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Profile of extension functionaries towards crop pest surveillance and advisory project

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Abstract

The present study was conducted in Palam, Pathri, Selu, Sonpeth, Manwat, Gangakhed, Parbhani, Purna, Jintur tahsils of Parbhani district from Marathwada region of Maharashtra state, with an objective to study the Perception of extension functionaries towards Crop Pest Surveillance and Advisory Project. Total nine tahsils were selected for research study. Fifteen respondents from each tahsil were selected randomly to comprise a sample of 135 respondents. One short case study method of ex-post-facto medium research design was adopted for this study. Findings revealed that a majority (68.15%) of the respondents belonged to the middle age group, and most exhibited medium levels of job satisfaction (70.37%) and job stress (65.93%). A large portion (82.96%) had attended 2-3 training programs. Notably, 36.30% of respondents displayed low innovativeness, and 94.07% were responsible for 1 to 9 villages. Nearly half of the respondents had a medium level of knowledge (49.63%) and held a Diploma or GTC qualification (46.67%). Over half (54.07%) had 3 to 15 years of experience, and 73.33% had a medium level of scientific orientation. Additionally, 59.26% of respondents had moderate sources of information, and over 60% had a moderate perception towards CROPSAP.

Keywords: CROPSAP, Perception, Extension functionaries, Correlation

1. Introduction

The rural economy of Maharashtra is largely driven by rainfed agriculture, with the cultivation of kharif crops like cotton, soybean, rice, and pigeonpea, alongside the primary rabi crop, chickpea, forming the backbone of the state's agricultural landscape. In the agricultural season of 2008-09, Maharashtra faced a devastating pest outbreak, primarily involving *Spodoptera litura* (Fabricius), *Helicoverpa armigera* (Hubner), and other leaf-eating caterpillars, which severely affected the cotton-soybean cropping system. This pest invasion led to the destruction of 14.56 lakh hectares of soybean crops, resulting in an economic loss of approximately Rs. 1392 crores. In response, the government provided a financial relief package of Rs. 450 crores to support the affected farmers. Despite the expansion of soybean cultivation in 2008, pest epidemics were exacerbated by insufficient monitoring of pest populations during the early stages of infestation, highlighting the

critical need for timely surveillance and intervention to prevent such large-scale losses. Given the wide range of factors contributing to the onset and spread of pests, it is crucial to implement continuous pest monitoring to prevent the recurrence of outbreaks. Such proactive measures necessitate the establishment of a robust pest monitoring and advisory system. To address this, a series of collaborative meetings took place between March and May 2009, involving a team of scientists from the Indian Council of Agricultural Research (ICAR) crop-based institutes, State Agricultural Universities (SAUs) of Maharashtra, and the State Department of Agriculture (SDA) of Maharashtra. These discussions were focused on developing the program's structure, outlining the operational areas, defining the roles and responsibilities of various stakeholders, and preparing a project proposal for funding under the Rashtriya Krishi Vikas Yojana (RKVY) through the Commissionerate of Agriculture, Government of

Maharashtra.

In 2008-09, a severe pest infestation affected soybean crops in the Marathwada and Vidarbha regions of Maharashtra. The outbreak underscored the critical need for systematic and scientific pest monitoring and management, sparking the innovative application of Information and Communication Technology (ICT) in plant protection. This initiative aimed to implement Integrated Pest Management (IPM) on a wide scale across India. (Source: <https://ncipm.icar.gov.in> ICAR-National Research Centre for Integrated Pest Management, New Delhi)

Objectives of research study

To study the profile of Extension Functionaries.

2. Materials and Methods

The present study was carried out purposively in Parbhani

district of Marathwada region of Maharashtra state in which 9 tahshils were selected (Palam, Pathri, Selu, Sonpeth, Manwat, Gangakhed, Parbhani, Purna, Jintur) purposively. From each tahshils 15 Extension Functionaries were selected as sample size total 135. Total 11 independent variables viz Age, Job satisfaction, Job stress, Training received, Innovativeness, Work Area, Knowledge, Professional Qualification, Year of Experience, Scientific Orientation, Source of information and one dependent variable Perception were selected for data collection using a structured interview schedule. Ex post facto research design was selected in the present study. Data were analysed with the help of statistical tools like mean, standard deviation, frequency, percentage, Pearson's coefficient of correlation.

3. Results and Discussion

Profile of Extension Functionaries

Table 1: Distribution of respondents according to their profile

Sr. No.	Category	Frequency	Percentage
1) Age			
1	Young (Up to 27)	27	20.00
2	Middle (28 to 43)	92	68.15
3	Old (Above 43)	16	11.85
2) Job satisfaction			
1	Low (Up to 24)	26	19.26
2	Medium (25 to 30)	95	70.37
3	High (Above 30)	14	10.37
3) Job stress			
1	Low (Up to 14)	26	19.26
2	Medium (15 to 22)	89	65.93
3	High (Above 22)	20	14.81
4) Training received			
1	Low (Up to 1)	23	17.04
2	Medium (2 to 3)	112	82.96
3	High (Above 3)	00	00.00
5) Innovativeness			
1	Low (Up to 1 score)	49	36.30
2	Medium (2 score)	42	31.11
3	High (3 score)	44	32.59
6) Work area			
1	Low (Up to 0)	01	00.74
2	Medium (1 to 9)	126	93.33
3	High (Above 9)	08	05.93
7) Knowledge			
1	Low (Up to 73)	37	27.41
2	Medium (74 to 91)	67	49.63
3	High (Above 91)	31	22.96
8) Professional qualification			
1	Diploma (1)	63	46.67
2	Graduate (2)	45	33.33
3	Post Graduate (3)	27	20.00
4	Doctorate (4)	00	00.00
9) Year of experience			
1	Low (Up to 2)	37	27.41
2	Medium (3 to 15)	73	54.07
3	High (Above 15)	25	18.52
10) Scientific orientation			
1	Low (Up to 13)	35	25.93
2	Medium (14 to 16)	99	73.33
3	High (Above 16)	01	00.74
11) Sources of information			
1	Low (Up to 8)	26	19.26
2	Medium (9 to 11)	80	59.26
3	High (Above 11)	29	21.48

1) Age

The results in the table 1 revealed that more than two-third (68.15%) of the respondents belonged to Middle age group, whereas 20.00 and 11.85 per cent of the respondents belonged to young and old age, respectively. As high as (31.85%) of the respondents belonged to young and old age. This is because the recent appointment made has given more weightage to highly qualified candidates for the post which has compelled to possess young to middle age category. Hence, it was understood that with well-defined programme objectives, young to middle aged respondents significantly influence the implementation process of Crop Pest Surveillance and Advisory Project.

This findings are in similar with Bortamuly (2015) ^[1], Khamoushi and Gupta (2015) ^[15].

2) Job Satisfaction

The results in the table 1 indicated that more than two-third (70.37%) of the respondents were having medium level of job satisfaction followed by 19.26 and 10.37 per cent of respondents were having low and medium level of job satisfaction respectively. Commonly, job satisfaction depends upon the extent to which an individual derives personal and socio psychological benefits from their job. This trend of results might be due to flexibility given by superior to do job well, job security, working facilities, suitable rewards, proper incentives and better promotional opportunities of Extension Personnel.

This findings are in similar with Jaryal *et al.* (2022) ^[4], Seles and Halakatti (2023) ^[10].

3) Job stress

It is clear from table 1 nearly two-third (65.93%) of respondents were having medium level of job stress whereas 19.26 and 14.81 per cent of respondents were having low and high level of job stress respectively. The possible reason for this tendency of results might be due to lack of sufficient field level extension staff, multiple roles, and too many tasks in the department are some of the ground realities.

This findings are in similar with Goyal *et al.* (2015) ^[2], Rathod and Deshmukh (2022) ^[9].

4) Training Received

The results in the table 1 revealed that (82.96%) of respondents were participated in trainings (2 to 3) followed by (17.04%) of respondents were participated in only one training and no one is participated more than 3 trainings. that training is a part of extension activity for capacity building of extension personnel and also it might be due to series of trainings conducted at different authority level in order to sharpen the skill to improve the capabilities of the Extension Personnel.

This findings are similar with Shaikh (2021) ^[11], Seles and Halakatti (2023) ^[10].

5) Innovativeness

It is clear from table 1 (36.30%) of the respondents were having low level of innovativeness followed by 32.59 and 31.11 per cent of respondents were having high and low level of innovativeness. This is because lack of healthy organization to invent new procedures, move towards new goals and also generate new ideas by the Extension

Personnel.

This findings are in similar with Kumar and Sailaja (2012) ^[7].

6) Work area

It is apparent from table 4.6 that (93.33%) of respondents were having 1 to 9 villages as work area followed by 05.93 and 00.74 per cent of respondents were having above 9 and 0 villages as work area. It might be due to posting area, designation of Extension Personnel.

This findings are in similar with Wankhade (2002) ^[14].

7) Knowledge

It is clear from the table that nearly half (49.63%) of the respondents were having medium level of knowledge followed by 27.40 and 22.96 per cent of respondents were having low and high level of knowledge. This is might be due to base on individual's work experience, the Extension Personnel had undergone training on Crop Pest Surveillance and Advisory Project.

This findings are in similar with Singh *et al.* (2015) ^[2].

8) Professional Qualification

In the present study from table 1 revealed that nearly half (46.67%) of the respondents were having Diploma / GTC level followed by 33.33 and 20.00 per cent of respondents were having graduate and post graduate level professional qualification. This is because of the minimum qualification was diploma to enter into any post in agriculture however minimum qualification for taluka and district officer level is graduation level.

This findings are in similar with Kshatriya *et al.* (2020) ^[6], Rathod and Deshmukh (2022) ^[9].

9) Year of experience

It is apparent from table 1 more than half (54.07%) of the respondents were having medium level (3 to 15 years) of experience whereas 27.41 and 18.52 per cent of respondents were having low (up to 2 years) and high (above 15 years) of experience respectively. the appointment pattern followed in the agriculture department and it also might be due to a reason that greater majority (81.48%) of the respondents were young to middle age that's why this kind of tendency in the results.

This findings are in similar with Kshatriya *et al.* (2020) ^[6].

10) Scientific orientation

It is clear from the table that 1 nearly three fourth (73.33%) of respondents have medium scientific orientation whereas 25.93 and 00.74 per cent of respondents were having low and high level of scientific orientation. It might be due to Crop Pest Surveillance and Advisory Project Extension Functionaries were having medium level of knowledge, medium level of trainings, low innovativeness.

This findings is similar with the Patil *et al.* (2017) ^[8].

11) Sources of information

It is apparent from the table 1 that more than half of (59.26%) of respondents have moderate level of sources of information and 21.48 and 19.26 per cent were having high and low level of sources of information respectively. This is because Extension Functionaries using different types of

sources of information such as newspaper, television, social media etc.

This finding is similar with Jahagirdar and Balsubramanya (2010)^[3].

4. Conclusion

The study found that, the profile of the extension functionaries of Crop Pest Surveillance and Advisory Project concluded from the present study that, majority of extension functionaries belonged to middle age category, medium level of job satisfaction, job stress, were participated in medium level of trainings, were having low level of innovativeness, medium level of work area, medium level of knowledge, majority of respondents were having diploma level /GTC diploma level, medium level of year of experience, scientific orientation and moderate level of sources of information.

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