AGRICULTURAL HIGHER EDUCATION IN INDIA: STATUS AND SCOPE

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INTRODUCTION

The National Agricultural Research System in India is supported by agricultural higher education. The cornerstone for need-based human resources and high-quality education is a strong network of higher education institutions. It is one of the world's largest educational networks. There are public, private, and traditional universities in India's agricultural higher education system. Public agriculture universities are aided by the Indian Council of Agricultural Research(ICAR) and state governments, while private agriculture universities are supported by various government universities and University Grant Commission (UGC). There are currently 74 agricultural universities in India, including 63 state agricultural universities, 04 ICAR-deemed universities, 03 central agricultural universities and 04 central universities with agriculture faculties.These universities offer 11 disciplines for Undergraduate (UG) courses, 96 for Postgraduate (PG) courses and 73 for Doctorate (PhD) courses. In addition to these private and traditional universities also offers agriculture and allied courses like Horticulture, Forestry, Food Technology, Veterinary Sciences, Home Science etc. These SAUs are funded by the state government and ICAR special fund and central agricultural universities are supported by the ICAR.Agricultural education is regulated by the Indian Council of Agricultural Research, whereas veterinary education and forestry are regulated by the Veterinary Council of India (VCI) and the Indian Council of Forestry Research and Education (ICFRE), respectively.

STATUS OF AGRICULTURAL HIGHER EDUCATION SYSTEM IN INDIA

Agricultural universities provide education in the various disciplines of agriculture, Agriculture, Horticulture, Forestry, Fisheries Science, Food Technology, Veterinary and Animal Husbandry, Agricultural Engineering, Dairy Science, Agri. Business Management etc. at diploma, degree, master and doctoral level. Around 35,000 full-time faculty members involved in agricultural and allied sciences teaching, research, and extension are scattered among these universities, and an estimated 1.65 lakh students are enrolled in various UG, PG, and PhD programmes in these institutions. The total number of PhD students in Agriculture and Allied courses is 7292 out of which 54.9% are male students. At the PG level, there are 30222 students enrolled in Agriculture and Allied sector with 61.9% male and 38.1% female students and at the UG level, there are 269833 students enrolled (Ministry of Education, 2020).

ADMISSION PROCESS

To cater to the requirement of talented pool in agriculture and allied science disciplines in the country, the Agricultural Education Division of ICAR annually conducts the All India Entrance Examination for Admission (AIEEA) to undergraduate [AIEEA (UG)] and postgraduate [AIEEA (PG)] programmes along with the All India Competitive Examination for admission to doctoral degree programmes [AICE-JRF/SRF(PGS)] in Agriculture and Allied Science subjects in the accredited universities under the ICAR-AU system. SAUs in every state also conducted their state-level entrance examination for students admission.

Agricultural Engineering:

It is a branch of engineering that focuses on the efficient production and processing of food, feed, fibre, and fuels using engineering science disciplines and technology methods. Agricultural engineers can work for the government and public sector organisations, agribusiness firms, the food processing and retail industry, research organisations and laboratories, banks and financial corporations, central and state government organisations, and private businesses. In India SAUs and private universities offers B. Tech(Bachelor of Technology) agricultural engineering degree course. After the completion of B.Tech Agricultural Engineering, candidates can pursue M.Tech(Masters of Technology from top colleges in India and abroad. B.Tech Agricultural Engineering candidates can appear in The Graduate Aptitude Test in Engineering (GATE) examination for the M.Tech course offered at top institutes in India.

Veterinary Sciences:

Bachelor of Veterinary Sciences & Animal Husbandry (BVSc. & AH) is an important discipline in higher education. The degree course enables graduates to diagnose animal's diseases and prescribe medicines for different diseases and management of the livestock. The course curriculum comprises a detailed study of animal anatomy, physiology, Veterinary public health, nutrition and medicine diseases. The five-year degree course will comprise both theoretical subjects as well as practical examinations. Out of 74 Universities, there are 47 Veterinary Colleges are functional from 27 Universities in India (VCI, 2019). After BVSc. & AH degree course, ample job opportunities are available in Animal Husbandry, Dairy and Agriculture Sectors, Zoological Parks, Wildlife Sanctuaries, Defence Dog training or breeding centres, Different research institutes, Poultry units, etc.

Agribusiness Management (ABM):

There are around 30 AUs that have included Agri. Business management in their degree courses from India.The candidate must have a bachelor's/master's degree in agriculture and allied disciplines with a cumulative grade point average (CGPA) of at least 50% or equivalent. The candidate must pass MBA admission tests certified by the All India Council for Technical Education (AICTE) or institute-specific entrance exams, which will be followed by a group discussion and personal interview. Agribusiness managers have opportunities in agriculture production, agricultural marketing, food processing, supply chain, dairying and retailing sector in national and Multinational Corporations.

AGRICULTURE EDUCATION IN VIEW OF NEW EDUCATION POLICY (NEP) 2020

The NEP 2020 focuses on reorienting India's school and higher education systems, as well as instilling research-based studies and innovation in our educational systems. The Indian Council for Agricultural Research (ICAR), on the other hand, has been doing this on the ground for years and is thus in line with the NEP's goals. As part of its focus on innovation and research-based learning, the ICAR-Agricultural University (AU) system, with its network of 74 universities, offers degree courses at the undergraduate level in 12 disciplines, with an emphasis on learning through hands-on practice sessions and field experience training.It is multidisciplinary, as required by the NEP 2020, with postgraduate programmes in 96 disciplines and PhD programmes in 73 subjects.

For their UG programmes, the AUs have created over 400 virtual classrooms and e-courses, which are supported by a centralised Academic Management System and will be further assisted for online classes by the recently released "KrishiMegh." In all fields of agriculture education, post-graduate courses are being converted into e-courses. As a recommended choice, the NEP recommends a four-year Bachelor's degree programme that includes multidisciplinary education (Times of India, 2020).

- **Academic Credit Banks:** In NEP the best option has been overcome regarding the Academic Credit banks may make it easier to integrate campuses and remote learning systems by allowing students to move between and within universities.
- **Experiential Learning-**NEP 2020 mentions experiential education, which has been already mandated in agricultural education since 2016. The NEP wants a shift to a four-year undergraduate degree course, while most of the degrees relevant to agriculture are already of four-year programmes.To obtain hands-on training, rural awareness, industry experience, research skills, and entrepreneurship talents, all students enrolled in the Student READY (Rural Entrepreneurship Awareness Development Yojana) programme must do a six-month internship during their fourth year.

SCOPE OF AGRICULTURE EDUCATION IN INDIA

Despite its many advantages, B.Sc. Agriculture is not high on students' priority lists of academic options. It may be because of a lack of awareness regarding the sector. Government departments, research and education, nationalised banks, agri-inputs business, and government sectors and policymaking agencies all offer traditional job options. Agribusiness, food processing, finance, retailing, rural marketing, international commerce, rural credit and insurance, warehousing and commodities, NGOs, and KPOs are among the developing industries. Almost half of all agricultural specialists are employed in business-related positions. Agricultural Marketing, Agricultural Pricing, Agricultural Law, Agricultural Trading & Merchandising, Agricultural Economics, Agricultural Data Analysis, and Farm Management are some of the most important aspects of an MBA in Agri-Business. Marketing, technical sales, merchandising, economists, accountants, financial managers, commodities traders, communication, and education are examples of non-scientific occupations.

- **Attracting talent to agriculture education:** The ICAR awards over 4,500 scholarships each year to deserving students who are chosen through the National Testing Agency's All India Entrance Examination for Admission.The National Scholarship Portal, which is being suggested as part of the NEP, will provide students with greater chances for stipends, boarding and accommodation, as well as tuition waivers. Talented students from rural India, who have been exposed to agriculture since childhood and have a strong interest in agricultural education, will be encouraged to pursue jobs in agriculture and related fields.

- **Internationalisation in Agriculture Education:** Over 250 foreign students from more than 20 countries are admitted to various degree programmes each year through the ICAR.Several programs/ fellowships have been established to fund their higher education in India, including the Netaji Subhas-ICAR International Fellowship, India-Africa Fellowship, and India-Afghanistan Fellowship. Multiple measures in the NEP to promote HEIs as global study destination hubs and re-establish India's status as a Viswa Guru will be immensely advantageous to the present system of AU campuses.

PERCEPTION ANALYSIS OF STUDENTS ABOUT AGRICULTURE DEGREE

After XII class, the biology background students often think of various options for their academic career, but BSc (Agriculture) is often not in their priority agenda and it's not attractive to them, there may be several reasons including non-awareness about the complete facts about BSC (Ag). To understand these facts, ICAR-National Academy of Agricultural Research Management (NAARM) initiated a research study using an internationally renowned methodology called Analytic Hierarchy Process (AHP) for final year B.Sc.(Ag) students of Acharya N.G. Ranga Agricultural University, Guntur, Andhra Pradesh. The students prioritised Bank Jobs, Government Jobs, Private Jobs, Higher Studies and Entrepreneurship to Get a Good Status in Society through Livelihood. This study was conducted individually with predefined criteria and options, students prioritised options based on criteria. The topmost priority was Government Job with 33% weight followed by 'Higher Education' with 31% weightage. Bank Job was the option with 19% weightage. At the least students prioritised 'Entrepreneurship' and 'Private Jobs' as options and they assigned 10% and 8 % weightage respectively. The topmost criteria was 'Family Circumstances' with 50% followed by 'Capability' with 26%. 'Own Interest' was the least weighted criteria with 24%. Therefore the study reveals that a government job is the best choice to get a good status in the society through livelihood (Indian Express 2018).

CONCLUSION

The agricultural education system in India has to be revamped urgently. Its spreads from traditional to private universities throughout the country. It is necessary to offer changes to the course curriculum to meet market demand. The demand for agriculture degrees is outpacing the supply. Different types of training, workshops are needed for the student for the better and productive outcome from the agriculture streams in India. Students need to sensitize about the importance and scope of higher agricultural education. India is having the world largest agriculture education network by having facilities for education in 12 disciplines at the undergraduate level and 96 disciplines at the postgraduate level through constituent and affiliated colleges. There is a need for attracting talents in the agriculture higher education system for producing a quality outcome. It could be done by making agriculture education more attractive, earning and reputed career for youths. Government funding and scholarship need to be enhanced based on the merit of students to attract more students tothe agriculture higher education system. Some studies show that there is a demand supply gap in higher agricultural education, so this situation demands proactive policies to encourage the private sector in agricultural education.