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Problems of Farm Scientists in Research and their Suggestions to Subdued in University of Agricultural Sciences, Bangalore

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ABSTRACT

The study was conducted in University of Agricultural Sciences, Bangalore (UAS-B) to know the problems faced by farm scientists and obtained suggestions to overcome them. All the Farm Scientists working in Directorate of Research were purposively considered as respondents. The pre-tested questionnaire was sent through mail and collected personally from 41 respondents who are working in the Directorate of Research. The Garrett Ranking and percentage was used to analyze the data. The major problems identified were : involvement in activities other than research activities (73.17%), frequent transfers and dislocation hinder works (65.85%) and high rigid rules and cumbersome procedures to utilize research funds (56.09%). The major suggestions were recruitment of scientific staff without delay (97.56%), develop lab facilities to reach international standards (92.68%) and organize training programmes on values and ethics of the organization (87.80%). Hence, there is need to prioritize the problems of Farm Scientists and consider their suggestions while framing the research related policy decisions to enhance research productivity.

Keywords : Human resources, Problems of farm scientists, Research management

The agricultural research has made significant changes in the growth of agricultural and allied sectors. With the intensified technology usage and climate change, the needs, adaptations and the challenges are exponentially increasing. Application of agricultural science is complex as the values and assumptions which underlie the agricultural practices of millions of farmers. Thus, it is decentralized and extensive in character (Agarwal and Shivamurthy, 2018**)**. The Indian National Agricultural Research and Education System (NARES) is one of the largest agricultural research systems in the world which had made significant changes in the research with its Deemed Universities, Institutes, Bureaus, Project Directorates, National Research Centres, State Agricultural Universities (SAUs), Central Agricultural Universities, AICRPs and Network Projects. The Farm Scientists were working in these institutes. There are 63 SAU's including six in Karnataka. India has doubled its investment in agricultural research and extension from 0.4 per cent of agriculture GDP in 1981 to 0.96 per cent in 2011, the research quality remained poor due to low institutional capacity of agricultural higher education to adapt and remain relevant (Anonymous, 2014). To overcome this, ICAR implemented National Agricultural Higher Education (NAHEP) project funded by World Bank and GoI with an outlay of Rs.1100 crores. Out of which more than Rs.500 crores allotted to SAUs. The UAS Bangalore is one among the 23 SAUs selected for this project (Anonymous, 2019).

The research has very important role in the SAUs along with education and extension. They plays an important role in identifying and working on research needs on diverse sub-continent. The human resources of these SAUs are very crucial in performing research work that address the technology gap existing (Padmavathi *et al.,* 2018). The information on problems faced by farm scientists will be very useful for adopting good practices that facilitate SAUs to function more effectively in generating technologies that are more essential for farmers. In view of the above, the objective was framed to know the problems faced

The Mysore Journal of Agricultural Sciences

by Farm scientists of UAS (B) and the suggestions obtained to overcome them in their professional activities.

METHODOLOGY

The study was conducted in University of Agricultural Sciences Bangalore (UAS-B). All the Farm Scientists working in Directorate of Research were purposively considered as respondents. The list of scientists working in the Directorate of Research was collected from University Telephone Directory and ensured with office of Directorate of Research. The pre-tested questionnaire was sent through mail and same has been collected personally from 41 respondents. The Garrett Ranking and percentage was usedto analyze the data (Zalkuwi *et al.,* 2015 and Ismanto *et al.,* 2018). In the first step, the percentile positions were calculated for all the ranks using formula given below.

$$\text{Percentile position} = \frac{100\ (R_{ij} - 0.5)}{N_j}$$

Where, R_{ij} is the Rank value and N_j is total number of ranks

The Garrett score for each rank was obtained from Garrett ranking conversion table based on percentile points. The obtained ranks to the problems / suggestions were multiplied with Garrett rank score given to each rank which is the result of previous step. All the scores obtained in this way were added within a problem / suggestion and the total is divided with total number of problems / suggestions which gives average score of them. The Garrett scores were assigned and ranked accordingly (Table 2). The cadre wise problems / suggestions are presented in percentage.

RESULTS AND DISCUSSION

The data depicted in Table 1 reveals the problems of men Farm Scientists namely, 'involvement in other activities than research' (73.07%) and 'frequent transfers and dislocation hinder works' (65.38%) followed by equal per cent (53.84%) 'high rigid rules and cumbersome procedures to utilize research funds', 'uneven distribution of workload' and 'lack of co-ordination among different departments in the University'. With respect to women farm scientists,

TABLE 1

Problems faced by Men and Women Farm Scientists and their Garrett rank

(n=41)

Problems	Men (%) (n_1=28)	Women (%) (n_2=13)	Pooled Percentile position	Garrett Rank
Involvement in other activities than research	73.07	68.75	75.30	I
Frequent transfers and dislocation hinder works	65.38	56.25	71.00	II
High rigid rules and cumbersome procedures to utilize research funds	53.84	50.00	62.60	III
Uneven distribution of workload	53.84	43.75	60.80	IV
Lack of coordination among different departments in the University	53.84	37.50	57.50	V
Difficult to get likeminded colleagues to collaborate	50.00	50.00	54.10	VI
Insufficient publication support services	38.46	56.25	53.40	VII
Groupism in the departments/institutes	42.30	37.50	49.60	VIII
Deadlines decrease the quality of work	19.23	56.25	47.80	IX
Sometimes non-technical staff create more hindrance than help	42.30	12.50	43.20	X
Disparity in encouragement, support and publicity	30.77	12.50	33.60	XI
My plans are denied by superior interventions	19.23	25.00	31.50	XII
Exclusion from debates, discussion etc.. due to centralized decisions	23.07	0	29.30	XIII
My performance standards are decreasing over the years	7.69	12.5	22.70	XIV
Incapable in setting my priorities unlike goals	3.84	0	12.00	XV

the majority of them expressed. 'involvement in activities other than research' followed by equal percentage (56.25%) respondents experience 'frequent transfers and dislocation hinder works', 'insufficient publication support services' and 'deadlines decrease the quality of work'. The pooled respondents perceived that 'it is inevitable to avoid involvement in unproductive activities', 'frequent transfers and dislocation hinder works' and 'high rigid rules and cumbersome procedures to utilize research funds' were important problems faced in research and ranked I, II and III. The similar problems were reported by Panda and Chowdhury (2015), Kulkarni (2016), Kumar *et al.*, (2017) and Al-Khasawneh *et al.* (2021).

The noticeable problems faced by majority Farm Scientists of Assistant Professor Cadre Scientists includes equal per cent (68.42%) 'uneven distribution of workload' and 'sometimes non-technical staff create more hindrance than help' followed by 'frequent transfers and dislocation hinder works' (57.89%) as shown in the Table 2. The Associate Professor cadre Scientists shared equal per cent (80.00%) 'high rigid rules and cumbersome procedures to utilize research funds', 'lack of coordination among different departments in the University' and 'groupism in the departments / institutes' as perceived problems. With regard to majority Professor cadre scientist's problems were equal per cent (56.25%) of 'frequent transfers and dislocation hinder works', 'insufficient publication support services', 'uneven distribution of workload' and 'insufficient publication support services'.

The involvement of scientists in unproductive work might limit their involvement in research activities. The frequent transfers effect the productivity of the scientist as they have to spend most of their time in establishment of lab and field to his / her area of interest. The insufficient publication support could result in missing the opportunity to publish in high rated journals. Deadlines framed for completing the tasks / projects by considering the various factors effecting the work. Few problems, such as limited opportunities to work with likeminded colleagues, sometime non-

TABLE 2

Problems faced by the Farm Scientists of different cadre

(n=41)

Problems	Assistant Professor (n_3=16)	Associate Professor (n_2= 10)	Professor (n_1= 15)
Involvement in other activities than research	10.52	60.00	0
Frequent transfers and dislocation hinder works	57.89	70.00	56.25
High rigid rules and cumbersome procedures to utilize research funds	42.10	80.00	43.75
Uneven distribution of workload	68.42	50.00	56.25
Lack of coordination among different departments in the University	26.31	80.00	43.75
Difficult to get likeminded colleagues to collaborate	31.57	30.00	37.50
Insufficient publication support services	47.36	60.00	56.25
Groupism in the departments/institutes	42.10	80.00	43.75
Deadlines decrease the quality of work	31.57	40.00	37.50
Sometimes non-technical staff create more hindrance than help	68.42	40.00	25.00
Disparity in encouragement, support and publicity	36.84	30.00	37.5
My plans are denied by superior interventions	5.26	30.00	12.50
Exclusion from debates, discussion etc.. due to centralized decisions	10.52	20.00	6.25
My performance standards are decreasing over the years	26.31	10.00	12.50
Incapable in setting my priorities unlike goals	15.78	0	0

The Mysore Journal of Agricultural Sciences

technical staff creates hindrance, uneven distribution of work and groupism in departments could be rectified by distribution of specific roles and responsibilities.

The suggestions by Farm Scientists with respect to their research are presented in the Table 3. The major suggestions given by equal per cent (96.00%) men Scientists were 'recruitment of Scientific staff without delay', 'develop organizational culture that values individual workers', 'clearly defined roles and responsibilities' and 'simplify the purchase procedures for equipment'. With respect to Women Scientists, cent per cent of them suggested 'recruitment of Scientific staff without delay', 'develop lab facilities to reach international standards', 'develop organizational culture that values individual workers', 'enhance the current incentives given for publishing', 'individual interest kept a side over organization interest', 'provide working atmosphere to work extra hours' and 'simplify the purchase procedures for equipment' as major problems. The most prominent suggestions by pooled Scientists were 'recruitment of scientific staff without delay' followed by 'develop lab facilities to reach international standards' and 'organize training programme on values' and ethics of organization', ranked I, II and III. The results were in line with the suggestions of Stads (2016), Suhardi *et al.* (2019), Sumpter (2019) and Fathima *et al.* (2020).

The results from Table 4 revealed that the cent per cent of Assistant Professor cadre Scientists suggested 'recruitment of Scientific staff without delay', 'enhance the current incentives given for publishing', 'adequate weightage for qualitative publications' and 'increase number of overseas research training'. With regard to Associate Professor cadre cent per cent of scientists suggested 'recruitment of Scientific staff without delay', 'develop lab facilities to reach international standards', 'organize training programme on values and ethics of organization', 'develop organizational culture that values individual workers', 'enhance the current incentives given for publishing', 'simplify the purchase procedures for equipment' and 'adequate weightage for qualitative publications' for the same. With regard to Professor cadre equal per cent of Scientists (87.50%) suggested 'recruitment of Scientific staff without delay', 'develop lab facilities to reach international standards', 'develop organizational culture that values individual

TABLE 3

Suggestions to overcome the problems by Men and Women Farm Scientists and their Garrett rank

(n=41)

Problems	Men (%) (n_1= 28)	Women (%) (n_2 = 13)	Pooled Percentile position	Garrett Rank
Recruitment of Scientific staff without delay	96.00	100	66.46	I
Develop lab facilities to reach international standards	92.00	100	55.61	II
Organize training programme on values and ethics of organization	48.00	62.50	52.23	III
Timely support to claim invention or intellectual property	76.00	93.75	51.76	IV
Develop organizational culture that values individual workers	96.00	100	49.30	V
Clearly defined roles and responsibilities	96.00	87.50	49.23	VI
Enhance the current incentives given for publishing	84.00	100	47.61	VII
Individual interest kept a side over organization interest	84.00	100	46.46	VIII
Provide working atmosphere to work extra hours	92.00	100	43.61	IX
Simplify the purchase procedures for equipment	96.00	100	41.23	X
Adequate weightage for qualitative publications	92.00	87.50	39.61	XI
Reducing the role of researcher in teaching and extension activities	88.00	87.50	33.92	XII
Increase the number of overseas research trainings/learning grants	72.00	87.50	26.69	XIII

TABLE 4

Suggestions to overcome the problems by Farm Scientists of different cadre

(n=41)

Problems	Assistant Professor (n_3=16)	Associate Professor (n_2= 10)	Professor (n_1= 15)
Recruitment of Scientific staff without delay	100	100	87.50
Develop lab facilities to reach international standards	87.50	100	87.50
Organize training programme on values and ethics of organization	93.75	100	68.75
Timely support to claim invention or intellectual property	87.50	80.00	75.00
Develop organizational culture that values individual workers	93.75	100	87.50
Clearly defined roles and responsibilities	93.75	90.00	81.25
Enhance the current incentives given for publishing	100	100	87.50
Individual interest kept a side over organization interest	81.25	90.00	62.50
Provide working atmosphere to work extra hours	93.75	90.00	81.25
Simplify the purchase procedures for equipment	93.75	100	75.00
Adequate weightage for qualitative publications	100	100	87.50
Reducing the role of researcher in teaching and extension activities	62.50	50.00	43.75
Increase the number of overseas research trainings/learning grants	100	90.00	87.50

workers', 'adequate weightage for qualitative publications' and 'increase number of overseas research training'.

The recruitment of scientific staff was very much needed to reduce operational pressure faced by farm scientists. The lab facilities also plays key role to reach research to international standards. The values and ethics are crucial role in all the stages of scientific process and help the scientists to come in a pace. The scientific policies should respect the individual worker's interest. The quality publications is an important parameter to access the scientists productivity. Hence, specific standards weightage system needs to be adopted to encourage the scientists. The other important suggestions that improve scientific temper and collaborations was overseas training programmes.

The study has expressed comprehensively the problems faced by the Farm Scientists to perform their research. The major problems were : involvement in activities other than research (73.17%), frequent transfers and dislocation hinder works (65.85%) and high rigid rules and cumber some procedures to utilize research funds (56.09%). The problems noticed by the Scientists which were not really exists can be solved by changing their attitudes by the concerned authority in the institution. Further, the major suggestions given were recruitment of Scientific staff without delay (97.56%), develop lab facilities to reach international standards (92.68%) and organize training programme on values and ethics of organization (87.80%). Hence, there is need to prioritize the problems of Farm Scientists and consider their suggestions while framing the research related policy decisions to enhance research productivity.

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The Mysore Journal of Agricultural Sciences

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