

CONSTRAINTS EXPERIENCED BY THE FARMERS IN ADOPTING IMPROVED BANANA CULTIVATION PRACTICES IN THIRUVANANTHAPURAM DISTRICT

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ABSTRACT

The present study entitled "Technology utilization of banana in Thiruvananthapuram district" conducted in Thiruvananthapuram district involved 90 commercial banana growers, with 30 each from Kalliyoor, Vembayam and Vellanadu panchayaths, during the period, 2015-2016. The objective of the study was to assess the constraints experienced by the farmers when adopting selected KAU practices in banana cultivation. A well-structured interview schedule was used for data collection from the respondents.

Keywords: Banana, constraints, farmers

INTRODUCTION

Banana is the second important fruit crops in the world and India. In India banana is being cultivated in climate ranging from humid tropical to dry mild subtropics. Thirty-three percent of the world's banana is produced by India. It is an important fruit crop in Kerala also. Banana refers to Nendran in Kerala & all other as plantains – small fruited types like Njalipoovan, Palayamkoda, Poovan etc. Banana is also known as Apple of paradise/Adam's fig.

It has also good export potential. India leads the world in banana production with an annual output of about 14.2 million tones'. In India banana ranks first in production and third in area among fruit crops. It accounts for 13 per cent of the total area and 33 per cent of the production of fruits. In 1985-86 the area under banana cultivation was 16500 ha and in 2004- 05 the area has increased to 59000 ha. But productivity of banana decreased from 13816 kg ha⁻¹ in 1995-96 to 8075 kg ha⁻¹ in 2004-05.

For greater improvements in banana cultivation KAU and R&D agencies developed many innovative technologies. If the farmers reach out those technologies can prevail the methods and can commercialize banana cultivation. KAU has evolved and standardized many technologies such as selection and curing of suckers, planting and spacing, manurial practices, sulphate of potash bunch covering, inter-cropping, tissue culture, double sucker etc. The success of a technology depends on how far it is adopted by the people and how it continues to provide welfare to the social system. Because of the crop specific complexity of agricultural technology, different institutional arrangements are needed to transfer different types of technologies to technology users. For profitable cultivation of banana, it becomes essential for the farmers to choose the appropriate technology released by R&D agencies. Hence an attempt was made to assess the adoption of selected KAU practices on banana cultivation by commercial banana growers.

Farmers face lots of constraints when adopting improved practices in banana cultivation.

MATERIALS AND METHODS

The study was conducted in Thiruvananthapuram district involved 90 commercial banana growers. From eleven blocks of Thiruvananthapuram district, three blocks having maximum area under banana cultivation was selected based on secondary data and in consultation with agricultural department officials. From each block one panchayath was selected which is having maximum area under banana cultivation. From each panchayath 30 commercial banana growers were selected with holding size not less than 0.5 ha using simple random sampling. Thus a total of 90 commercial banana grower respondents were selected for the study. A well-structured interview schedule was used for data collection from the respondents to measure the constraints in adoption of selected KAU practices.

RESULTS AND DISCUSSION

Table 1: Constraints experienced as perceived by farmers in adopting selected banana cultivation practices

Sl. No	Constraints	Rank over class	Rank over total
1	Environmental Constraints:		
a)	Rainfall	3	14

b)	Wind	4	15
c)	Attack of insect pest or diseases	2	5
d)	Lack of proper drainage	5	16
e)	Climate change influence on pest intensity	1	4
2	Technology Constraints:		
a)	Plant protection chemicals are not effective in their recommended dosage.	1	1
b)	Lack of knowledge about INM, IPM, IDM	3	6
c)	Lack of awareness about the correct dosage of chemical fertilizers.	2	2
3	Extension constraints:		
a)	Lack of accessibility of ICT sources	4	18
b)	Lack of demonstration about new technologies.	2	13
c)	Lack of motivational factors from officials	5	20
d)	Lack of proper information source to deliver the latest technology on banana cultivation	1	12
e)	Non availability of supply and services	3	7
4	Economic constraints		
a)	High cost inputs	3	8
b)	High cost of labour:	1	3
c)	Price fluctuation in banana	2	11
d)	Lack of knowledge about market information	4	17
e)	Crop insurance coverage	5	19

5	Physical constraints		
a)	Non availability of skilled labour on time	1	9
b)	Non-availability of good quality inputs at required time and amount.	2	10

Table 1 depicts the constraints experienced as perceived by commercial banana growers in adopting selected KAU banana cultivation practices. Constraints were ranked under sub headings of environmental constraints, technology constraints, extension constraints, economic constraints and physical constraints.

In environmental constraints, climate change influence on pest intensity was ranked first followed by attack of insect pest or diseases, rainfall, wind and proper drainage. Due to climate change farmers felt that the pest and diseases incidence had increased and also evolved new ones too. Improper drainage was found to hinder management operations and also resulted in incidence of diseases. Similar result was reported by Sujitha (2015)

Among the technology constraints plant protection chemicals are not effective in their recommended dosage, lack of awareness about the correct dosage of chemical fertilizers and lack of knowledge about INM, IPM, IDM were ranked first, second and third respectively. Respondents felt that pests and pathogens become resistant to the recommended dosage so they are applying it in the quantity they felt suitable. Most of the respondents were not skilled enough to find out correct dosage of chemical fertilizers required for their farm and they consider it as a complex technology of calculation and formulas. Majority of the respondents were not aware about the integrated management of pest, disease and nutrient. This results are in line with Bennur *et al* (2015) and Sujitha (2015).

Lack of proper information source to deliver the latest technology on banana cultivation, lack of demonstration about new technologies, no availability of supply and services, lack of accessibility of ICT sources and lack of motivation from officials were major constraints identified under extension constraints. More of extension intervention can fill this gap among commercial banana growers. This results are in confirmation with findings of Meera (1995) and Balachandran (2004).

In economic constraints, high cost of labor was ranked one followed by price fluctuation in banana, high cost of inputs, lack of knowledge about market information and crop insurance coverage. Due to large area of commercial banana cultivation, farmers cannot afford to purchase expensive planting materials and high cost inputs for farming.

Major physical constraints perceived by respondents were non availability of skilled labour and good quality inputs at required time and amount. Commercial banana growers preferred good quality planting materials and fertilizers for banana cultivation but these were not available to them at required time. Similar result was reported by Esakkimuthu (2012).

Considering the total rank the major constraints perceived by banana growers in adopting selected KAU technologies were plant protection chemicals are not effective in their recommended dosage, lack of awareness about correct dosage of chemical fertilizers, high cost of labour, climate change influences on pest intensity and attack of insect pest or diseases, lack of knowledge about INM, IDM and IPM.

CONCLUSION

Major environmental constraints were climate change influence on pest intensity, attack of insect pest or diseases, rainfall, wind and proper drainage. Among the technology constraints plant protection chemicals are not effective in their recommended dosage, lack of awareness about the correct dosage of chemical fertilizers and lack of knowledge about INM, IPM, IDM were perceived as important. Lack of proper information source to deliver the latest technology on banana cultivation, lack of demonstration about new technologies, non-availability of supply and services, lack of accessibility of ICT sources and lack of motivation from officials were major constraints identified under extension constraints. In economic constraints, high cost of labour was ranked one followed by price fluctuation in banana, high cost of inputs, lack of knowledge about market information and crop insurance coverage.

Plant protection chemicals are not effective in their recommended dosage, lack of awareness about correct dosage of chemical fertilizers, high cost of labour, climate change influences on pest intensity and attack of insect pest or diseases, lack of knowledge about INM, IDM and IPM were the major constraints experienced by the farmers when adopting selected KAU practices in banana cultivation.

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