 2022-23, teachers and scientists of the University have published 1285 publications in the form of research papers, research abstracts in journals and proceedings, books, book chapters, practical manuals, popular articles and technical bulletins of which 44 research papers were published in journals with NAAS score of 10 or above.

Directorate of Post-Graduate Studies:

Directorate of Post-Graduate Studies was established as per the Act and Statutes of Assam Agricultural University Act. As per provision of the Act, Director of Post-Graduate Studies, AAU is the Statutory Officer for supervision of duties, maintenance of records pertaining to PG course, instruction and students and for co-ordination of post-graduate studies in all Colleges, Departments and Section of the University.

B) Extension:

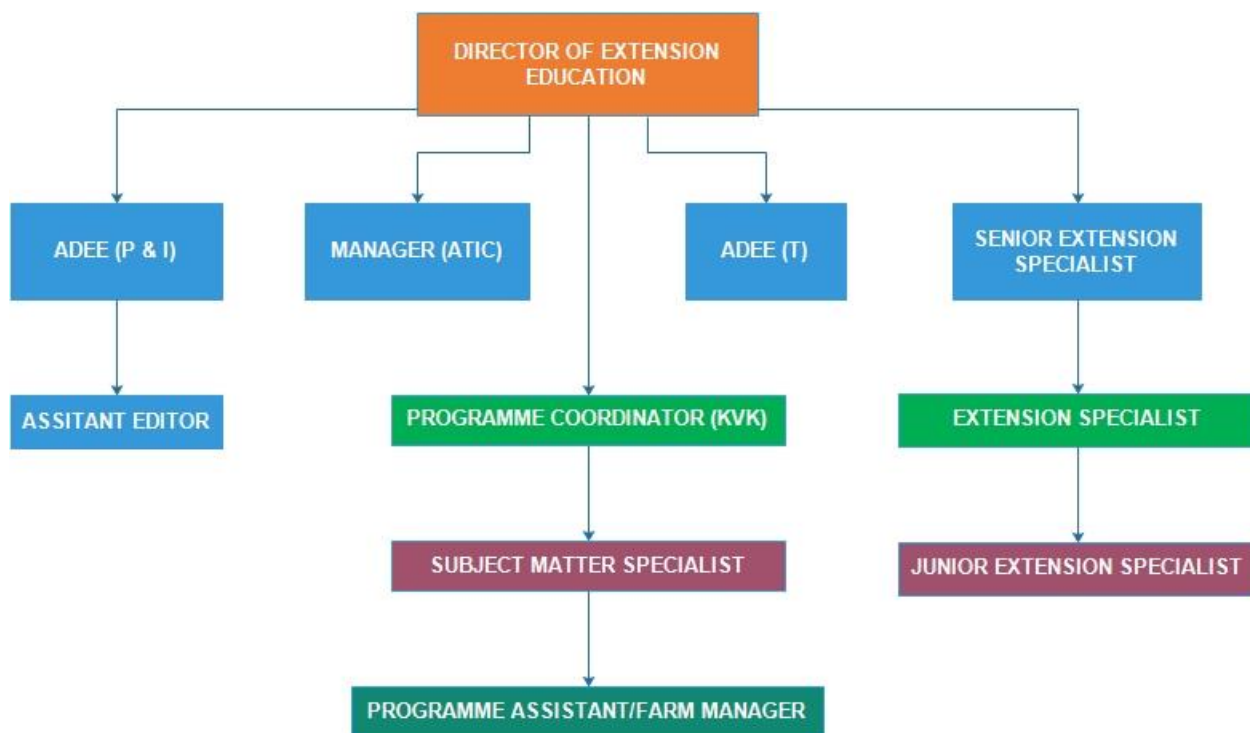
Assam Agricultural University caters the needs of the farming community of the Northeastern region and has been playing a vital role for socio-economic development. The Directorate of Extension Education has been maintaining liaisons with the Department of Agriculture, Govt. of Assam since inception. Also, this Directorate has been maintaining linkages with other line departments of the NE states like Fishery, Veterinary & Animal Husbandry and Sericulture. The Directorate provides all necessary steps for adoption and dissemination of technologies evolved locally at AAU. Extension Education services to the farmers field has been warmly accepted by the farmers of the region. It has been reflected in boosting up of the crop production potentiality. The area under HYV was increased and the farmers of the region are committed to adopt package of practices for both Rabi and Kharif crops. The Directorate of Extension Education of the University has been continuously striving to uplift the lives of the farming community. The Directorate through its 23 KVKs conducted many training programs benefiting almost 32,000 farmers of the state in the current year. KVK Scientists regularly visits farmer's fields and addresses the problems encountered by the latter through realistic and time bound solutions.

The Veterinary Clinical Complex at AAU, Khanapara campus has been providing services to the farmers, livestock and pet owners as well as various central and state agencies through Public-private -partnership (PPP) mode. This facility is operational in the field of providing diagnostic services for small and large animal diseases, laboratory training of manpower and providing consultancy services in disease diagnosis and control. A feed testing laboratory has been established through the financial support of World Bank Fund costing around 95 lakhs to help the farmers for improvement of the productivity of bird's animals and fish through quality feeding of feeds. The Clinical Complex, on an average, treats around 100-150 animals daily earning revenue of more than one crore during 2022-23. Transfer of technologies for improving milk, meat, fibre production, value addition of goat products has also been taken up.

The Directorate of Extension Education provides ample opportunity for convincing and motivating the poor farmers of the region towards low-cost technologies, farmers visit to AAU farms and to Agricultural Technology Information Centre (ATIC) and other farm related programmes through its 23 KVK's. Apart from this, the Publication and Information wing of the Directorate regularly publishes Annual Reports, Newsletters, Farm Newspaper, Extension Bulletins etc. Besides, the technologies generated in the University are disseminated through electronic and print media.

Mandates of the Directorate of Extension Education are:

- Developing linkages between various govt. and non govt. organizations concerned with agricultural and allied extension programmes.
- Organizing need-based training for extension functionaries, farmers, rural youths and SHG members.
- Advisory services to farmers.
- Functioning as a centre for collecting, storing and disseminating information to farmers and extension functionaries.
- Conducting demonstration for transfer of technology.
- Entrepreneurship development in agriculture and allied areas
- Publication



Organogram, Directorate of Extension Education

Krishi Vigyan Kendra (KVK)

Krishi Vigyan Kendra (Farm Science Centre), an innovative science-based institutions, were thus established mainly to impart vocational training to the farmers and field level extension workers. The concept of vocational training in agriculture through KVK grew substantially due to greater demand for improved agricultural technology by the farmers. They not only required knowledge and understanding of the intricacy of technologies, but also progressively more and more skills in various complex agricultural operations for adoption on their farms. The Faculties of Agriculture, Veterinary Science, Community Science, Horticulture, Sericulture and Fisheries Science are headed by the Deans assisted by Associate Deans of constituent Colleges.

The mandates of KVK:

- Conducting "On-Farm Testing" for identifying technologies in terms of location specific sustainable land use systems.
- Organizing training to update the extension personnel with emerging advances in agricultural research on regular basis.

- Organizing short- and long-term training courses in agriculture and allied vocations for the farmers and rural youths with emphasis on "Learning by doing" for higher production on farms and generating self-employment.
- Organizing Front Line Demonstrations (FLDs) on various crops to generate production data and feedback information.

Agricultural Technology Information Centre (ATIC)

Agricultural Technology Information Centre (ATIC) under the Directorate of Extension Education caters to the needs of the farming community through a single window system to address a series of farm related problems. This service includes both providing solutions to location-specific problems and making available all the technological information along with technology inputs and products.

The main objectives of ATIC are:

- Providing diagnostic services for soil testing, plant and livestock health.
- Supplying research products such as seeds and other planting materials, poultry strains, etc. emerging from the institution for testing and adoption by different clientele.
- Disseminating information through published literature and communication materials as well as audio-visual aids.
- The ATIC is intended to provide formal management mechanism between the scientists and technology users.

Facilities available at ATIC:

- | | |
|----------------------------------|---|
| 1. Exhibition/Technology Museum: | 1 |
| 2. Touch screen Kiosk: | 1 |
| 3. Sales Counter: | 1 |

Services to be provided through ATIC:

1. Farmers' Facility Centre

- To retail technology products of AAU to the farmers through single window system.
- Testing and providing solution to the problems encountered by the farmers in the field.
- Guiding the farmers to Departments of the University to get answers for farm related queries.

- To disseminate information of farm technologies through demonstrations, exhibitions and audio-visual shows to the farming community.
- To facilitate the interaction of progressive farmers with other farmers to improve the status of agriculture.
- To answer the queries of farmers through telephonic conversation in real time.
- Establishment of Technology Kiosks to cater to the technology needs of the farmers
- Provision of Market Intelligence information through ticker board.
- Introduce the interactive agricultural apps to the visitors and enable them for use
- Provide real time weather report and agricultural advisories for the entire state
- Dissemination of agricultural information through Community Weather Station.
- Maintenance of crop cafeteria

2. Technology services

Soil Health Management: INM, soil testing and leaf analysis

Pesticide Health Management: IPM, IDM, Pesticide residue analysis

Farmers Consultancy: Directly interact with scientists

III. IPR (Intellectual Property Rights) Cell:

Assam Agricultural University is committed to protect its intellectual properties by protecting them under the existing laws of the country. It believes that this will improve the quality of research, generate funds for the University and open scope for public private partnership with faster availability of technology to the public. The University recognizes that research in frontier sciences requires intellectual property (IP) protection through patents, plant variety protection and other forms of intellectual property rights (IPR).

(Revised AAU_IPR guideline is available on the University website: www.aau.ac.in)

1. Farmer's Variety Protection Application

Application for protection of farmers' variety by farmers or community of farmers or group of farmers as contained in the Protection of Plant Varieties and Farmers' Rights Act 2001.

(Detailed information is available on the University website: www.aau.ac.in)

2. Material Transfer Agreement

Provision of Material Transfer Agreement stipulating that the germplasm material(s) or its (their) part(s), components or derivatives (including live or dead tissue/DNA) that

can be used to retrieve whole DNA/fragment or sequence or any other genetic information shall not be distributed or transferred to any third party, except those directly engaged in research under direct supervision of the recipient (Second party), without prior written approval of AAU.

(“AAU guidelines for intellectual property management and technology transfer/commercialization”, published in the year 2022-23)

3. A. Patent Application Filed by AAU

Patents filed/published (2007-2024): **20**

Granted: **4**

Published: **6**

B. GI applications facilitated and filed by AAU

GI applications facilitated and filed (2013-2024): **7**

GI registration obtained: **5**

Plans for future Research and IPR:

Activity	Short term, 2030	Medium term, 2040	Long term, 2050
Human Resource Development Cell to be developed to meet training needs of staff	Initialization of training programs, activities for communication skills, technical writing, brainstorming sessions, language training and interpersonal communication skills	Training program on Artificial Intelligence, covering at least 50 per cent of the stakeholders	Training program on Artificial Intelligence & machine learning in Agriculture using software programs covering at least 80 per cent of the stakeholder.
Research Collaboration	Collaboration with universities, research centres including community-based organizations, locally and nationally promoting systematic institutional research with high performance and output.	Maximizing collaboration with universities, research centres including community-based organizations, locally and nationally promoting systematic institutional research with high performance and output.	Maximizing collaboration with universities, research centres including community-based organizations, locally and globally promoting systematic institutional research with high performance and output

Human values & professional ethics:	Strengthen existing social research programs by introducing areas of waste management, climate change, conflict management and peace studies, sustainable development, health care, etc.	Introducing human Values and Professional Ethics Programs	Continuing with and expanding the area of these programs to a wider horizon.
Technology transfer	To undertake a 'Technology Transfer Acceleration Program' to transfer promising IP-enabled technologies from the lab to the market.	To undertake joint intellectual property ventures on a global scale.	To position AAU as a global hub for agricultural innovation, specializing in patent, GI and PVP.
Community Enrichment	To ensure that the farmers and rural communities have access to and benefit from GI and PVP-protected crops.	To promote agricultural GIs on the national and international market and secure international recognition and protection for those GIs.	To play a pivotal role in educating and mentoring the next generation of innovators and intellectual property professionals.
IPR and AI in precision agriculture	To double the number of IP portfolios of AAU by 2030.	To encourage the development and IP registration of a diverse range of crop varieties those cater to the new Agricultural technologies, specific needs, and other challenges of Indian agriculture.	To leverage advanced data analytic and artificial intelligence to optimize intellectual property strategies and decision-making.
Conservation of genetic resources	Cataloguing and Characterization of at least 30 per cent native nondescript plant and animal genetic resources of Assam on the verge of extinction.	Characterization of 90 per cent native nondescript plant and animal genetic resources of Assam on the verge of extinction.	Improving the efficiency of plant and animal breeding programs and products using nuclear-related genomic information-practical application in developing countries.

Entrepreneurial activities	Motivate students and faculty members to engage in entrepreneurial activities to enhance the university's revenue through ventures like production of bio-pesticides, bio-fertilizers, tissue culture products, bakery products, fishery products, veterinary products etc through our brand "AAU Select".	More emphasis on UG students at the ELP level who can take up such ventures in the future.	The progress till 2050 will help in expanding the reach of our brand "AAU Select"
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Plan for future extension:

Activity	Short term, 2030	Medium term, 2040	Long term, 2050
Technology assessment and Refinement	<p>Technology assessment and refinement as per national, regional and local need. Demonstration on integrated farming system model and special programmes on organic and natural farming to develop/ popularize good practices suitable for the locality</p> <p>Backyard farming involving woman self-help groups should be encouraged particularly in animal and homestead components.</p>	Sensor based agriculture. Emphasis on demonstration of good model of typical Homestead gardening comprising of agri-horti-animal-fish-homestead components.	The emphasis is on using precision farming and automated systems to enhance diagnosis, performance, and decision-making. Additionally, exploring vertical farming is crucial for maximizing output with limited resources. Both precision and vertical farming are particularly beneficial for entrepreneurs and large-scale farmers.
Thrust on mechanized farming	<p>Training and demonstration on use of modern machinery and equipment's</p> <p>More emphasis on mechanized farming through group approach or by involving talented work force</p>	Advanced machinery and equipment may be provided through Custom Hiring Centre, assisting revenue generation at the same time.	Community managed advanced Post harvest processing, grading and packaging will be established

Quality Seeds and Planting Material	Establishment/ development of mother block/ breeding stock (unit) at regional and/ or district level for production of high-quality seed, planting materials, breed/ variety/ strain etc as per location specific importance.	Multiplication of mother block/ breeding stock (unit) at block level for production of high-quality seed, planting materials, variety/ breed etc.	Quarantine measure system for assessing purity of seeds and planting materials
Capacity building on new technologies	More training, awareness and demonstration programmes in far flung areas to reach the unreached people engaged in farming is important. Special emphasis on HRD, Certificate of vocational and skill development courses are to be given.	Organizing HRD, skill and vocational training courses to make the end users (both trainees and trainers) confident in their occupation/ vocation.	Organizing HRD, skill and vocational training courses to make the end users (both trainees and trainers) confident in their occupation/ vocation.
Conservation technology	Develop awareness and skill among the farming community on Conservation technology such as zero tillage, minimum tillage, mulching etc., for soil health management and generating more income.	Extensive Use of Conservation agriculture to ensure maintenance and boosting yields and increasing profits, while reversing land degradation, protecting the environment, and responding to growing challenges of climate change.	Promoting Renewable Energy: Emphasizing clean energy, harnessing solar, wind, and biomass will boost sustainable agriculture. Solar cookers and water heaters, along with indigenous windmills and biogas plants, offer affordable, eco-friendly energy solutions for rural areas.
Climate resilient technology	Develop knowledge and skill among the farming community on Climate resilient technology	Demonstration on Climate resilient technology in agriculture such as flood and draught tolerant cop varieties,	Floating farming practices to be undertaken in chronically flood affected areas in vegetable cops.
Entrepreneurship development	Focus on Startup and Incubation: Set up innovation hubs and collaborative spaces at KVKs to unite researchers, industry experts, and entrepreneurs. Strengthen bank linkages to support rural startups and enterprise creation.	Development of at least 100 smart/ climate resilient villages and 100 entrepreneurs (turnover of > 1crore) in terms of technology infusion and adoption.	Connecting the startups with national and international markets

Technology dissemination	Knowledge dissemination through easy and effective means of communication as per local needs and available practices.	Developing expertise in ICT and developing/ use of farmer's friendly communication and diagnostic tools	Working on establishment of "Block Knowledge Centre" for easy transformation of knowledge to villages
	Working on development of model and/ or commodity villages	Establishment of Community Radio station preferably at regional level	
Emphasis on Organic and Natural Farming	Emphasis on natural and organic farming through use of available and natural eco-friendly resources.	Standardization and popularization of organic and natural farming model	Area expansion under organic and natural farming technologies
Establishment of Commodity villages	Programmes on value addition, post-harvest management and other means of secondary agriculture preferably through promotion of group approach.	Measures for making bio-inputs available in the locality by establishing bio input production unit Create agri-tourism hubs to showcase farming practices, promote farmer's markets to boost rural economies	Value chain management
	Identification of high valued but underutilized agricultural products and bringing them into commercialization through scientific production technology and post-harvest value addition.	Linking Rural to Global: Development of e-commerce platform for facilitating the high value of local products in reaching global consumers.	
Validation of ITK	Special emphasis on application of indigenous knowledge system including ITKs and exploring the benefits of indigenous herbs and medicines	Leveraging Indigenous Knowledge for sustainable agriculture. Field testing of ITKs for supporting sustainable agricultural practices. Application of ITKs in natural and organic farming	Networking for large scale replications
ICT	ICT for Agriculture: Create a farmers' database by linking land records, geo-referencing village maps, and real-time crop surveys. Deploy AI-based	Tech Parks and Digital Platforms: Set up technology parks for collaboration and knowledge sharing.	Special attention in effective use of AI and machine learning for the benefit of the end users. E-extension platform for

	<p>apps for weather updates, crop advice, and market prices. Enhance digital literacy and access to digital services.</p> <p>Strengthening frontline extension with advanced digital innovations (6 KVKs)</p>	<p>Implement digital platforms for real-time updates on weather, market prices, and best practices.</p> <p>AI/ML for Agriculture: Use remote sensing, soil sensors, and aerial surveying with AI/ML to deliver real-time insights for improving crop yield, controlling pests, screening soil, and reducing farmers' workload.</p>	<p>effective communication and fruitful diagnostic and control measures will get edge in the days to come.</p> <p>Popularization of very effective apps for real time crop and soil management</p> <p>Use of IT tools and decision support system (DSS)</p>
Strengthening coordination and linkage	Strengthening the coordination and linkages with all the concerned stakeholders and try for implementation of few programmes extracted from extramural sources.	<p>Strengthening convergence and resource mobilization</p> <p>Make region specific and sector specific convergence strategies</p>	Networking for large scale replications
Group Mobilization and Promotion of FPOs	FPOs and Farmers' Clusters: Promote Farmers Producer Organizations (FPOs) for production, value addition, and marketing to boost income. Support FPOs and farmers' clusters to create viable business models, making it easier for financial institutions to assess creditworthiness and provide loans.	<p>Support for the establishment of Custom Hiring Centres (CHCs) which will provide access to modern machinery for small and marginal farmers</p> <p>Creating awareness among the FPCs for promotion of business attitude.</p>	<p>Preventing Rural Youth Migration: Focus on programs that keep rural youth in agriculture by showcasing sustainable business models and better opportunities.</p> <p>Develop knowledge and skill among the FPCs for doing business with national and international markets</p>
Women empowerment	Sensitizing women on biocultural diversity of millets and nutri garden	Drone pilot training of woman and year-round drone application	Focusing on women entrepreneurship programmes.

E. SUPPORTIVE AND FACILITATIVE INFRASTRUCTURE

The following are few more facilitative infrastructures:

- AAU Grievance Redressal System
- Women's Cell
- Anti-ragging Committee
- Anti-ragging squad
- Human Resource and Development Cell
- AAU Caste-Based Grievance Redressal Cell
- Extension and KVK Training programme, farmers' exhibition program, students' Rural Agricultural Work Experience Programme (RAWEP), Tea Industrial Work Experience Programme (TIWEP), Fishery Work Experience Programme (FWEP)
- Establishment of Pilot testing Technology Park cum incubation center for enhancement of Technology Readiness Level (TRL) to attract investors
- Radio and television talks by faculty members

F. INFRASTRUCTURE FOR PROFESSIONAL NETWORKING AND COLLABORATIONS

I. Alumni Association:

To carry the brand name of Assam Agricultural University, constituent colleges have formed Alumni Associations in their respective colleges to strengthen the bonds between the alumni, the student's community, and the University and to shoulder pertinent social responsibility.

- College of Agriculture, AAU, Jorhat has a vibrant Alumni Association with more than 5000 active members which organizes Alumni Meet regularly for the establishment of active network among the alumni. A Platinum Jubilee Convention Centre with the creation of facilities like – skill development and capacity building, empowering the underprivileged, nurturing agripreneurs, recreation center, satellite meetings, and resource and facilitation center for NE students, is going to be established shortly for trying to connect our alumni with these resources.

- There is a dynamic Alumni Association of College of Veterinary Science, AAU, Khanapara with a membership of 4150 which organizes various social service activities.
- College of Fisheries has an Alumni association- with membership strength of 500 plus in the year 2019 to support the organization's Mission, Vision and Goals and to strengthen the bonds between the alumni, the student's community, and the University and for overall governance, management and growth of the fisheries profession in the state.
- The College of Community Science has an Alumni Association with a membership strength of 180 active members.

Objectives of Alumni Association:

- To foster fraternity, friendship and fellowship among the member alumni,
- To maintain and promote the overall image of the University as a premier centre of excellence in agriculture and allied sector in India,
- To undertake suitable publications, organize seminars, symposia and other related activities for the furtherance of its objectives,
- To encourage the members for socio-economic voluntary work,
- To enable professional networking among alumni for mutual benefit in academic, professional and/or business areas; including employment network for new graduates or alumni looking for career upgrades/change, and alumni displaced from the workforce.
- To extend academic support to the Institute through various networks.
- To undertake any other activity as is required for the achievement of the above objectives.

II. Networking and Connection with the Society:

The University, to strengthen the capacity of farmers, other stakeholders, and researchers/ extension workers, has planned several programs in participatory mode involving public, private, and civil society. A roadmap converging the various organizations has been prepared for efficient technology dissemination, validation of developed technologies on a larger scale, and entrepreneurship development. To initiate the process, the University in collaboration with NABARD, USAID, and SIRD, etc. has already organized a few certificate courses on specific subjects to develop the entrepreneurial ability and managerial skills of the

rural youth. The KVKs, to connect with the society are capable of imparting skill development and vocational training in collaboration with other organizations to create technically competent manpower for disseminating technical know-how and business skills of the rural youth. With the motto to strengthen the capacity of farmers to equip them with recent technological know-how in agricultural and allied sectors, the University in close association with the local, regional, national, and international organizations has started the process for better technology dissemination and adoption in the farmer's field. To execute the plan, the University has initiated the process of implementing the World Bank-funded Assam Agri Business Rural Infrastructure Project (APART) in collaboration with ARIASP, Assam, and IRRI, Philippines to enable agri-enterprise development, facilitating agro-cluster development and fostering market-led production. The University has also planned to develop the concept of a "Village Knowledge Centre (VKC)" to provide various services like audio conferencing, Voice Message dissemination and editing techniques, Video Conferencing, Need-based Knowledge through WhatsApp group, Plant Clinic, Farmers Helpline number, etc. with the involvement of different specialists across various disciplines. Other plans are to develop small agriculture-based enterprises in potential farm units, strengthen existing entrepreneurs through skill development, and establish linkage and access to information, technology, input, and market by the participating farmers. The concept of Social Engineering/Farmer's Participatory approach and mass campaigning program are also to be included during the implementation of programs.

The University already has created well organized Research Management System that includes a Research Advisory Committee, Research Management Committee, Department level Technical Committee, Zonal Research Extension Advisory Committee, etc. wherein every detail of the research program is discussed to sort-out the credential of the project for incentivization. University also supports startups/ entrepreneurship projects from technologies developed by the AAU scientists with incentive to the scientists and staff associated with the work.

To improve the teaching and research ambience in the University, a problem-solving pedagogical approach is required to address the 21st century demand-centric aspects of agriculture and allied sectors across the globe. Therefore, the existing wisdom of the University needs to be expanded by focusing problem-solving research agenda in collaboration with premier institutions to opt for knowledge beyond boundaries that improve the quality of our students, faculties, and staff and thus the overall quality of the institution. Meanwhile, the University has planned and framed strong collaboration mechanisms for intra and inter-

institutional research, academic and extension activities. The DBT-Northeast Centre for Agricultural Biotechnology (DBT-NECAB) of the University, Jorhat is a Centre of Excellence for Agri-biotechnological research in NE India. Collaborative research has been a fundamental key to the success of the Centre.

The Assam Agricultural University has oriented its knowledge base in teaching, research and extension to become a driving force in societal growth. In line with this venture, the University has adopted flagship plan for a transformative space of skill-based knowledge sharing through research, education, innovation with the other academic/research institutions, industry, and civil society with a motto to reshape the future of the knowledge-driven society.

Connectivity/ Collaborations of AAU:

1. Academic Institution:

- International level: **22 Institutes** (including World Bank)
- National level: **49** (ICAR, IVRI, IIHR, CCRI, NCDC, DBT, NABARD, MANAGE, NAARM, NESAC, NERIWALM, TERI, TRA etc.)
- Regional Level: **36**
- In recent years, the University has collaborated with Bhabha Atomic Research Centre, ICAR institutes, DST, DBT, IITs in the field of research projects in agriculture and allied sciences.
- The University has academic collaboration with Rutgers University, the University of Nebraska, the University of Texas, University of Illinois, University of Huntington and University of Hawaii, USA.

2. Industrial Collaboration: 134 regional and international institutions.

Recently the University has signed MoU's with national (ONGC, OIL, NRL, Sungro seeds, Mahyco, Greenvention Biotech, Dhanuka, TERI etc.)

3. Other Collaboration:

Regarding involvement towards uplifting the civil society in terms of knowledge base for overall societal growth. The University is continuously catering to the needs of the extension functionaries and farming community of Assam and NE states by providing Farm Advisory Services (89760), Consulting Services (1968), AIP Mobile Solution of 2073 farmers' problem, Soil Health Cards (69757) to farmers, animal care including treatment and vaccination

(223321) and organizing Trainings(10,127), Demonstrations (469), FLDs, (2187), OFTs (1629), Kishan Mela (90), Field Day (672), Farmer- Scientist- Interaction,(330), Awareness Programme (343), TV/Radio Programmes (450), Exhibition (232), Village Adoption (458), Phone in Programme (5057), Self Help Group formation (53), Exposure Visit (183), Tribal Subplan Programme (25) under 5 districts, Custom Hiring centres (8) besides, taking up of villages (761) under “*Swachh Bharat Abhiyan*”, Seed Production on Rice, Pulse and Oil Seeds and publication of around 226 extension literatures etc. through its Directorate of Extension Education, Extension Education Institute and widely scattered KVKs (23), Regional & Commodity Research Station (11) and Constituent Colleges (9) in the field of agriculture, horticulture, sericulture, veterinary, community science, fishery during the last 5 years. Certificate courses are being offered by the University which include Pig production, Master Goat Production, Apparel Designing and Construction, Production of Bio-fertilizer, Poultry Production Technology, Plant Tissue Culture & Management, Aquaculture Production, Tea Production Technology & Management, Cut Flower Production, and Flower Design, Bakery, Apiculture, Management of Day Care Centre, Nursery Management of Horticultural crops, Dyeing & Printing of Textiles, Dairy Farming & Fodder Production, Designing & Value addition of Marketable Products for Home Furnishing, Food Preservation and Floral Design.

3. Development of Network Infrastructure

AAU has recently started Internship Development of Entrepreneurship in Agriculture (IDEA) for the Masters’ students to facilitate industry/academia-student linkage to provide skill-based knowledge to students and create awareness of the recent development of agriculture-based industries. On successful completion of the internship program, AAU may provide the necessary support to the selected ventures. The in situ part-time employment program ‘Earn while you learn’ engages the undergraduate students in a need-based manner in different establishments like the departmental laboratories, the Central Library, the finance department, and AAU guest houses etc.

Recently, the AAU has initiated an innovative project entitled “*Aamar Gaon Aamar Gaurav*” wherein the direct interface between scientists/ faculties with the farmers to foster convergence between Assam Agricultural University and other departments of the state, for successful implementation of different schemes to transform the rural economy of the state.

Through the implementation of the Norwegian Institute of Bioeconomy (NBIO) Funded Project (Norway Govt.) on “Building Climate Resilience of Indian Smallholders through Sustainable Intensification and Agroecological Farming Systems” to strengthen Food and

Nutrition Security, AAU has adopted 2 (Two) Village Knowledge Centres (VKC) in Sivsagar and Golaghat districts of Assam. The project “Participatory Technology Assessment for Enhancing Farming System Productivity and Developing Entrepreneurship for Sustainable Rural Livelihood (commonly known as Farmer FIRST)” is currently being implemented in Titabor and Nakachari of Jorhat district to facilitate participatory assessment of existing farming systems and integrating them to enhance farm income, efficient utilization and conservation of farm resources in Agri-Horti-Livestock sector. It also encourages small agri-based enterprises/potential farm units, strengthening them through skill development, and establishing linkage and access to information, technology, input, and markets.

Under AAU-DRMR collaborative project on “Augmentation of agricultural productivity in tribal areas of Assam”, 105 numbers of demonstrations on “Quality seed production of Short Duration High Yielding Mustard (Variety NRCHB-101)” were conducted covering 47 villages of Majuli, Tinsukia, Dhemaji, Udalguri, Karbi Anglong and Kokrajhar districts of Assam during 2019-20. With the active participation of the farmers, a multi-disciplinary team of the University conducted several demonstrations under Oil India Ltd. Funded Project on Kharif paddy (Variety Ranjit, Shraboni and Chikon) at Khowang, Rahmoria and Nepaligaon covering around 20.0 ha area involving 105 beneficiaries. The University in a participatory approach with the farmers, produced 111.6 quintals of foundation and 5781.44 quintals of certified seeds of new and promising varieties of rice (Ranjit sub1, Bahadur sub1, Swarna sub1, Shraboni, Gitesh, Numoli, KetekiJoha, Aghoni Bora, Joymoti, Kanaklata, Dishang, Luit, etc.), lentil (HUL 57), black gram (PU-31, IPU02-43, SBC47), rapeseed and mustard (M-27, TS36, TS38, TS 46, TS 67) during 2019-20. Following the concept of Social Engineering/ Farmers Participatory Approach, a mass campaigning program for the adult management of *L. mansueta* was conducted in Majuli River island of Assam during 2019-20 with the involvement of 400+ farmers from different Lepidoptera Management Groups (LMG) with the active participation of district administration, state Department of Agriculture, NGOs, etc. This mass campaigning program received an overwhelming response and was exceedingly successful leading to massive collection and killing of about 1.74 lakhs of beetles.

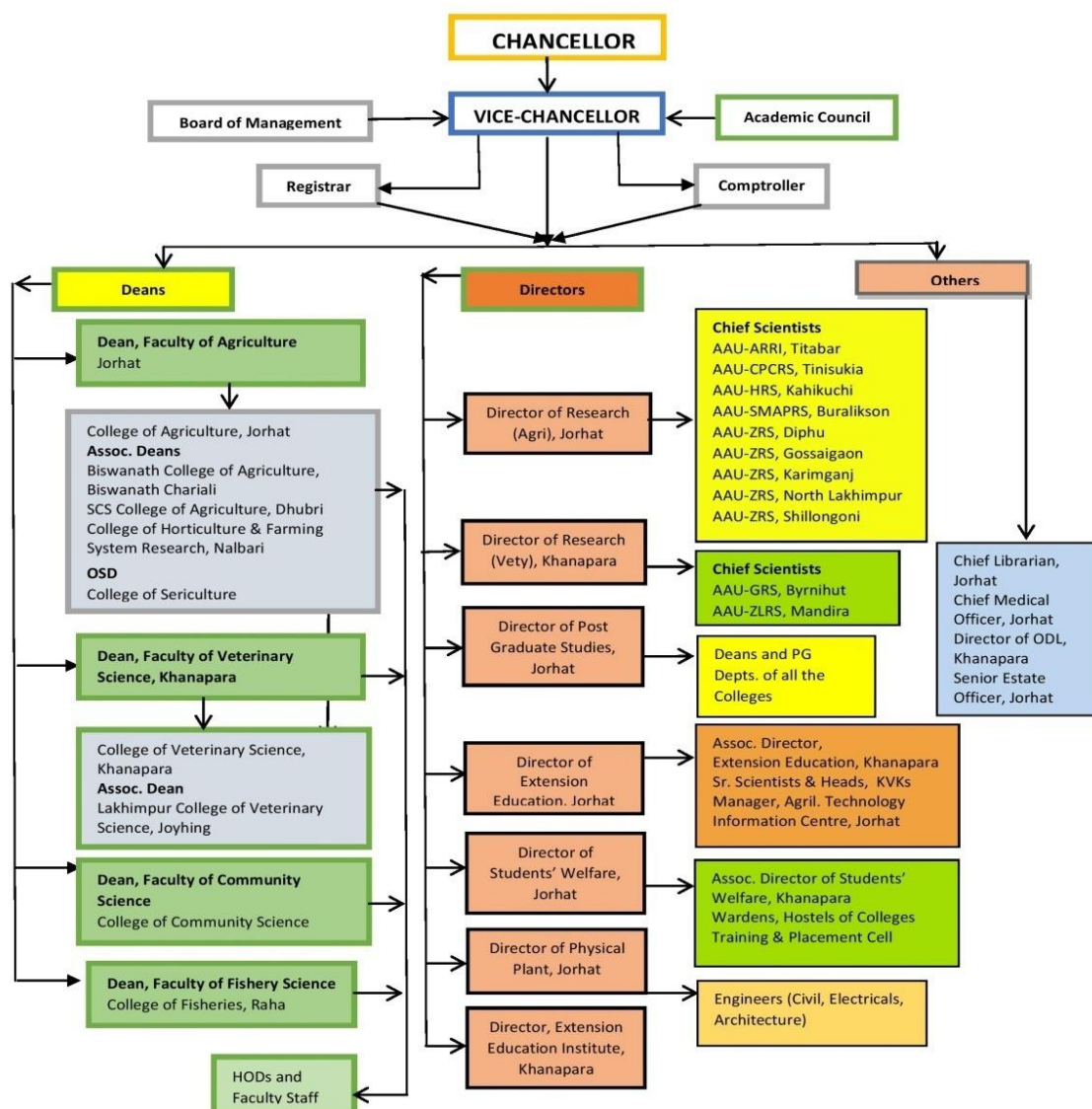
As NEP 2020 emphasizes on facilitating research and teaching collaborations with high-quality foreign higher educational institutes, the University has sent 137 Students and 40 Teachers/Scientists across the faculties to undergo international training through NAHEP in different high-quality international institutions.

G. GOVERNANCE INFRASTRUCTURE

To improve the quality in terms of teaching, research, and extension according to the vision, mission, and goal of Higher Education, Governance has become a major leveraging tool to maintain administrative accountability of the Institution. The University has already developed a plan to maintain and improve the quality in all aspects of teaching, research, and extension and has a well-structured Governance system. The Board of Management, the Academic Council, the Board of Studies of each faculty including Post-Graduate Studies, and other such bodies of the University govern the various activities of the University as per the provisions in the AAU Act 1968 and the statute published in the Assam Gazette for efficient administration and planning.

The University's management system has published Vision document-2050. Strategies to achieve visions under Education, Research, and Extension fronts covering agriculture, horticulture, veterinary, fisheries, sericulture, and Community science along with the periodic plan of implementation have been highlighted in the vision document. Further, a detailed 5-year action plan (2021-25) based on the vision document has been prepared and taken up for implementation.

Governance structure of the University:



The University has adopted some policies for smooth governance as given below:

- Assam Agricultural University (Promotion of Academic Integrity and Prevention of Plagiarism) Policy or Regulations, 2021
- Assam Agricultural University Information Technology Policy, 2021 (AAU IT Policy 2021)
- Assam Agricultural University Human Resource Development (HRD) Policy
- Innovation, Startup and Entrepreneurship Policy (AAU-ISEP)-2021

H. FINANCIAL INFRASTRUCTURE AND FUNDING MODELS

(RESOURCE GENERATION)

The Administrative Building of the University houses the offices of the Vice-Chancellor, Registrar, and Comptroller besides a State of art conference hall. The Comptroller manages the funds and investments of the University and advises regarding its financial policy. The Comptroller is held responsible for ensuring that expenditures are made as authorized in the budget.

The financial infrastructure is the epicentre of the overall financial system in any HEI. The financial system is the backbone of the institution and to prosper its growth financial stability of the institution bears immense significance. To bring transparency to financial management, the University has adopted the following strategies -

1. Updating University balance sheet and bank reconciliation wherever there is a gap
2. Updating asset register in mission mode
3. A special drive to adjust the unadjusted advances given to employees and others
4. Modification and/or further refinement of financial software package to fit into the University financial system
5. Bringing more transparency in official transactions by linking it with the e-governance module indicated above

Regarding resource generation, the University has developed a plan to generate Internal Revenue from different sources such as crop production, egg, meat, milk, and fish production, production of bio-pesticides and biofertilizer, seed and planting material production, veterinary clinic, conducting training's, certificate courses, etc. Internal Revenue generated by the University from various sources is accumulated and utilized for different academic programs, research activities, extension activities and to meet the other amenities of students. The fund is mobilized to create capital assets, and repair and renovation of existing structures such as hostels, examination halls, classrooms, equipment, and machinery etc.

Plans for revenue generation from different interventions:

1. Through the production and selling of Seeds and Planting materials:
 - Fulfilling the stakeholders need for quality seeds of the AAU developed crop varieties
 - Helping in Seed replacement in formal seed supply chain
 - Supplying quality planting materials of improved varieties to stakeholders
 - Performing as a demonstration unit for various training programs for farmers

2. Through the production and selling of Bio-inputs:
 - Developing organic practices for soil and nutrient management
 - Utilizing Bio- inputs for the management of crop insects/ pests and diseases
 - Acting as a source of vermi-compost
 - Performing as a demonstration unit for the training of farmers and rural youths
 - Supplying Bio-inputs to different stakeholders
3. Through the production and selling of livestock:
 - Production of quality piglets and supplying those to the end users
 - Production of meat animals and sale for meat production
 - Technology for augmentation of egg production
 - Production of designer eggs
 - Technology demonstration and nutritional security
 - Meat animals are also produced and sold for meat production.
4. Through the production and selling of Mushroom:
 - Producing quality spawns for the mushroom growers
 - Performing as a demonstration unit
 - Promoting of entrepreneurs
5. Production and sales of utility products and ethnic craft of Assam:
 - Procurement of cheap biomass to produce utility products
 - Training and demonstration
 - Popularization of ethnic crafts of Assam
6. Through animal/fish disease diagnostic unit:
 - Advance Animal Disease Diagnostic facility (AADDF) is a public-private - partnership mode (PPP) joint venture of College of Veterinary Science that provide services to the stakeholders of the commercial poultry industry.
 - Confirmation of specific diseases to help clinicians and husbandry managers to make appropriate decisions at the right time.
 - Wildlife disease diagnosis for catering to national and regional wildlife sanctuaries, parks, migratory birds and zoos.
7. Through Vaccine production unit:
 - Duck plague (DP) and Classical swine fever (CSF) are endemic diseases of Assam, wherein the state is in dearth of Swine fever and Duck plague vaccine.
 - ADVaRC supplies cell culture adapted Duck plague (DP) and Classical swine fever (CSF) vaccine.
8. Through Frozen semen production:
 - Improving local goats for enhanced meat production.
 - Fulfilling the need for elite bucks for breeding in the state
 - Helping in controlled breeding programme
9. Through the establishment of Small Animal House facility/ and sale of animal:

AAU is catering to the huge demand for animal house in the whole NE region. Breeding and sale of animals are approved by CPCSEA, New Delhi by paying a nominal fee, thus AAU is legally authorized to sell these animals.

10. Through Veterinary Clinic Complex:

- Free and /paid treatment for small and large animals of the farmers.
- Vaccination at a concessional rate (15-20% discount).
- Time to time free vaccination camp against Rabies.
- Treatment of wild animals in State Zoo and other National parks/ World Heritage sites etc.
- Treatment and guidance to Assam Police Dog Units, CISF, CRPF, SSB, BSF, Air Force and the Army animals (Horses & dogs) from the entire North-Eastern region.
- Free of cost medicines and clinical services in 3 selected nearby areas (Hajo, Kamalpur and Halogaon) through Ambulatory Clinical Services.
- Blood bank
- Eye surgery unit
- Laser therapy unit
- Cardiology Unit
- Laparoscopic surgery unit
- Neonatal ICU unit
- Histopathology unit
- Artificial insemination and dog breeding unit

11. Through consultancy /certification/testing etc.

12. Through renting of Playground, Swimming Pool, Gymnasiums, Auditoriums, Training Halls, Conference room, Guest houses, Farmers Hostels etc. located in different campuses under AAU.

13. Through licensing/royalty AAU-developed technologies:

- AAU has developed and is developing technologies which can be licensed with a license fee to interested organizations.
- Six AAU-developed technologies have recently been transferred to different Organizations with license fees and royalty sharing mode.

14. Through the Experimental Garden for Plantation Crops & Tea Processing Units

- Supply of quality planting materials at a reasonable price.
- Selling of quality tea of different flavour.
- Encouraging small tea growers to process their tea leaves in the AAU tea processing unit on payment basis.

15. Through Agro Ecotourism project:

- The Agro Ecotourism area at AAU, Jorhat is attracting tourists. The boat ride in the channelise a potential revenue earning proposition.

16. Through Fees collected against training offered

17. Through Hiring charges of farm machinery/other such facilities

18. Through Sale proceeds from auction of unserviceable items

19. Through House rent collected from AAU employees residing in AAU quarters.

20. Through Library income from various services

21. Through Institutional/Service Charge

22. Through Interest earned from savings/fixed deposits

23. Through the various utility fees collected by SEO
24. Through the collection of Student Annual tuition fee/Course fee/ Establishment fee/ electricity/ seat rent etc.
25. Through saving on electricity bill by installing rooftop solar power plants
 - AAU has already installed rooftop solar power plant in its headquarters at Jorhat.
 - Phase wise, rooftop solar power plants will be installed in other campuses of the University to save on the electricity bill.

Plans for Revenue Generation:

Activity	Short term, 2030	Medium term, 2040	Long term, 2050
Revenue Generation	Rs. 100 Cr	Rs. 150 Cr	Rs. 200 Cr

3. Conclusion:

Assam Agricultural University, through the implementation of the Institutional Development Plan (IDP), aims to inculcate human values and professional ethics into its human resources. The institution believes implementation of the Institutional Development Plan (IDP) will have a catalytic effect on the stakeholders to understand their fundamental duties and to make them conscious of their roles and responsibilities in a changing world. This IDP is also aimed at providing a vibrant academic platform and improving the rank of AAU in the near future. Assam Agricultural University will take utmost care for the timely and proper execution of the strategies enlisted in the comprehensive roadmap of its Institutional Development Plan to achieve the desired goals.
