



## Research Article

# ECONOMIC MOTIVATION AND ITS RELATIONSHIP WITH THE LEVEL OF KNOWLEDGE OF BANANA GROWERS ABOUT INTEGRATED PEST MANAGEMENT

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**Abstract:** Economic motivation plays an important role in soaring the level of knowledge of banana growers about integrated pest management. Economically motivated farmers are more oriented towards profit maximization from farming as they give comparatively more value on economic ends. Keeping this in view, an attempt has been made to study economic motivation and its relationship with the level of knowledge of banana growers about integrated pest management. The result of study revealed that slightly more than four-fifth (84.00 percent) of the banana growers was found with high to very high level of economic motivation. It is also revealed that economic motivation of the banana growers had positive and highly significant ( $r = 0.305^{**}$ ) relationship with their level of knowledge about IPM.

**Keywords:** Economic Motivation, Knowledge, Integrated Pest Management, Banana Growers

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## Introduction

Banana becomes one among the most popular fruits due to its low price and high nutritive value. Insect pests of banana can cause significant damage to fruits. Integrated pest management is a system approach to pest control which combines biological, cultural and other novel approaches with the judicious use of pesticides. IPM maintains the pest levels below the economically damaging level and also minimizes the detrimental effects of pest control on human health and environmental resources. Economic motivation is the extent of orientation of respondents towards profit maximization and the relative value an individual places on economic ends. Economically motivated farmers are more oriented towards profit maximization from farming as they give comparatively more value on economic ends. They may consider farming as an enterprise and make their great efforts to earn more. Considering the above facts, an attempt has been made to study economic motivation and its relationship with the level of knowledge of banana growers about IPM [1-6].

## Objective

1. To study the economic motivation of banana growers
2. To ascertain relationship between the economic motivation of banana growers and their level of knowledge about integrated pest management practices

## Materials & Methods

The present study was undertaken in Anand district of Gujarat state. The level of knowledge of banana growers about IPM was studied with the help of the developed test. Five villages having fairly good number of banana growers adopting integrated pest management practices were selected from each taluka purposively. 10 banana growers adopting integrated pest management practices were randomly selected from each village. Thus, total sample size was 100 banana growers adopting integrated pest management practices.

## Economic motivation

Economic motivation of IPM adopting banana growers was measured with the help of scale developed by Supe (1969) with due modifications. The responses of the respondents were obtained against each item in terms of their agreement or disagreement with statement on five point continuum ranging from strongly agree to strongly disagree. Out of total statements, 5 statements (sr. no. 1, 2, 3, 4 and 5) were positive and statement at sr. no.6 was negative. The positive and negative statements were scored as below:

| Statement | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-----------|----------------|-------|-----------|----------|-------------------|
| Positive  | 5              | 4     | 3         | 2        | 1                 |
| Negative  | 1              | 2     | 3         | 4        | 5                 |

Economic motivation score of an individual farmer was the sum total of score of all statements included in the scale which ranged from 6 to 30. On the basis of arbitrary method, the respondents were grouped into the following five categories:

| No. | Category  | Score Range    |
|-----|-----------|----------------|
| 1   | Very low  | Up to 10.80    |
| 2   | Low       | 10.81 to 15.60 |
| 3   | Medium    | 15.61 to 20.40 |
| 4   | High      | 20.41 to 25.20 |
| 5   | Very high | 25.21 to 30.00 |

Karl person coefficient of correlation( $r$ ) was calculated to find out the relationship between economic motivation and the level of knowledge of banana growers about integrated pest management.

## Results and Discussion

### Economic Motivation

It is obvious that economically motivated farmers are more oriented towards profit maximization from farming as they give comparatively more value on economic ends. They may consider farming as an enterprise and make their great efforts to earn more.

Table-1 Distribution of the banana growers according to their economic motivation, n=100

| No.   | Economic motivation     | Frequency | Percent |
|-------|-------------------------|-----------|---------|
| 1     | Very low (Up to 10.80)  | 01        | 01.00   |
| 2     | Low (10.81 to 15.60)    | 02        | 02.00   |
| 3     | Medium (15.61 to 20.40) | 13        | 13.00   |
| 4     | High (20.41 to 25.20)   | 59        | 59.00   |
| 5     | Very high (25.21 to 30) | 25        | 25.00   |
| Total |                         | 100       | 100.00  |

The data regarding economic motivation of respondents are shown in [Table-1] and presented graphically in [Fig-1]. It is evident from the data reported in [Table-1] that slightly less than three-fifth (59.00 percent) of the banana growers had high level of economic motivation, followed by 25.00 percent of them were with very high level, 13.00 percent were with medium level and 02.00 percent were with low level of economic motivation. Only 01.00 percent of them had very low level of economic motivation. The result reported in the table depicts that slightly more than four-fifth (84.00 percent) of the banana growers was found with high to very high level of economic motivation. The probable reason might be the intense urge of banana growers for higher returns from farming to have a better standard of living. Also, by the judicious use of inputs such as fertilizers, pesticides and other chemicals helped them to reduce extra expenditure which might have benefitted them to get higher economic returns. More market oriented production technologies especially value addition enabled them to gain more profit. Similar findings are reported by Gulkari (2014) and Patel *et al.* (2017).

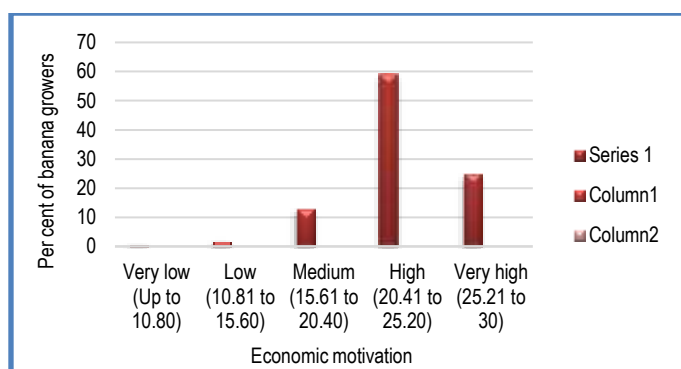


Fig-1 Distribution of banana growers according to their economic motivation

### Economic Motivation and Knowledge

The correlation coefficient value ( $r = 0.305^{**}$ ) clearly indicates that economic motivation of the banana growers had positive and highly significant relationship with their level of knowledge about IPM. Hence, the null hypothesis that "there is no relationship between economic motivation of the banana growers and their level of knowledge about IPM" was rejected. Thus, it can be concluded that economic motivation had significant influence on level of knowledge of banana growers about IPM. The banana growers having better education, better contact with extension agencies, better social participation and higher level of mass media exposure were motivated to improve their economic activities and economically motivated farmers are oriented towards maximization of profit from farming. They might have regarded farming as an enterprise and it is obviously true in case of respondents for their knowledge gain about various IPM strategies in banana cultivation. This might be the reason for above finding. This finding has been supported by the findings of Manjunath (2010), Patel *et al.* (2015), Patel *et al.* (2017) and Khatri (2017).

### Conclusion

From above study it is revealed that slightly more than four-fifth (84.00 percent) of the banana growers were found with high to very high level of economic motivation. It is also revealed that economic motivation of the banana growers had positive and highly significant ( $r = 0.305^{**}$ ) relationship with their level of knowledge about IPM.

**Application of research:** Study of banana growers about integrated pest management

**Research Category:** Agriculture economics

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University: Anand Agricultural University, Anand, 388110, Gujarat, India

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**Author statement:** All authors read, reviewed, agreed and approved the final manuscript. Note-All authors agreed that- Written informed consent was obtained from all participants prior to publish / enrolment

**Study area / Sample Collection:** Anand district of Gujarat state

**Cultivar / Variety / Breed name:** Banana

**Conflict of Interest:** None declared

**Ethical approval:** This article does not contain any studies with human participants or animals performed by any of the authors.  
Ethical Committee Approval Number: Nil

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