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EXTENSION SERVICES AND TECHNOLOGY ADOPTION OF DATE PALM (*PHOENIX DACTYLIFERA* L.) IN DISTRICT DERA ISMAIL KHAN

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ABSTRACT:- The present study has been designed to investigate the role of agricultural extension services in date palm (*Phoenix dactylifera* L.) improvement. Agriculture extension is appreciating the problems of farmers and suggesting a suitable solution for these problems. Due to the utmost importance of agricultural extension services, its role was investigated in the major date producing areas (Dakki, Mian Wada, Mathra Abad, Jhok Ghamywali, Habib Abad, Bilot Sharif, Himat, Jhok Moazam, Matwala Shah, Chura and Jhok Malkanri) of the district Dera Ismail Khan by personal interview method from a sample of 51 respondents selected from these villages. Agriculture was the major profession of the farmers (80.3%). It was found that 62.7% of the respondents were never visited by the extension workers while 60.7% of the respondents never attended any meeting with field staff or Agriculture Officers. A single field day was organized by extension workers almost two years ago in the studied area attended by only 41% of the respondents. About 72% of the selected respondents were aware about modern technologies but only 43% of them were educated by extension workers. It was concluded that most of the respondents (70%) were never satisfied with proper working of extension workers. It is, therefore recommended that better extension services, trainings and guidance are the need of the farming community.

Key Words: Date Palm; Extension Services; Personal Interview; Extension Field Staff; Pakistan.

INTRODUCTION

Agriculture extension is the most logical, scientific and systematic method of disseminating new knowledge and skills to farmers to enable them in successfully adopting and making a more efficient use of their land and allied resources (www.agrihunt.com). Agriculture extension reduces the gap between the research and farmers by carrying over the scientific knowledge to the farmers. Agriculture extension values the problems of farmers, suggest a suitable solution for their problems and if required, they transmit their problem to the subject matter specialist (SMS). The major function of agriculture extension is to educate the farmers and enable them to act accordingly. Recognition of the problems, finding best suitable solutions and practical performance of these solutions is the functional objective of agriculture extension. The extension worker is the last posi-tion in the overall hierarchy of agriculture extension who works under the sup-

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ervision of the Agriculture Officer. The extension worker is responsible for his/her assigned area or villages to influence the farm people to adopt better practices relating to agriculture. Education of the farmer relating to agriculture mostly depends on the efforts of extension worker.

As agriculture is the major economic activity and main source of earning for people of the district Dera Ismail Khan, due to its warmer climate, the area is most suitable for summer fruits and vegetables. Among these the major fruits grown here are mango and date palm especially "Dakki" dates. Pakistan exported 88,451 tons of dried dates and 4,687 tons of fresh dates and earned $36.033 million from export of both fresh and dried dates during the 2007-2008 (EPB, 2009).

In Pakistam, date palm is produced in almost all the provinces (Table 1). The productivity of dates can be considerably increased by the appropriate application of the modern techniques in agriculture. It is therefore necessary to make aware the farmers and make them familiar with the modern methods of high agricultural production. To disseminate the new techniques, the government uses the services of extension. The study was, therefore, conducted to investigate the role of extension services in the improvement and production of date palm.

Table 1. Area and production of date palm in the provinces of Pakistan

Province	Area ('000' ha)	Production ('000' t)
Sindh	32.7	268.6
Balochistan	50.1	204.3
Punjab	5.8	42.5
KPK	1.5	6.8
Total	90.1	522.2

Source: Anonymous, 2011

MATERIALS AND METHOD

Study Area

The study was undertaken at district Dera Ismail Khan. It lies in the southern most part of the Khyber Pakhtunkhwa province. The area is suitable for date palm cultivation.

Dakki area is famous for the date palm cultivation in Dera Ismail Khan. List of villages was obtained from the office of the revenue/agricultural officer with the cooperation of agricultural extension department and farmers. The villages selected were Dakki, Mian Wada, Mathra Abad, Jhok Ghamywali, Habib Abad, Bilot Sharif, Himat, Jhok Moazam, Matwala Shah, Chura and Jhok Malkanri. From these villages quantitative data was collected.

Selection of Respondents

A list of date palm growing farmers from each village was obtained from local Agricultural office. From this list farmers were randomly selected. Those farmers having atleast 25 trees in their orchards were considered as a respondent and thus a sample of 51 respondents was obtained which was 20% of the whole population i.e., 255.

A questionnaire was designed to collect relevant information from 51 date palm growers in the area. The questionnaire was developed in such a way as to seek information from

farmers about date palm cultivation, frequency of visits of agricultural extension workers, transfer of new technologies and awareness etc.

RESULTS AND DISCUSSION

The majority of the respondents i.e., 41 (80.5%) had a farming as their major profession and source of income, 3 (5.8%) respondents were businessmen and 7 (13.7%) were government servants (Figure 1). It shows that most of the respondents are totally dependent on agricultural sector.

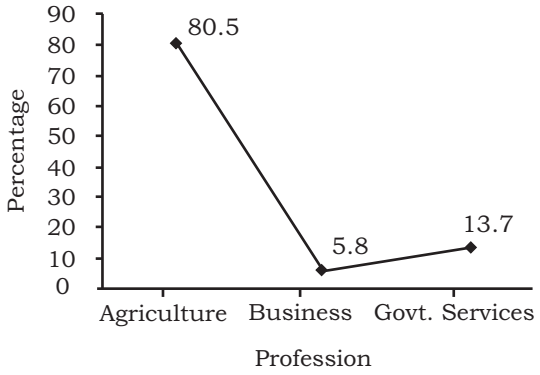


Figure 1. Percent representation of respondents with respect to major profession

Visits by the Agricultural Extension Staff

The data explains that no frequent visits were made on weekly and monthly basis (Figure 2). Only 6 (11.8%) respondents reported that they were visited by agricultural extension workers once a year, 13 (25.3%) respondents were visited by the extension workers five or more years ago while 32 (62.9%) respondents were never visited by any of extension worker. To improve the date palm production the extension

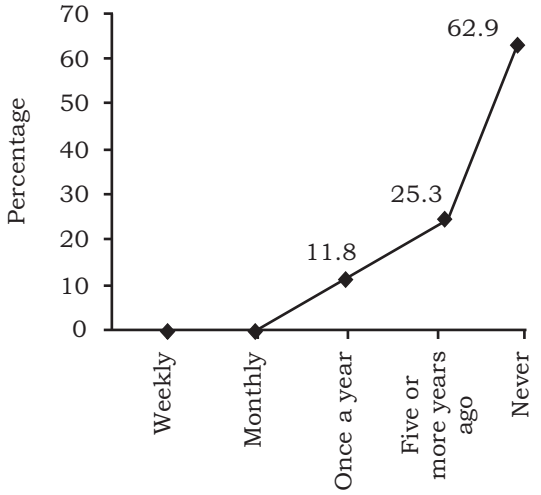


Figure 2. Percent visits by extension staff

services must be improved. The farmers should be made aware about their problems and possible solutions concerning date palm farming. The result is quiet close to that of Ata (2011) who reported that majority (98.3%) of the respondent were not visited by agricultural extension staff and to only 0.8% respondents the agricultural extension staff provided services during last four years. Our results are also in conformity with that of Muhammad (1981) who reported that 61% of respondents were never visited by extension staff.

Methods for Communication

The role of extension agents is important in updating the farmers with new and better technology. Inappropriate and inefficient work of extension worker leads to failure of the dissemination process which ultimately affect the productivity (Rahim et al., 2003) and rural livelihoods (Rivera and Qamar, 2003). Meeting is the best way to get the farmer into confidence and make their interest directed towards the targeted obje-

ctive. Field day is another method to bring changes in farmer's skill and ability to perform different activities interrelated to date palm cultivation and development. After conducting the personal interview of the respondents it is evident that only 20 (39.3%) respondents held meeting with extension workers and Agriculture Officers (Figure 3a). The remaining 31 (60.7%) of sample respondents did not attend any meeting with extension workers or Agriculture Officers. The 41% respondents gave a positive response regarding field day organization while 59% respondents negatively responded to the question about the field day (Figure 3b). Field day seems helpful for farmer not only by getting information from the extension staff but farmers also have a chance to share their ideas with one another. These results are in line with that of Hayat (1982) who reported that only 15.8% respondents attended meeting with extension staff. Ziaullah and Nawab (2005) also reported that 64% of the respondents were not visited by the extension workers while only 34 % were visited.

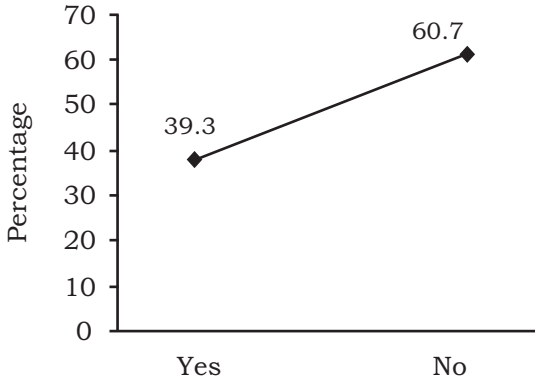


Figure 3 (a). Percent representation of meeting held with extension staff

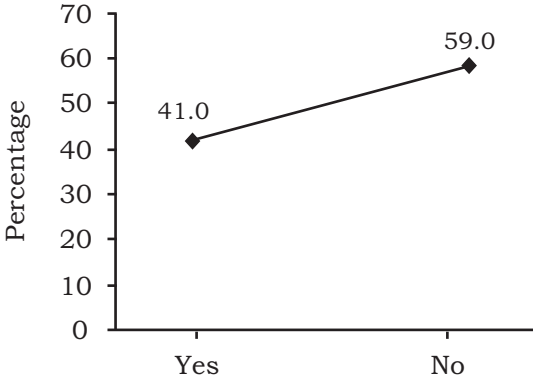


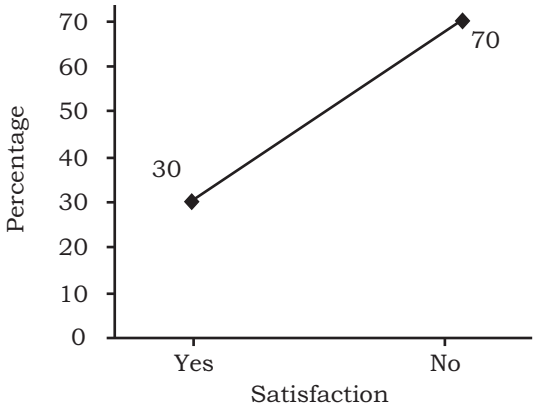
Figure 3 (b). Percent representation of field day organized by extension department

Extension Services at Village Level

Date palm tree contributes significantly to the livelihoods of the farmers in date growing areas (Chowdhury et al., 2008) while extension has a greater role in promotion of date palm cultivation and raising the living standard of farming community. Extension services in the study area were not sufficient for promotion of date palm cultivation; 30% of the respondents were satisfied with the extension workers while majority of respon-dents were not satisfied with the proper working of the extension workers in their area (Figure 4). The results are in close line with that of Ali (1973) who stated that 87% of the respondents were not satisfied with the working of extension workers. The results are also in line with that of Khan (1990) who stated that only one out of 30 respondents was satisfied.

Knowledge about Modern Practices, Technologies and their Sources

By use of sophisticated and modern technology farmers can better compete in production and marketing of their date palm produce to get app-



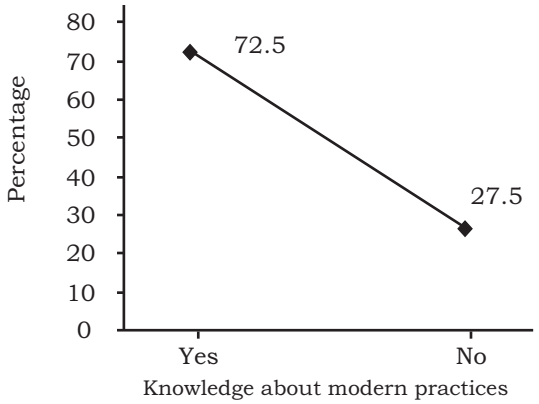
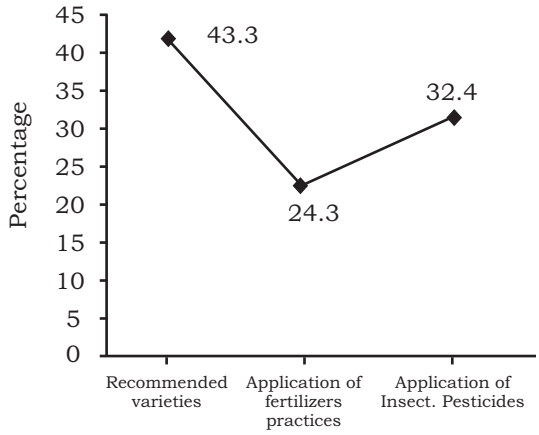


Figure 4. Percent representation of availability of extension services at village level



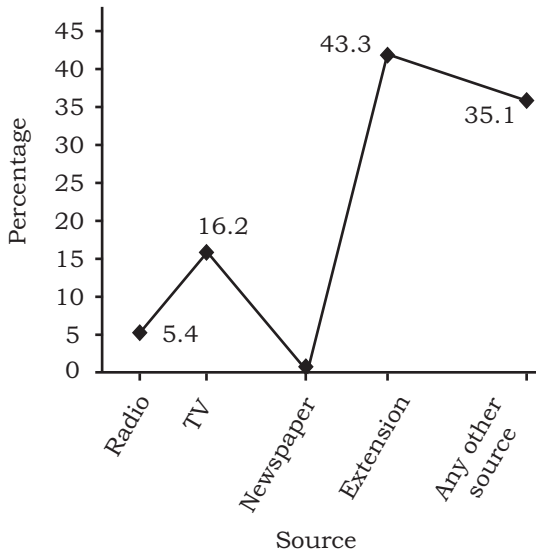


Figure 5. Knowledge and source of awareness about the modern practices and technology

ropriate return. Data showed that 37 (72.5%) respondents have the knowledge of modern techniques and practices while 14 (27.5%) respondents were not aware about the modern practices and technology (Figure 5). Those respondents that were using advanced and improved practices were further investigated about these practices. It was found that out of 37 respondents who were aware about the modern practices regarding date palm cultivation, 16 (43.3%) respondents were using recommended varieties, 9 (24.3%) respondents have knowledge about the application of fertilizers and recommended doses while 12 (32.4%) respondents were practicing regular use of pesticides (Figure 5).

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The data pertaining to awareness of technology and modern practices reflects that 16 (43.3%) respondents got information from extension workers followed by any other source (various agencies) which were 13 (35.1%), few got 2 (5.4%) information by using radio as a source of information while 5 (16.2%) of the respondents use the source of TV (Figure 5). None of the respondent got any type of help from newspaper.

Future Prospect of Date Palm

Date is the major fruit in district Dera Ismail Khan. All of the respondents were satisfied from the production of date palm and declared the future of date palm as good (Figure 6).

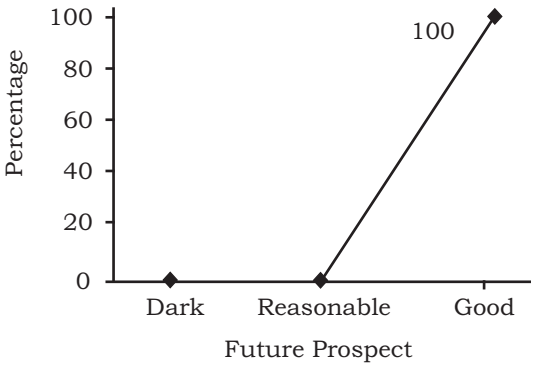

Figure 6. Percent representation of future prospect of date palm

It is concluded that extension services were not up to the mark in improvement of the date production per unit area and transferring of new methods and technology to the farmers. Though majority of farmers have knowledge about the modern techniques but still a need is felt to improve its conditions by better extension services, proper trainings and guidance because agricultural production is directly related with the use of modern methods. Study also concludes that agriculture extension services have an influencing role on timely adoption of date palm cultivation. Therefore emphasis should be made on both formal as well as on informal education system to strengthen knowledge of farming community of the respective area.

RECOMMENDATIONS

On the basis of results obtained, following suggestions are made:

- Schedule training days in each month throughout the year for field staff and farmers must be organized.
- Monitor branch for check and balance and proper execution of field activities should be established.
- Use the mass media (radio, TV, pamphlets etc.) for increasing awareness among large number of farmers regarding how to increase date production.
- Use participatory approach and involve other stakeholders working on the same lines in the area
- Provide inputs required for date palm cultivation and loans.
- Remove/bridge gap between the research and extension so that

improved methods can be transferred to the farmers well in time.

- Demonstrate technology by showing demonstration plot in the farmer's field for practical use of new innovations.
- Improve the sense in farming community for collective mar-keting of their produce so as to minimize the role of middle man and to improve the livelihood of farmers by getting maximum return.

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