Educational Progression and Employment Status of Agriculture Post Graduates of Northern SAUs

ABSTRACT

India is an agrarian society. Agriculture and its allied activities act as main source of livelihood for the rural society in India. Today the agriculture education in India is imparted at diploma, Undergraduate, master's and doctoral level. The success of any nation depends not only on the number of enrollment for higher education but also on the professional accomplishment of its graduates and postgraduates. Therefore, the present study was planned to study the enrolment and employment status of the agriculture postgraduates of Northern State Agricultural Universities SAU's. Survey questionnaires were developed to collect primary and secondary data so as to elicit structured responses in quantifiable terms. Questionnaire was mailed to the students who had completed their M.Sc. degree. The responses of 2457 students were received. Thus, the sample size for the present study was 2457 agriculture postgraduates. The data revealed that during the five years (2010-11 to 2014-15) out of total admission of 3716 students in M.Sc. Agriculture programme, 91.57% completed their degree while 8 per cent dropped without completion and only 14 % students were admitted through Indian Council of Agricultural Research-All India Entrance Examination for Admission ICAR-AIEEA (UG) in SAUs against 25% reserved seats. As far as educational progression and employment status of agriculture postgraduates was concerned 54% were employed in public and private sectors, 35% were pursuing PhD, while the rest 11% had no progression after M.Sc. Thus majority of the students were engaged in jobs after completing their M.Sc while some of them did not have any progession.

KEYWORDS: *Agriculture, Postgraduate, Students, Educational Progression,Employment status*

1.INTRODUCTION

In India the agricultural education system at present is based on the 74 Agricultural Universities (AUs), prepared on the Land-Grant pattern of the USA to integrate teaching, research, and extension. These, together with ICAR's 106 institutes and hundreds of centers makeup the National Agricultural Research and Education System (NARES), which is the largest in the world. The NARES, have been the harbinger of the Green, Yellow, White, and

Blue Revolutions known as the Rainbow Revolution. They have generated the desired scientific man-power, teachers, technologies and their transfer to transform India from Ship-to-Mouth situation to the Right-to-Food status (Singh, 2021).

The establishment of higher agricultural education institutions has been the major contributors of this success, besides government policies and high receptivity of the farming community.The skillful human resource developed in these institutions wasinvolved not only in generating new technologies but also in the assessment, refinement and dissemination of these technologies to the farming community. For realizing the potentials of agriculture and for its sustenance and diversification, human resource development is very important. Agricultural human resource development,which is a continuous process,is being carried out through cooperative efforts of the various components of the Indian Council of Agricultural Research (ICAR). This working apparatus is comprised of Agricultural Universities (AUs) System which consist 53 State Agricultural Universities (SAUs), 5 Deemed to be universities (DUs), four Central Universities (CUs) and one Central Agricultural University (CAU) with Agriculture faculty. Over the years, the Agricultural Universities in India, set up on the 'land grant' pattern of USA, have contributed vastly to human resource development as well as augmentation of agricultural productivity in the country. (NAHEP, 2020)

At present, the Gross Enrollment Ratio (GER) in agricultural education is up to one percent which signifies that only one percent of the students at PUC (Pre University Course) level, who are eligible for agricultural and allied sciences education, are being admitted in higher agricultural educational institutions. At present,every year 25,000 students at UG level, 15,000 at Masters' level and Ph.Dprogrammes are enrolling themselves in 350 constituent colleges, along with enrolment in private agriculture colleges. ICAR- Agricultural Universities system with approximately 23,000 scientists in teaching, research and extension offers 11 UG degree programmes and 93 disciplines in PG programme, having 52 percent students from rural areas (Chandrakanth, 2022). Given the current scenario it is important to know the status of students in higher agricultural education. Therefore, the present research was planned to know the educational progression and employment status of agriculture postgraduates in Northern SAU's.

2.METHODOLOGY

The study was carried out under the extra mural project sanctioned by Education Division, Indian Council of Agricultural Research, New Delhi. M.Sc. agriculture students of eight Northern SAUs namely Punjab Agricultural University (PAU) Ludhiana, Punjab; Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) Hisar, Haryana; Chandra Shekhar Azad University (CSA) Kanpur, UP; Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya (CSKHPKV) Palampur, Himachal Pradesh; SKUAST Jammu, J&K; SKUAST Srinagar, J&K; Maharana Pratap University of Agriculture & Technology (MPUAT), Udaipur and YS Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh, constituted the sample of the study.

All the students who had completed their M.Sc. programme during the period of 2012-13 to-2016 from selected Northern SAUs were chosen as sample for the study. Secondary sources i.e. records of the Universities were considered for obtaining the data regarding student's enrolment, their retention and dropout. Contact numbers and E-mail Id's of the students were procured from the respective University. Questionnaires were E-mailed to all the passed out M.Sc. students to get information regarding their educational and employment status. In total, response from 2457 students was received. Thus, the sample size for the present study was 2457 agriculture postgraduates. Data analysis was done through frequency and percentage.

3.RESULTS AND DISCUSSION

Overall enrolment and retention of students

Table [1] gives a comprehensive view of overall enrolment and retention of students in M.Sc Agriculture programme during XII FYP in selected Northern SAUs. It is indicated from the table that the highest number of students admitted in M.Sc. Agriculture programmewere 803 in the year 2014-15 while the lowest was 670 in the year 2011-12. The maximum number of students who completed their degree was 93.29 percent in the year 2012-13 followed by 92.29 percent in the year 2015-16. Almost equal percentage of students i.e. 91.74 percent and 91.04 percent completed their degrees in the 2014-15 and 2013-14 respectively while 89.66 percent of the students completed in 2016-17 which was lowest in all the years under

consideration. It can be seen from the tabular data that the drop-out rate has increased over the years. The highest drop out of the students was 10.33 percent in the year 2016-17 while the lowest was 6.70 percent in the year 2012-13. Overall during this five year period, out of 3716 students admitted in M.Sc Agriculture programme in selected Northern SAUs, 91.57 per cent students completed their degrees while 8.42 per cent dropped out before completion.

Table: [1] Overall enrolment and retention of students in M.Scagriculture programme

Year of admission	Year of completion	No. of Students admitted	Studentscompleted their degree f(%)	Students left/ dropped f(%)	Students admitted through ICAR-AIEEA (PG)
2010-11	**2012-13**	716	668 (93.29)	48 (6.70)	104(14.53)
2011-12	**2013-14**	670	610 (91.04)	60 (8.95)	99(14.78)
2012-13	**2014-15**	787	722 (91.74)	65 (8.25)	105(13.34)
2013-14	**2015-16**	740	683 (92.29)	57 (7.70)	127(17.16)
2014-15	**2016-17**	803	720 (89.66)	83 (10.33)	97(12.08)
Total		**3,716**	**3,403 (91.57)**	**313 (8.42)**	**532(14.32)**

Thus, from 2010-11 to 2014-15, a total of 3874 students were admitted in the M.Sc Agriculture degree program in selected Northern SAUs, out of which 91.57 percent completed their degrees while the remaining 8.42 percent dropped out. The results of the study indicates consistent drop out of the students from higher agricultural education. There could be various reasons for this trend ranging from socio-economic factors, lack of enthusiasm, interest loss, and uncertain prospects to job placements.According to the report of National Statistical Office (NSO) of the Indian government, one out of every eight students enrolled in school or college drops out before completion of their studies. (Anonymous, 2021). Economic insecurity was reorted as the major factor for college drop out in the study conducted

by Nishat et al 2020. In an another study conducted by Castleman and Meyer (2020) new academic demands was seen as the main reason for students dropout. Guzman et al (2020) stated that family influence was one of the main factors for dis-continuation of the educational process.

A further analysis of the table 1 shows the number of students admitted in M.Sc. degree programme through ICAR-AIEEA (PG). A highest percent of students i.e. 17.16 percent were admitted in the year 2013-14 through ICAR-AIEEA while the lowest percent 12.08 percent in the year 2014-15.An equal percent of students i.e. 14.78 percent and 14.53 percent were admitted in the years 2011-12 and 2010-11 respectively followed by 13.34 percent in the year 2012-13. Thus only 14 percent were the ICAR nominees despite of 25 percent reserved seats. Similar finding was noted in the study conducted by Mittal et. al. (2021) where students admitted through ICAR-AIEEA(PG) in Home Science were only 2.62 per cent. The result indicatesthat in-spite of the financial assistance provided by ICAR-AIEEE to the studentsthey were reluctant to go for further higher education in agriculture.

Table: [2] Distribution of respondent's according to their admission criteria inM.Scagriculture programme

Criteria for admission	PAU (n_1=544)	HAU (n_2=416)	CSA (n_3=505)	CSKHPKV (n_4=249)	MPUAT (n_5=273)	SKUAST, Jammu (n_6=142)	SKUAST, Srinagar (n_7=12)	YS Parmar, Solan, Horticulture (n_8=140)	YS Parmar, Solan, Forestry (n_9=176)	Total (n=2457)
Entrance exam	461 (84.7)	312 (75)	453 (89.7)	202 (81.1)	248 (90.8)	123 (86.6)	12 (100)	132 (94.3)	159 (90.3)	2102 (85.6)
AIEEA nominee	83 (15.2)	104 (25)	52 (10.3)	47 (18.8)	25 (9.1)	19 (13.3)	-	8 (5.7)	17 (9.7)	355 (14.4)

Table [2] shows distribution of respondents according to admission criteria in M.Sc Agriculture programme. A total of 2102 students were admitted through entrance exam, out of which 461 students were admitted in PAU, 453 in CSA, 312 in HAU, 248 in MPUAT, 202 in CSKHPKV, 159 in YS Parmar (Solan-Forestry), 132 in YS Parmar (Solan, Horticulture), 123 in SKUAST (Jammu) and 12 in SKUAST (Srinagar). Rest of the students (14.4 percent) got admission after qualifying ICAR-AIEEA (PG). Highest number of ICAR nominees were in HAU (104) followed by PAU (83), CSA (52), CSKHPKV (47), MPUAT (25), YS Parmar (25) andSKUAST (Jammu) (19).

Table [3]: Educational progression and employment status of agriculture post graduates

Educational progression/Employment status	Number of respondents from SAUs f (%)									
	PAU (n_1=544)	HAU (n_2=416)	CSA (n_3=505)	CSKHPKV (n_4=249)	MPUAT (n_5=273)	SKUAST, Jammu (n_6=142)	SKUAST, Srinagar (n_7=12)	YS Parmar, Solan, Horticulture (n_8=140)	YS Parmar, Solan, Forestry (n_9=176)	Total (n=2457)
Pursuing Ph.D.	186 (34.19)	175 (42.06)	168 (33.26)	82 (32.93)	77 (28.20)	55 (38.73)	5 (41.66)	46 (32.85)	60 (34.09)	854 (34.75)
Unemployed	13(3.63)	22(9.13)	57(16.91)	42(25.15)	64(32.65)	22(25.29)	2(28.57)	31(32.98)	32(27.59)	285(11.60)
Employed (Public sector)	129 (23.71)	76 (18.27)	87 (17.23)	41 (16.47)	52 (19.05)	15 (10.56)	1 (8.33)	22 (15.71)	32 (18.18)	455 (18.52)
Employed (Private sector)	216 (39.71)	143 (34.38)	193 (38.22)	84 (33.73)	80 (29.30)	50 (35.21)	4 (33.33)	41 (29.29)	52 (29.55)	863 (35.12)

Table [3] depicts educational progression and employment status of Agriculture postgraduates from selected Northern SAUs. The data revealed that only 34.75 percent of the students were pursing Ph.D. The reasons for majority of the students not going for further studies after M.Scmay be they got placed after M.Sc or due to socio-economic constraints or maybe they were unable to secure a seat for themselves in PhD. The results are in line with the article published byAthal (2022), which stated that considering the large size of India's population and higher education sector it has a lesser number of students enrolled in doctoral programmes. The article further highlighted the "All-India Survey on Higher Education data" for 2017-18 which showed that out of 36.6 million Indian students enrolled in higher education programmes, only 161,412 were enrolled inPhD programme. Similar result was also found in the study conducted by Mittal *et. al.* (2020) where, one third of the Home science postgraduates

opted for PhD after completing Master's programme.The data further indicatesthat 11.60 percent of the post graduate students were unemployed and were also not involved in further studies. Among employed, 35.12 percent were in private sector and 18.52 percent were in public sector which is less than private sector.A study conducted by Chandrashekhar and Ghosh (2019) indicated that India is remarkably low in providing public sector jobs. The employment and the number of public jobs areextremely low, which indicates that both coverage and quality of public services is disgustingly inadequate. It is also evident from the data that more than fifty percent of the students were employed in public and private sectors altogether, which indicates that more agriculture students opt for jobs after completing their M.Sc. degree than studying further. This could be due to many reasons like individual interest or one's financial conditions or may be due to other social and family influences. The result was in congruence with the findings of the study conducted by Mittal *et. al.* (2020) where, nearly fifty two percent of the agriculture graduates were employed in both public and private sector after completing their bachelors programme. The percentage of PhD students was higher overall may be because of the reason that the students who could not secure Government job after M.Sc and didn't want to work in private sector went for higher studies in the hope of getting a Government job after PhD as more weightage is given to the PhD holders than MSc student in interviews or may be some of them were genuinely interested in doing higher research. An article by Parishad (2019) stated that most of the private universities and colleges offers a meager salary to their faculty members providing them no opportunity but to go for higher education.

4.CONCLUSION

It can be concluded that majority of the students got admission in M.Sc degree through state entrance exam however consistent drop out of the students can be seen in all the five years. Most of the M.Sc. Students did not show any progression after their degree completion which could be due to their interest or other socio-economic factors. Thus,both the government and the corporate sector must take necessary strategic actions to attract students for higher education in Agriculture field such as increasing the number of scholarships for agriculture students to enhance research and development, better job placements etc. This will help them become better professionals and improve their earning capacities. Policy makers should seriously analyse and consider various factors influencing GER (Gross Enrollment Ratio). The universities should make it clear that there are promising multiple opportunities for jobs both within and outside the country before offereing any course.

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