BINDING SIDE

Strengthening the Agricultural Education through

Digital Interventions

ICAR-Indian Agricultural Statistics Research Institute (ICAR-IASRI)

September
2021

Designed and Developed by
Division of Computer Application,
ICAR-Indian Agricultural Statistics Research Institute
Under the Guidance of Agricultural Education Division

ICAR - IASRI

Creating Agricultural Awareness Through State-of-The-Art IT Infrastructure

UNDER THE "DIGITAL INDIA"
INITIATIVE OF GOVERNMENT OF INDIA

MESSAGE FROM DIRECTOR GENERAL, ICAR

In 2015, Hon'ble Prime Minister of India launched "Digital India" programme to transform India into a digitally empowered society and knowledge economy. Digital India programme is centered on three key vision areas – Digital Infrastructure to every citizen, Governance and Services on demand and Digital empowerment of citizens. Aligning with the vision of Minister Digital India Mission and and guidance from Indian Council of Agricultural Research (ICAR), ICAR – IASRI is continuously moving towards bringing a paradigm shift in Agricultural Higher Education System.

India currently has a very strong agricultural education system consisting of 03 Central Agricultural University, 63 State Agricultural Universities (SAUs), 04 Central Univerties and 04 National ICAR Institutes having the status of "Deemed University": the Indian Agricultural Research Institute (IARI), established a century ago and given the status of Deemed University in 1958; the Indian Veterinary Research Institute (IVRI), Izzatnagar (Uttar Pradesh); and the National Dairy Research Institute (NDRI), Karnal; and the Central Institute of Fisheries Education (CIFE), Mumbai, which cater to quality education in animal sciences and the dairy and fishery sectors, respectively.

Agricultural education is observed as the key pillar for the overall development and strengthening of agricultural ecosystem. In order to sustain, diversify and realize the potential of agricultural sectors, it is necessary to develop skilled manpower through continuous enhancements in agricultural ecosystem leveraging digital technologies. The power of technology has started bearing profound results in the agricultural education sector where a huge transformation is seen as a result of the advanced diffusion of information technology. And in these challenging times of COVID-19, role of technology proved to be a game-changer, providing a huge boost to digital infrastructure. Agricultural higher education in India is transforming to align with global technological trends and build upon its capacity for sustenance through amalgamation of 'Digital India" initiative of Government of India and "National Education Policy 2020". Further, the digital transformation has been accelerated under National Agricultural Higher Education Project (NAHEP) funded by World Bank.

I am delighted to share that during the last year, ICAR has taken several new initiatives in the agricultural digital sector like virtual classrooms, developing e-content for the higher education system, AI-based mobile apps for farmers, etc., and also working towards making a fully digitize education system. I further congratulate and appreciate ICAR-IASRI's team for implementing various digital initiatives. This IT booklet endeavors the success of the ICAR team in the

DR. TRILOCHAN MOHAPATRA

Secretary (DARE) & Director General (ICAR)

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MESSAGE FROM DDG, AGRICULTURAL EDUCATION & NATIONAL DIRECTOR, NAHEP

Today, under the strong and able leadership of our Hon'ble Prime Minister, India is the second fastest digitizing economy among the leading economies of the world. India's digital model is narrowing the digital divide and bringing technology to even the most remote parts of the country. Digital transformation in India has the potential to create USD 5 trillion of economic value by 2025, sustaining 60-65 million jobs.

With India, poised to have the largest number of young people globally by 2030, investing in human capital is the priority to make the most of this evolving economic opportunity. This necessitates the need for our agricultural education system to evolve in sync with the fast changing national and international scenario to reap the benefits of digitalization of education that can fundamentally change how we learn and what we learn. The need for bringing in digital transformation in the agricultural education and research system cannot be emphasized enough to make it stronger and more resilient. The new paradigm of digital agricultural education system encompasses disruptive technologies aimed at strengthening the agricultural education system by improving the quality, learning outcomes and enhancing the access to high quality education through appropriate, effective and interactive digital learning channels.

I applaud and appreciate ICAR-IASRI's commitment under the guidance of Agricultural Education Division, ICAR for undertaking various digital initiatives to strengthen the agriculture ecosystem and improve both capacity and quality of agriculture and allied disciplines. This IT Booklet envisions the transformation of Agricultural Education through digital initiatives which entails a systematic and holistic approach used to bring in uniformity, automation and integration across various agricultural universities and provide for data sharing thereby strengthening teaching and learning within agricultural universities. All these initiatives are inculcating a digital change in the academic arena and ICAR-IASRI under NAHEP is further striving to improve the system and make it more robust for

Finally, our ambition is to nurture India's digital driven based economy and we reiterate our full commitment and resolve towards achieving many more milestones in strengthening the agriculture ecosystem through digital initiatives.

DR. R.C. AGRAWAL

DDG, Agricultural Education & National Director, NAHEP

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MESSAGE FROM DIRECTOR, ICAR-IASRI

ICAR-Indian Agricultural Statistics Research Institute (ICAR-IASRI) is a premier Institute for undertaking research, education and training in Statistical Sciences (Statistics, Computer Applications and Bioinformatics) and their judicious fusion in agricultural sciences for enriching quality of agricultural research and education. The journey of the Institute to become technologically adept and relevant began with an important landmark in 1964 with the Installation of an IBM 1620 Model-II Electronic Computer. Further, Burroughs B-4700 system was installed in March 1977 and then replaced in 1991 by a Super Mini COSMOS-486 LAN Server with more than hundred nodes.

The rich legacy of computing at ICAR-IASRI continued in the new millennium era, where in the Institute started development of online management information systems and data warehouse. Institute led the development of various statistical packages and providing high end statistical computing facilities across NARES that had improved the use of advanced statistical methodologies in NARS and ease of data analytics. Web resources on Design of Experiments and Sample Surveys developed for online learning and e-advisory are being viewed across the globe. For providing service oriented computing environment to NARES users, developed Indian NARS Statistical Computing Portal that is being widely used by NARES users.

ICAR-IASRI had been pioneer in developing the cutting-edge of IT infrastructure and technological solutions as Advanced Supercomputing Hub (ASHOKA) in 2013 and ICAR Data Centre in 2014. Solutions such as the Academic Management System (AMS), Agricultural Knowledge based Resources Information System Hub for Innovation (KRISHI), AU-Project Information Management System (PIMS), Alumni Network (KVC ALNET), Capacity Building Portal (CBP), University Ranking, E-learning and, E-KrishiShiksha among others, have immensely benefitted the agricultural educational, research and practice communities by facilitating collaborations, networking and strategic working. Furthermore, in 2020, the Institute introduced Cloud Computing, Disaster Recovery Centre (DRC) at ICAR-NAARM and Artificial Intelligence through Krishi Megh under National Agricultural Higher Education Project (NAHEP). In the challenging times of COVID-19, role of technology proved to be a game-changer, providing a huge boost to digital infrastructure. Under NAHEP, the Institute has taken a lead in establishing Smart Classrooms and providing solutions for virtual education in 18 Agricultural Universities.

ICAR-IASRI has introduced and implemented a plethora of digital initiatives across National Agricultural Research and Education System (NARES) aimed at strengthening the agricultural education system in line with Goal 4 of SDG 2030. I appreciate the hard work and effort put in by Division of Computer Application at ICAR-IASRI for bringing out first volume of IT Booklet. This booklet of IT initiatives provides information about more than 30 such marquee digital infrastructure and solutions developed at ICAR-IASRI in collaboration with Agricultural Education Division, ICAR that facilitate equity and inclusion

DR. RAJENDER PARSAD

Director, ICAR-IASRI

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Strengthening the Agricultural Education through Digital Interventions

Creating agricultural awareness through state-of-the-art IT Infrastructure

Maximum Outreach

NARES-Cloud Infrastructure and Services

Under the "Digital India" Initiative of Government of India

Division of Computer Application, ICAR-IASRI

These digital initiatives are aimed at transforming the functionality of agricultural universities through emerging frontline digital technologies encompassing autonomous systems, cognitive systems, single window platforms, new digital teaching methods and tools, thereby improving the learning outcomes of not only the students but also the lifelong learners.

Dr. Sudeep
Head (CA)

Strengthening the Agricultural Education System through Digital Interventions

Under the Guidance of Agricultural Education Division, ICAR

EXECUTIVE SUMMARY

Digitalization is transforming significant aspects of educational resources by offering varying degrees of integration, interoperability, transparency, data sharing and openness. The use of digital technologies/ digitally empowered platforms has great potential in improving the quality of education and widening the access of education as well as up-skilling of the teachers across the country. The agricultural education system is evolving for the sake of betterment, as this generation's students are not born to be confined to the limits of simple learning; their curiosity is vast and cannot be catered with educational systems that were designed earlier. If we kept on teaching our children the way we taught them yesterday, we would deprive them of their tomorrow.

This booklet emphasizes on disseminating information on various digital initiatives undertaken by ICAR - Indian Agriculture Statistics Research Institute (IASRI) under the guidance of Agricultural Education Division, ICAR to strengthen the agricultural education system and improve learning outcomes. Further, World Bank aided National Agricultural Higher Education Project (NAHEP) has also accelerated the development and implementation of digital initiatives to raise the overall standard of campus teaching-learning in more non-conventional ways. Several initiatives have been undertaken to digitally transform the knowledge management and governance of the agriculture universities by ensuring digital services, digital access, digital inclusion, digital empowerment and by bridging the digital divide.

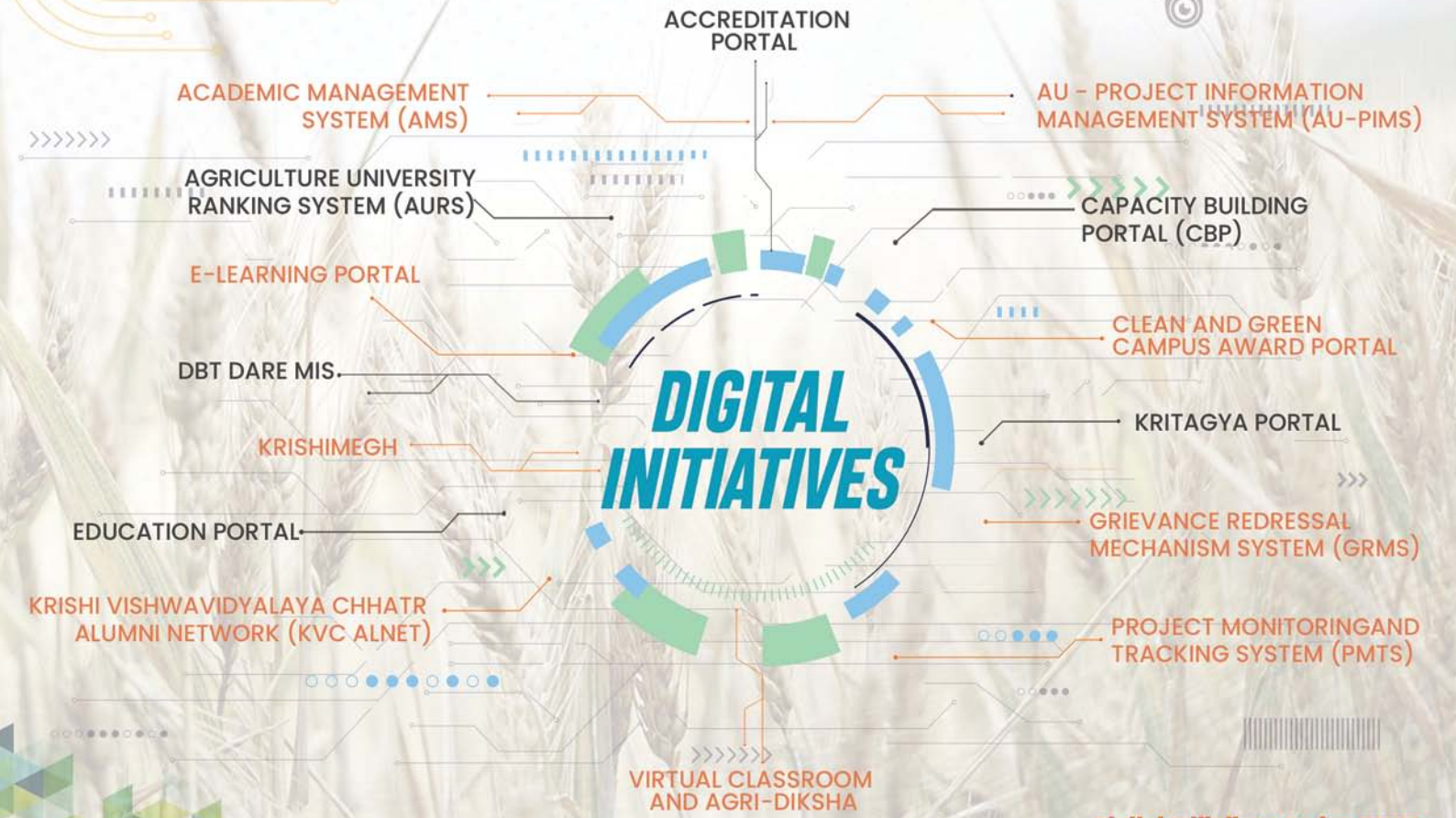
These digital initiatives are focused to empower students/faculties/administration in one way or the other and divided across various functional areas such as: manage academic activities; track and monitor research projects; ranking of agricultural universities; accreditation through ICAR; alumni connect; content creation and review mechanism; single window for agriculture education; agriculture hackathon; monitor and track projects under NAHEP; grievance redressal; direct benefit transfer schemes of DARE; capacity building of faculties; connect with agriculture experts; teaching-learning experience beyond classroom walls; infrastructure services for NARES and development of mobile applications using emerging technologies.

Under the "Digital India"
Initiative of Government of India

Digital Infrastructure

Creating agricultural awareness through
state-of-the-art IT Infrastructure

DIGITAL INFRASTRUCTURE



Digital Initiatives under NAHEP

Accreditation Portal

Beneficiaries

Higher Agricultural Educational Institutions seeking ICAR accreditation

Why Accreditation Portal for HAEI?

Accreditation portal is designed and developed with a vision to strengthen the agricultural education system by allowing both government and private Higher Agricultural Educational Institutions **(HAEIs)** to apply for ICAR accreditation. The ICAR accreditation improves the quality and relevance of higher education in agricultural universities through effective regulation and peer review processes.

Key Features

A. Automated and Transparent mechanism to get accreditation

B. Unified workflows with all checks and balances

C. Safe and secured data storage at ICAR – Data Centre established at ICAR-IASRI, New Delhi

D. Evaluate all the applications with real-time tracking system

ACCREDITATION PORTAL

Description

This portal allows both Government and Private Agricultural Universities/Colleges (HAEIs) to apply for online accreditation by submitting relevant documents to National Agricultural Education Accreditation Board (NAEAB) Secretariat for approval.

After acceptance of LoI, IEA and SoC, HAEI shall submit Self Study Report (SSR) to the respective Regional Centre of the NAEAB and one copy of SSR along with Accreditation fee (in the form of Demand Draft) to NAEAB Secretariat through this portal. Regional Centre of the NAEAB shall examine the SSR submitted in portal online and ensure that SSR meets the requirement of the NAEAB guidelines.

An Agricultural University can apply for the "ICAR Accreditation" in 4 Quick Steps

Process to apply

1. Letter of Intent (LoI) →
2. Institutional Eligibility for Accreditation (IEA) →
3. Statement of Compliance (SoC) →
4. Self Study Report (SSR) • • •

ICAR ACCREDITED

Website Access
https://accreditation.icar.gov.in

Academic Management System (AMS)

Why AMS?

AMS is developed with an objective to automate all the academic activities in the Agricultural Universities to enhance the efficiency of the overall academic system by saving time and efforts involved in manual processes.

Role Based Access Control (RBAC) to all the Users

- Dean
- Professors
- Faculties
- Students
- Guide
- Admin

Beneficiaries

All the stakeholders of agricultural universities across India

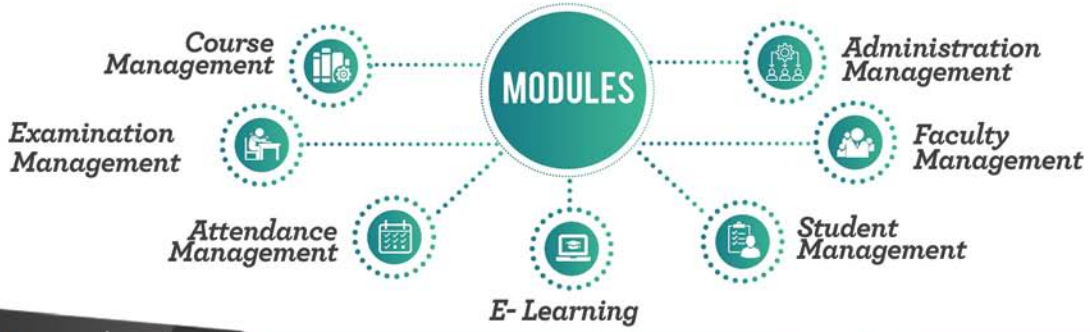
Description

AMS has been customized under NAHEP Component 2 by ICAR-IASRI making it an easy to implement system and provide strength to the overall academic system of Agricultural Universities. To ensure safety and security of data, AMS is hosted at Krishi Megh.

AMS is a web enabled system for management of all various academic activities of the university

E-Learning module provides a comprehensive overview of the course structure and the directs towards available digital resources.

"AMS offers Easy - To - Customize Modules"



Dashboard

50	Registered Universities
448	Registered Institutes / Colleges
50,197	Registered Students
9,613	Registered Faculty
70,564	Total Registered Users

Website Access
http://auams.in/

AU - Project Information Management System (AU-PIMS)

Why AU-PIMS?

AU-PIMS has been developed with the objective to create unified information base for research projects to enable in informed decision making.

Beneficiaries

All Agricultural Universities across India

Description

AU - PIMS system has in-built workflows for effective information management related to research projects.System enables creation of research projects repository for all agricultural universities as well as the national level. System has provision for document management related to projects.

Key Features

- Central repository of project's data across universities with long term objective of duplication detection
- Provides Role Based Access Control (RBAC) to the users allowing them to see the relevant information
- Provision to upload annual progress report of projects along with completion report
- Provides MIS Reports on projects data along with multiple filters and functionalities to download and print

Monitor the agricultural research projects effectively and efficiently

Dashboard

- 60 Registered Universities
- 90 Registered Nodal Officers
- 1,488 Registered Investigators
- 968 Total Projects
- 656 Total Projects Approved

Website Access
https://education.icar.gov.in/aupims/index.aspx

Agriculture University Ranking System (AURS)

Why AURS?

AURS portal is developed in line with the National Initiative on Ranking of Indian Institutions. The portal generates the ranking of agricultural universities on the basis of required information provided by the universities. This drives the universities towards improving quality standards and enhance their visibility across the globe.

Beneficiaries

Agricultural Universities across India

Key Features

A. Developed on strict policy guidelines approved by APEX Committee

B. Transparent and Efficient scoring system

C. User friendly interface with seamless user experience

D. Effective evaluation mechanism to ensure quality standards

E. Motivates Universities to attain Global Ranking

Description

The ranking process is expected to help the universities to self-assess themselves on the quality and enhance their abilities. It also tends to improve healthy competition among universities.

The parameters on which the ranking of the universities is decided

To enhance the quality and relevance of higher agricultural education in the country

Website Access

https://education.icar.gov.in/auranking/

Capacity Building Portal (CBP)

Why CBP?

CBP portal is developed with an objective to facilitate the online management of all training programs under Centre for Advanced Faculty Training (CAFT), Summer-Winter Schools (SWS) and Short Courses sponsored by Agricultural Education Division, ICAR.

Beneficiaries

ICAR institutes and all Agricultural universities across India

Description

The portal has in-built workflows for effective training management dealing with proposal submission, approval, financials, participant application to feedback submission and report submission at the end of the training program.

CBP portal is created for Trainee, Course Coordinator, CAFT Director, Managers (DDG/ADG) and Portal Administrator.

It provides a platform for knowledge sharing in the form of e-books generated from the training program.

Key Features

A. Huge eBook repository

B. User-friendly interface

C. Single platform for all capacity building training programmes. Sponsored by Agricultural Education Division, ICAR

D. Dashboard at different levels for effective management of Information
Trainee, Course Director, CAFT Director, Managers (DDG, ADG Level)

Capacity building of faculties under CAFT, SWS and short courses

Dashboard

More than

1,143 APPROVED TRAINING PROGRAMS
have been organised

19,955 PARTICIPANTS
have attended

599 E-BOOKS
have been generated

12,50,474 VISITORS

Website Access
https://cbp.icar.gov.in/

Green & Clean Campus Award Portal

Why Green & Clean Campus Portal?

Green and Clean Campus Award Portal is developed to invite entries from Agricultural Universities to showcase the clean and green initiatives undertaken by them in order to promote sustainable living.

Beneficiaries

Agricultural Universities under NAHEP

Description

Greening the campus is all about turning around wasteful inefficiencies and using conventional sources of energies for its daily power needs, correct disposal handling, purchase of environment friendly supplies and effective recycling program. Institute must work out the time bound strategies to implement green campus initiatives.

These strategies need to be incorporated into the institutional planning and budgeting processes with the aim of developing a clean and green campus. The competition will act as a catalyst for the agricultural universities to adopt sustainable practices.

Key Features of
Green & Clean Campus Award Portal

A. Invite applications for the competition	**B.** Brief participating agricultural universities about the rules and regulations and collect data required for analysis
C. Declare results of the competition	**D.** Allow evaluators to evaluate the data submitted by agricultural universities on Portal

Benefits to the Agricultural Universities

- Rain and roof water harvesting
- More green cover
- This competition will act as a push to put in place strategies to implement green campus initiatives
- Solid, liquid and e-waste management
- Water and energy conservation

A platform to enable agricultural universities to adopt sustainable activities in the campus

Dashboard

31 | Registered Intitutites

29 | Participated Institutes

Website Access
https://nahep.icar.gov.in/greencleancampus/

DBT DARE MIS

Why DBT DARE MIS?

DBT DARE MIS is developed with an objective to capture records of individual beneficiary and transactions under the Direct Benefits Transfer (DBT) applicable schemes of DARE.

Beneficiaries

Participants of DBT applicable schemes of DARE

Description

Access to this MIS is role based which allows protection of user content from unauthorized tampering and maintains integrity of data.

Nodal officers from individual organizations are responsible for uploading and maintaining the information in the MIS.

This MIS facilitates generation of consolidated reports for nodal officers of the ICAR Institutes, SAUs, CAUs and SMDs (Education and Extension).

Key Features

A. DBT DARE MIS is integrated with National level DBT Bharat Portal

B. Monthly Progress Report (MPR) is uploaded in each month for all DBT applicable schemes of DARE

C. Hosted at ICAR- IASRI data centre

D. Facilitates automated workflows

E. User-friendly interface

Repository of beneficiaries & monthly transactions under DBT schemes of DARE

Dashboard

₹ 3,684.32 TOTAL DIRECT BENEFIT TRANSFER IN LACS **(FY 2019-20)**

8,747 TOTAL NUMBER OF BENEFICIARIES **(FY 2019-20)**

19 TOTAL NUMBER OF SCHEMES **(FY 2019-20)**

271 TOTAL NUMBER OF TRANSACTIONS **(FY 2019-20)**

Website Access
https://dbtdare.icar.gov.in

Education Portal

Why Education Portal?

Education portal is developed with an objective to provide vital information about all the agricultural universities across the country at the central platform.

Beneficiaries

All the agriculture education stakeholders

Description

The portal is a single window platform for providing vital education information/announcements/event schedules/e-learning resources from Agricultural Universities across the country to the rural youth in an easy and fast way on their doorsteps.

The portal helps in management, monitoring and promoting activities/schemes of Education Division, ICAR.

The portal has been developed as an initiative of ICAR under the Digital India Programme of the Prime Minister of India

Information available on Education Portal

A. Agricultural Universities in India

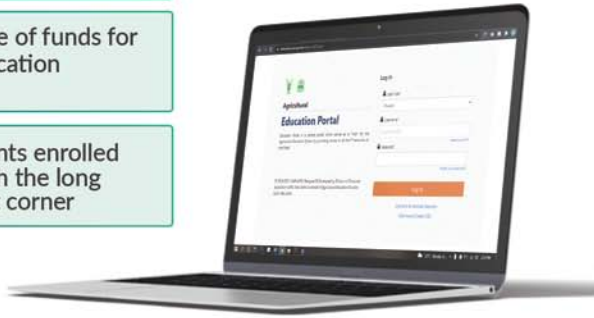
B. UG, PG and PhD courses offered by the Agricultural Universities

C. Vice Chancellors of Agricultural Universities

D. Financial sanction and release of funds for all major progrmmes of Education Division, ICAR

E. Single platform to disseminate information about all the programes of Education Division, ICAR

F. Generation of USID for students enrolled in agricultural universities with the long term goal for creating student corner



Dashboard

- **03** Central AUs
- **04** Central University with Agriculture Faculty
- **1,86,152** USID Generated
- **04** ICAR Deemed Universities
- **63** State AUs

Website Access
https://education.icar.gov.in

E-Learning Portal

Beneficiaries

Students and Faculty of Agricultural Universities

Why E-Learning Portal?

E- Learning Portal is developed with an objective to strengthen the Agricultural Higher Education in India by developing and disseminating the e-courses for Undergraduate and Postgraduate Agricultural Courses.

Key Features

- Provides user friendly interface for application submission by faculty of Agricultural Universities and ICAR Deemed Institutions for the roles of content creator, unit-reviewer and course-reviewer for the specified UG and PG E-Courses
- The E-Learnirng Portal facilitates the selection of faculty for E-Course creation and Review based on the guidelines provided by the advisory committee of the project.
- The communication between the creator and reviewers is done through the portal itself, the corrections are suggested by reviewers and the finalized E-Content from the Course Reviewer is uploaded on the portal
- The system focuses on maintaining an up-to-date database and save all the content uploaded by the faculty before review, after review along with all corrections
- It provides a platform for developing and reviewing the E-Courses

User Roles

- Content Creator
- Unit Reviewer
- Course Reviewer
- Nodal Officer

CONTENT CREATION & REVIEW MECHANISM

This allows agricultural higher education faculty to develop and revise digital learning content for undergraduate, postgraduate and Ph.D courses.

PG Courses

From 68 disciplines of 18 Broad Subject Matter Area, a total of 127 PG courses were selected for e-course develop-

- **A.** Two Mandatory courses were selected from each discipline
- **B.** The e-courses have been sub divided into different units for creating unit wise e-content
- **C.** For each unit there is one Content Creator and one Unit Reviewer
- **D.** For integrating and reviewing the whole e-Course content there is one Course Reviewer

Providing Quality E-courses in Agriculture

UG Courses

- **A.** 172 UG Courses from 8 major disciplines were selected for development of e-courses
- **B.** 171 UG Courses from 7 disciplines were selected for revision of e-Courses available at "ekrishishiksha" portal
- **C.** For each e-course, there is one Content Creator and one Course Reviewer

Dashboard

28 | E-Courses Developed under PG till date

21 | E-Courses Developed under UG till date

Website Access
https://education.icar.gov.in/eLearninghomepage.aspx

Grievance Redressal Mechanism System (GRMS)

Why GRMS?

Grievance Redressal Mechanism System is designed and developed to have fair and transparent grievance redressal mechanism for the NAHEP participating Agricultural Universities.

Beneficiaries

All stakeholders of Agricultural Universities participating under NAHEP

Description

The portal for GRMS follows three tier Grievance Redressal Mechanism System:

Tier 1

STEP 01 Registration of **complaint**

STEP 02 Acknowledgment of the GRMS to the complainant

STEP 03 GRMS Received by the GRMS Officer of AU's/ Colleges

STEP 04 Get redressed by the GRMS Officer

STEP 05 Communicate to the complainant within 10

STEP 06 If the complainant gets satisfied, the complaint is resolved. If not, it is passed on to the next stage

Tier 2 (PIU)

STEP 01 Get unresolved complaint

STEP 02 Acknowledgment of the complaint

STEP 03 Get redressed by the GRMS Officer at PIU

STEP 04 Communicate to the complainant within **7 days**

STEP 05 If the complainant gets satisfied, the complaint is resolved. If not, it is passed on to the higher level

To ensure the transparency of activities in a project for participating universities under NAHEP

Tier 3 (Apex Level)

STEP 01 Get unresolved complaint

STEP 02 Redirect the matter to **AU's/PIU** in case of directly received complaint

STEP 03 Instruct PIU with suggestion to redress the complaint within **7 days**

STEP 04 If the complainant gets satisfied, the complaint is resolved. If not, the complainant can go for the **legal remedy**

Website Access
https://nahep.icar.gov.in/creategrm.aspx

KRISHI MEGH

Why Krishi Megh?

Krishi Megh is the integration of the ICAR Data Centre (DC) at ICAR-IASRI, New Delhi with the Disaster Recovery Centre (DRC) at the ICAR- NAARM, Hyderabad. The primary objective is to provide a robust and dynamic IT infrastructure to meet the growing IT needs of the NARES system.

Beneficiaries

National Agricultural Research and Education System (NARES)

Krishi Megh ensures

- Availability and reliability of e-governance and IT systems in the field of agricultural research and education
- Resilient IT infrastcuture for fostering innovation to enhance scientific research and development
- Ready to use platform for agri-entrepreneurs, educationists, researchers and extension professionals
- Immediate and authentic information disbursement to researchers, students, farmers and policy planners

Services

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS)
- DR as a Service (DRaaS)

Key Features

A. Cloud Ready Infrastructure for all Agricultural Universites

B. Application Continuity with Disaster Recovery Capability

C. IPv6 Ready

D. RAAS - Reliability, Availability, Accessibility and Scalability

E. Multi-layer Physical Security & Information Security Infrastructure

All the IT Systems are hosted at
Krishi Megh

ICAR DATA CENTRE

960 Cores 6224 GB
RAM 400 TB Storage

ARTIFICIAL INTELLIGENCE

240 Cores 17 Tesla V100 GPU 84070
CUDA Cores 10880 Tensor Cores 21
TBSSD 1280 GB RAM

CLOUD & DISASTER RECOVERY

Smart Rack 804 Cores 2940 RAM
225 TB Storage

Ready cloud infrastructure for all the Agricultural Universities across India with secured services such as data storage, backup, management and networking

Kritagya Portal

KRITAGYA

Why Kritagya Portal?

Kritagya Portal is developed with an objective to automate end-to-end modules of national level ag-tech hackathons. KRI-TA-GYA explains, KRI for Krishi (Agriculture), TA for Taknik (Technology) and GYA for Gyan (Knowledge).

Beneficiaries

Agriculture sector in India

Key Features

A. Provides Role Based Access Control (RBAC) to the users allowing them to see the relevant information only

B. User friendly interface with seamless user experience

C. Transparent and Efficient marking system

D. Safe and secured data storage at ICAR–Data Centre established at ICAR-IASRI, New Delhi

Description

A. Allows quick registration of students/faculties/ innovators/technical institutions

B. Enable participants to select a problem statement

C. Allows to constitute zonal level and national level committees for evaluation

D. Provide a platform to upload presentations and other relevant documents

E. Automatic mentor allotment to the qualified teams

Hon'ble Minister of Agriculture and Farmer's Welfare, Government of India awarded the winners of 1st Kritagya hackathon organized by ICAR

Dashboard

"Kritagya – Agtech Hackathon" organized in 2020

784 teams registered

Second session of Kritagya Hackathon on
"Precision and Economical Animal Farming"
is under way

Website Access
https://nahep.icar.gov.in/Kritagya.aspx

Krishi Vishwavidyalaya Chhatr Alumni Network (KVC ALNET)

Why KVC ALNET?

KVC ALNET is developed with an objective to provide an exclusive online platform to connect all the alumnus of agricultural universities across India. The system enables agricultural universities and colleges to manage their alumni website through unified automated processes.

Beneficiaries

All stakeholders of agricultural education eco-system in India

Key Features

A. Provides a user-friendly interface with effective checks and balances to control the registration of verified alumnus

B. Enable alumnus to register through social media platforms

C. Enable alumnus to write testimonials for other alumnus

D. Allows universities/colleges to create events and send push notifications

Register @ KVC ALNET

Description

KVC ALNET allows all the ex-students and present students to connect and collaborate on an exclusive online platform developed to facilitate strategic networking among agricultural professionals to stay in touch with their fellow alumnus specialized in multiple fields of work across all agricultural universities and colleges.

This platform helps current student to build network with alumni for internships and placements

"KVC ALNET offers Easy - To - Customize Modules"

MODULES

- University Admin Module
- College Admin Module
- Registered User Module

Dashboard

37,980 Total Alumni Members

Website Access
https://alumni.icar.gov.in

Project Monitoring and Tracking System (PMTS)

Why PMTS?

PMTS is developed to provide a digital platform to the beneficiaries with an automated solution to project tools required for monitoring and tracking of the project, ensuring projects to complete within estimated timelines.

Beneficiaries

All the agricultural universities participating under NAHEP

Benefits to the Agricultural Universities

- Provides free storage to all participating agricultural universities at ICAR–Data Centre
- PMTS provides user friendly interface and a seamless user experience
- PMTS generates multiple reports in easily accessible formats that contribute to transparency, accountability and quick decision making

Description

The system provides automated solutions to monitor and track real time projects for all the agricultural universities participating under NAHEP.

An efficient way for participating Agricultural Universities to track projects under NAHEP

Features of PMTS

A. Facilitates officials in capturing, storage and retrieval of clear, quantified and operational baseline data

B. Enables officials to track the progress of various sub-projects under components I, II and III

C. Provides real-time information about overall progress of NAHEP Project

D. Facilitates officials in monitoring the performance of sub-project staff and conduct impact assessments

E. Assists in evaluating the outputs and outcomes at mid-term and prior to the completion of the project

Website Access
https://pmtsnahep.icar.gov.in/

Virtual Classroom and Agri-DIKSHA

Why Virtual Classroom?

In-line with NEP 2020 to recognize the importance of leveraging technology in agriculture education to meet the current and future challenges of access and quafity education for all. Establishment of Virtual Classroom in Agricultural Universities is done to improve the quality of education and widen the access of education for students as well as up-skilling of teachers across the country.

Beneficiaries

Faculty members and students of 18 Agricultural Universities across India

Agri-DIKSHA

The virtual classroom facility is bundled with **Agri-DIKSHA** web channel which is an interactive portal for facilitating teachers to develop and broadcast virtual learning modules.

Virtual classrooms will be part of the **'blended learning'** method that combines on-line and in-person teaching/learning wherein quizzes, video lectures and other learning material can be embedded in virtual learning modules. It combines entrepreneurial pedagogy, collaborative teaching and the latest technological teaching tools to create a modern and effective education service environment in education setting.

Features of Agri-DIKSHA

- High quality virtual learning modules
- Quick access to video repository
- Geographic, temporal and platform independence
- Lectures delivered through video capture
- Easy and seamless integration capabilities
- AI based content search mechanism
- Online assessments, Quizzes and polls functionality
- Security and data privacy

Faculty benefits

- Anywhere and anytime video recording
- Magnification and showcasing of specimen/slides/-textbooks/journals using the visualizer
- Digital white board which allows the faculty to interact with the content during teaching
- Video editing for e-course creation embedded with additional content such as youtube videos and presentation
- Attendance monitoring and reporting

Student benefits

- Anywhere and anytime access to course modules
- Interactive learning and online assessments
- Easy accessibility on all devices
- Flexible and self-paced learning
- Live interaction with facultiy members during lectures
- Exposure to multiple disciplines

A smart learning experience which brings classroom teaching into the palms of the learners connecting the teachers and learners across the country

Dashboard

1,951	Total Videos	89,118.96	Total Duration (in Minutes)	15,214	Total Views

Website Access
https://agridiksha.krishimegh.in/

WAY FORWARD

Education Portal 2.0
Student READY and EL
"One-stop solution" for Agricultural Education System

Agricultural Experts Information System (AEIS)
Premier repository of Agriculture Experts

National Image Base for Livestock Disease (NIBLD)
Artificial Intelligence based mobile app to diagnose livestock diseases

Kisaan 2.0
Repository of 300+ Agriculture related Mobile Application (knowledge partner: KRISHI)

DIGITAL INITIATIVES

Augmented Reality & Virtual Reality Labs
Implementation of AR/VR labs in Agricultural University

National Image Base for Plant and Protection (NIBPP)
Artificial Intelligence based mobile app to diagnose infected crops

ICAR - Emeritus Scientist Programme Under CBS
Tapping Brain and Skill Bank of the outstanding superannuated professionals of NARES

Resilient Agricultural Higher Education System(RAES)-Blended Learning Platform
Next Generation Digital Learning Platform for Agriculture Education System

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