

GROWERS' ADOPTION BEHAVIOR OF PRODUCTION TECHNOLOGIES OF DATE PALM.

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INTRODUCTION

Date palm is one of the oldest cultivated fruit crops of the world. The cultivation of date palm (*Phoenix dactylifera* L) in India occurs only in Gujarat. Here too its' commercial cultivation is restricted to coastal region of Gulf of Kutch, covering few talukas viz. Mundra, Anjar, Mandvi and Bhuj only. Estimates indicate that there are about 1.5 million seedlings palms available in Kutch, of which about 1.2 million are productive. The fresh fruit production comes around 50,000 tones with an annual turnover of Rs. 8 to 10 cores/ year. Thus, date palm plays an important role in the economy of the district. However, area and production of this crop in the Kutch district are static since last few years. The production of this crop could be raised, if the farmers adopt scientific cultivation practices. Keeping this in view, it was felt appropriate to undertake this study with the following objectives.

1) To determine the extent of adoption of improved production technology of date palm.

2) To determine the extent of adoption of offshoot propagation technology of date palm.

3) To identify the constraints faced by the date growers in adoption of improved production technologies.

METHODOLOGY

The study was conducted in Mundra taluka of Kutch district of Gujarat state. Four villages viz, Zarpara, Dhrub, Bhujpar and Borana having maximum area under the date palm were purposively selected for study. A list of the date growers was prepared, with the help of VLWs and the records of village panchayat, for all the selected villages. Twenty date palm cultivators from each village were selected at random. The sample for the study comprised of 80 farmers.

The selected farmers were interviewed personally using the structured interview schedule prepared for the purpose. Collected data were analyzed, tabulated and inferences were drawn in light of the objectives using simple statistical tools like frequencies and per centage.

Table 1 Extent of adoption of improved production technology by the Date palm growers
N = 80

Sr. No.	Technology	Extent of adoption	
		No.	Per cent
1	Method of propagation (offshoot)	43	53.75
2	Distance of sowing (Row to row 8x8 mts.)	56	70.00
3	Use of fertilizer (August-September and January-February)	26	32.50
4	Plant protection measures (Control of Rhinoceros and scale insect)	38	47.50
5	Pruning of dry leaves	37	46.25
6	Thinning of fruit bunches (6:1 leaves: bunch)	28	35.00
7	Protection of fruit against rain using plastic sheet	29	36.25

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Table 2 Extent of adoption of offshoot propagation technology by the date palm growers N = 80

Sr. No.	Technology	Extent of adoption	
		No.	Per cent
1	Use of proper media mix	28	35.00
2	Selection of proper offshoot	33	41.25
3	Hormone treatment for root formation (IBA1000 ppm)	09	11.25
4	Application of fungicide at the time of separation of offshoot	21	26.25
5	Time of offshoot preparation (July - August)	36	45.00
6	Time of offshoot separation (March - April)	39	48.75

RESULTS AND DISCUSSION

Adoption of improved production technology

The results regarding level of adoption of improved production technology of date palm by the growers are presented in Table 1.

The data show that 53.75 per cent of the respondents had propagated date through offshoot whereas 46.25 per cent of them had preferred asexual method of propagation i.e. use of seeds as planting material.

About 70 per cent of the respondents had adopted the recommended planting distance of 9x9 meters. It was also observed that 32.50 per cent and 47.50 per cent of them had applied the recommended dose of fertilizers and pesticides, respectively. It was noted that 46.25 per cent and 35 per cent of the respondents had adopted the practice of pruning of dry leaves and thinning of bunches of fruit for getting higher production. To avoid damage due to rainwater, as many as 36.25 per cent respondents had protected bunch of fruits with polyethylene sheets.

Out of the seven practices only two practices were found to be adopted by more than 50 per cent of the respondents. This reflects that the level of adoption of the technologies was insignificant.

Adoption of offshoot propagation technology

The results regarding level of adoption of offshoot propagation technology of date palm by the growers are presented in Table 2.

Regarding adoption of offshoot propagation technology, it was observed that only 35 per cent and 41.25 per cent of the respondents had adopted the recommended technology of media mix and criteria's for the selection of offshoot, respectively. It was further observed that 89.75 per cent of the respondents had not adopted the use of hormone for artificial root formation. This might be due to the complexity in use of hormone for artificial root formation. To protect mother plant from the attack of pests and diseases, as many as 75 per cent of the respondents did not use any fungicide during separation of offshoot. About 45 per cent and 48.75 per cent of the respondents had prepared and separated the offshoot at proper time, respectively.

Out of the six practices none were found to be adopted by more than 50 per cent of the respondents. Thus, the level of adoption of the technologies was quite insignificant.

Constraints in adoption of technologies

It could be observed from Table 3 that non-availability of hormones in the local market,

Table: 3 Constraints faced by the growers in the adoption of technologies

Sr.	Constraints	No.	Per cent
1	Unavailability of good quality Offshoots	48	60.00
2	Lack of knowledge about Pests and disease	52	65.00
3	Non availability of hormone in Local market	63	78.25
4	Lack of knowledge about application Of hormone	60	75.00
5	Lack of knowledge about pruning, Thinning of leaves and fruit bunches	43	53.75
6	High cost of agrochemicals	36	45.00
7	Inadequate knowledge about fertilizer application	29	36.25
8	Lack of knowledge about Scientific method of offshoot propagation	58	72.50

lack of knowledge about application of hormone and lack of knowledge about scientific method of offshoot propagation were the main constraints reported by majority of the respondents. Unavailability of good quality offshoot and lack of knowledge about pests and disease were marked as constraints by 60 per cent and 65 per cent of the respondents, respectively. More than 50 per cent of the respondents considered that lack of knowledge about pruning of leaves and thinning of fruit bunches was the major constraint for adopting the technology. Inadequate knowledge about fertilizer application and high cost of agrochemicals were marked as a problem by 36.25 per cent and 45 per cent of the respondents.

CONCLUSION

The findings showed that the overall adoption of the improved production technologies found to be low. Similarly, the overall adoption of the offshoot propagation technologies was also found to be quite low. Constraints analysis could lead to conclude that the major constraints faced by the farmers includes lack of knowledge about insect pest, fertilizer application, application of hormone, etc. Similarly, the availability of inputs in local market was also a constraint for non-adoption of many technologies.

REFERENCES

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