

New Paradigms in Agricultural Education in India

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The New Education Policy-2020 (NEP-2020) of India provisioned that “the design of agricultural education will have to be strengthened towards developing professionals with the ability to understand and use local knowledge, traditional knowledge and emerging technologies, while being cognizant of critical issues of declining profitability and/or productivity but enhanced economic aspirations of farmers, climate change, food sufficiency, etc.”. Based on the principles and philosophy of NEP-2020, a roadmap and Implementation Strategy for NEP-2020 in Agricultural Education System has been prepared and released on 28 September, 2021 during the Annual Vice-Chancellors Conference in New Delhi.

Introduction

The New Education Policy-2020 (NEP-2020) of India provides an opportunity and has opened the gateway to introduce various changes in the education system, including higher agriculture education. Some of the major highlights of NEP 2020 include enhancing the gross enrollment ratio (GER), defining minimum standards of quality of agricultural education and ensuring their adherence by all stakeholders, improvement in research contributions, importance of staying relevant and providing placement along with right skills. Starting with multiple exit and entry points into higher education, relaxation of the residential requirements of UG, PG and PhD programmes, restructuring and reformulation of the UG curriculum in accordance with the new system advised by NEP, compliance with Academic Bank of Credits as per the directives of the Ministry of Education, Deemed universities of ICAR may initiate process for transforming them into Multidisciplinary Education and Research University (MERU).

Accordingly, the Indian Council of Agricultural Research (ICAR) constituted a national level Committee of Vice-Chancellors to develop an implementation strategy to comply with various provisions of the NEP-2020. The committee was asked to assess and recommend requirements of higher agricultural education in the present set of education/research/extension and suggestion for consideration of agricultural education in the categories of Medical and Legal Education under NEP-2020. In this direction, several meetings

and consultations were held to deliberate with various stakeholders. The draft report was also circulated to all the Vice-Chancellors and Chief Secretaries for their input and comments. Various timelines for implementation of NEP by AUs were also defined by the committee.

The preparation of professionals in agriculture and veterinary sciences under NEP-2020 is through programmes integrated with general education. Most

NEP-2020 and Higher Education in Agriculture –Salient Targets

- By 2022-23, common entrance test may be conducted by ICAR for admission of the students in all the AUs, and AUs to start increasing seats on annual basis by 10% until the target is achieved.
- By 2025-2030 all institutions, located in the same premises, offering either professional or general education may aim to organically evolve into multi-disciplinary institutions/ clusters offering higher education both seamlessly, and in an integrated manner.
- By 2035, achieving 50% Gross Enrolment Ratio (GER) in higher agricultural education including vocational education.
- All higher education institutions (HEIs) should aim to become multidisciplinary institutions by 2040.

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importantly, NEP-2020 has indicated that “*the design of agricultural education will have to be strengthened towards developing professionals*” with the ability to understand and use local knowledge, traditional knowledge and emerging technologies, while being cognizant of critical issues of declining profitability and/or productivity but enhanced economic aspirations of farmers, climate change, food sufficiency etc. Based on the principles and philosophy of NEP-2020, a roadmap and implementation strategy for NEP-2020 in Agricultural Education System has been prepared and released on 28 September, 2021 during the Annual Vice-Chancellors Conference in New Delhi. The major recommendations of the committee are as given below.

Restructuring of Agricultural Universities under NEP-2020

As per the main thrust of NEP-2020, it has been recommended to end the fragmentation of higher agricultural education by transforming Agricultural Universities/Colleges into large multidisciplinary universities, colleges, and Higher Education Institute (HEI) clusters/Knowledge Hubs with 3,000 or more students. The canvas of multi-disciplinarity of agricultural education shall encompass academic programmes of basic sciences, social sciences and allied disciplines of agricultural sciences. Therefore, the single stream universities under the ICAR-AU system need to move towards multidisciplinary institutions by 2030 while continuing the focus on agriculture.

Several affiliated colleges exist in large numbers in both public and private domain. As per NEP-2020, they need to be brought under the new norms of higher education. In compliance with the proposed policy, collective steps have been proposed to work in coordination with the universities to eliminate “affiliation” by 2035.

By taking the advantage of the available expertise and resources, the necessary steps will be taken to translate ICAR Deemed Universities into multi-disciplinary research-intensive universities.

For each university it is necessary that it works on preparing a blue print of its future called, Institutional Development Plan (IDP) and use it to seek/attract funding from different sources as well for planned growth and development.

Academic Restructuring of Agriculture Education

It has been proposed to revamp academic program structure with an innovative system of multiple entry and exits with options to award certificate, diploma, UG degree general, or degree research, and one or two years of Master’s degree. The residential requirements of UG, and PG programmes will be relaxed so that the students wishing to exit/enter may be able to do so irrespective of any time limit.

A Deans’ committee may be constituted by ICAR for restructuring UG curricula in compliance with the provisions of NEP-2020 (based on the recommendation, ICAR has already constituted the 6th Deans committee). Based on the demand, the universities may enhance the intake of UG so that the exits of few students with Certificate/Diploma do not hamper the numbers of degree pass-out students. Further, the agricultural universities may be given time to make this restructured four year UG programme functional by 2025. A separate curriculum and admission criteria may be devised for the admissions to one year certificate and two year diploma in Agriculture.

In PG programmes, it is proposed to follow multidisciplinary approach with an option to choose major and minors as per the choice of the student. Teaching assistantship shall be encouraged to PhD students to gain the required experience and also to address the shortage of faculty in many institutions/universities.

Policy directives have been enlisted to enhance Gross Enrolment Ratio (GER) in agricultural universities with at least increase of 10% seats from 2021-22 academic session on annual basis; the scores of the common entrance test conducted by ICAR through National Testing Agency (NTA) for admission of the students in all the AUs for UG/PG/PhD may be used by AUs for the admissions. Entrance Examination for UG may be conducted in regional languages and compliance with Academic Bank of Credits (ABC) as per the directives of the Ministry of Education.

Role of ICAR in Regulation of Agricultural Education

As per the recommendations of NEP-2020, the ICAR shall act as a Professional Standard Setting Body (PSSB) for Agricultural Education to develop the curricula and lay

down academic standards for the agricultural education. As a member of the proposed General Education Council (GEC), the ICAR shall take necessary steps through PSSB for making a uniform academic structure across the country both in public and private institutions offering academic programmes in agricultural sciences.

As member of the GEC, the ICAR will be able to contribute in the regulation of agricultural education through single regulatory body to be enacted as a National Higher Education Regulatory Council (NHERC), the first vertical of the proposed Higher Education Commission of India.

As per NEP-2020, the National Accreditation Council (NAC) shall act as a meta Accrediting body and shall assign the task of functioning as recognized accreditor to appropriate number of institutions.

The task to function as a recognized accreditor shall be awarded to an appropriate number of institutions by NAC. In this perspective, the NAEAB of ICAR may be recognized as an Accreditor for the accreditation of Universities/Colleges offering agricultural education.

To achieve the goal of 'internationalization at home' by maintaining global quality standards and attracting greater numbers of international students, an International Students Office shall be created to coordinate all matters relating to welcoming and supporting students arriving from abroad.

Research/teaching collaborations and faculty/student exchanges with high-quality foreign institutions will be facilitated, and relevant mutually beneficial MOUs with foreign countries will be signed.

With the available alternative modes of quality education, we need to complement/enrich traditional and in-person modes of education.

The necessary steps should be taken to avail the existing e-learning platforms such as SWAYAM, DIKSHA, SWAYAMPURABHA, etc and also to develop e-courses in agriculture and allied sciences.

Attracting Talent in Higher Agricultural Education

In order to attract and retain the talent in higher agricultural education and achieve educational excellence, ICAR provides financial assistance through various

scholarships/ fellowships to the admitted students. In addition, a national level examination was started ICAR-All India Entrance Examination for Admissions (AIEEA), in the year 1996-97, to address the challenges of quality manpower development and meet the requirement of much needed talented pool of human resource in the field of agriculture and allied sciences. The primary objective of conducting the exam is curtailing academic inbreeding in agricultural education and promoting national integration by providing a window of opportunity for the students to take admissions outside their domicile states in reputed institutions having state-of-the-art infrastructure and facilities, infuse merit, encourage talent and promote uniform examination standards across the agricultural universities, thereby leading to an overall improvement in the quality of Higher Agricultural Education.

The SAUs annually provide 15% (UG) and 25% (PG and PhD) of their existing seats as ICAR quota seats for filling up through this entrance examination. However, ICAR fills 100% PG and PhD seats at ICAR-DUs, CAUs. To align with NEP-2020 and reduce the burden on students for appearing in multiple entrance examination for admissions in State Agricultural Universities (SAUs), ICAR has taken an initiative and offered the SAUs to utilize NTA scores for UG, PG and PhD admissions. During academic session 2021-22, 05 SAUs for UG, 07 for PG and 08 for PhD admissions utilized NTA scores for state quota seat admissions.

National Talent Scholarship (NTS): The NTS UG and NTS PG were initiated to discourage inbreeding to pursue undergraduate and post-graduate studies to all those candidates who are admitted through ICAR-AIEEA and take admission outside their state of domicile and maintain prescribed academic standards.

PG Scholarship: Based on their merit in AIEEA (PG), the ICAR-PG Scholarship, is awarded to 600 candidates per year for pursuing Masters' degree for a period of two years who get admission in AUs located in states other than those from where they had graduated.

Junior/Senior Research Fellowship (JRF/SRF): 300 students are awarded this scholarship every year for pursuing Ph.D. degree program in ICAR-AU System subject to the condition that they meet the other prescribed eligibility requirements.