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Production and Prospects of Agriculture -A case Study of Shimoga District of Karnataka

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Abstract

Agriculture has a predominant role not only for food grains to the people but also supplies raw materials to the industries and it is considered as integral part of social, culture, tradition, and combination of all walks of life in the district. The present paper focuses on the problems and prospects of agriculture in the Shimoga District of Karnataka especially on major production problems faced by the farmers. The production problems like quality seeds are not available, sources of irrigation non-available in time; supply of power is insufficient, non-availability of labour in the peak period, literacy rate of the farmers is very low, farmers depended on local moneylenders etc. The paper highlights on the prospects of agriculture, such as plantation and horticulture, dairy farming, mushroom, organic farming etc. The multistage random sampling methodology was followed to collect the primary data. The statistical tool used for testing hypothesis is chi-square test. It is significant at 5% level of significance that there is an association between production and the problem of agricultural products. (P<0.001). The sustainability of agriculture is possible where there is need for perfect synergy between public and private sectors, civil society organizations in the society.

Keywords: Production, agriculture, problems, prospects, Society.

1. Introduction

The District of Shimoga is famous for Jog falls and which has an attractive landscape. It is meant for natural beauty because the Western area of the District comprises of a mountainous terrain, but on the eastern side, there is a striking transition from Malnad and semi-Malnad to Maidan. Shimoga is bounded by the districts of Chikkamangalur to the South East, Davanagere to East, Haveri to the North East, Udupi to the South West, and North Canara (Uttara Kannada) to North West. Shimoga is known for the granary of paddy of Karnataka State. The district is divided into seven taluks. The paper is mainly syntheses on major production problems and prospects of agriculture in the district.

2. Review of Literature:
Jitendra Kumar Choudhary, Rajeev Ranjan Shrivastava (2015) have made a study on problems and prospects of agriculture-a case study of Deoghar District (Jharkhand) revealed that there were problems of agriculture such as small and fragmented land-holdings, seeds, manures ad fertilizers, low percentage of irrigation, low productivity, soil erosion, agricultural marketing, inadequate storage facilities, inadequate transport, under employment, lack of commercial agriculture, and researchers were made an attempt that opportunities of income generation activities like plantation, horticulture, dairy farming, organic farming, agricultural mechanization, agricultural tourism etc.[1-5]
Meera Kumari, Lokesh Kumar Meena and Ravi Gopal Singh (2015) who analyzed the problems of maize crop in Eastern Zone of Bihar observed that 90% farmers preferred local variety for Kharif maize market, and Institutional constraint was 70%, especially on account of insufficient and irregular supply of electricity, lack of timely credit availability to the rural mass, and inefficient Kisan Credit Card supply, lack of storage facility, lack of adaptation to technology, marketing delay, delay in sowing due to non-availability of seeds in time.[6-9]

3. Statement of the problem
The sector of agriculture is facing in numerous problems and challenges like production, marketing, marketing channels and problems of marketing facilities etc. Nevertheless, this paper deals with major production problems and prospects of agriculture in the study area.

4. Research Questions

- Is there any significance to the study the production problems of the study area?

5. Objectives of the study
The study is focuses on the problems and prospects of agriculture in the study area. The objectives are:
- To study the production problems of farmers in the study area
- To understand the future prospects of agriculture in the study area.
- To offer suggestion based on the results of the study to overcome the existing production problems.

6. Hypothesis of the study
Hypothesis 1: There is a significant association between production problems with agricultural crops.

7. Methodology
The objectives stated above could be accomplished through the multi-stage random sampling technique, it is depicted in the given below table and the chi-square test is used to test the hypothesis.

Table 1. Distribution of sample farmers in the study area

| District | Taluks or Blocks | No. of Villages in each taluk | No. of Farmers selected per village | No. of farmers selected per taluk | Cumulative number of Farmers |
|----------|-----------------|------------------------------|-------------------------------------|----------------------------------|-----------------------------|
| Shimoga  | Bhadravathi     | 5                            | 20                                  | 100                              | 100                         |
|          | Hosanagara      | 5                            | 20                                  | 100                              | 200                         |
|          | Sagara          | 5                            | 20                                  | 100                              | 300                         |
|          | Shikaripura     | 5                            | 20                                  | 100                              | 400                         |
|          | Shimoga         | 5                            | 20                                  | 100                              | 500                         |
|          | Sorab           | 5                            | 20                                  | 100                              | 600                         |
|          | Thirthahalli    | 5                            | 20                                  | 100                              | 700                         |

Sources: Primary data

- Sources of data

Primary data
The primary data was collected from the farmers by using an interview schedule specially designed for the purpose and the same was administered to the farmer respondents.

Secondary data
The secondary data have been obtained from various secondary sources like newspapers, journals, books, websites.

8. Problems of agriculture
Agriculture is the main source of income in Shimoga district. It plays a pivotal role in the economy of the district. Below are given some of the obstacles for the development of agriculture in the district:
- Small and fragmented land holding
- Lack of seeds, manures, fertilizers, pesticides
- Lack of improved and high yield varieties
Inadequate storage facilities
Inadequate transport and road infrastructure
Price fluctuations
Lack of power supply:
Inadequate credit support
Lack of regulated markets
Delay in cash payment

8.1 Prospects of agriculture in the District:
- The farmer respondents earned supplementary income from dairy farming and off farm activities.
- The farmer is followed the organic farming which is environment friendly, and promotes and supports agro-ecosystem.
- Poultry farming is one of the opportunities to generate the income in the study area.
- The farmer can have nursery business with potted plants and foliage plants for the generation of additional income.
- Mushroom farming is one the prospects of agriculture to enhance the income of the farming community.

8.2 Analysis of production problems of agriculture in the District:
The given below Table No.1 clearly shows that 124(about 80%) of those who grow maize, all the farmers who grow paddy, 8(80%) of those who grow areca nut, 120(98%) of those grow areca nut and paddy, 50(94%) of those who grow both areca nut and maize, 136(78%) of respondents who grow maize and paddy, and 151(95%) of those who grow all the three crops face the problem of non-availability of improved and quality seeds. So statistically, it is concluded at 5% level of significance that there is an association between production and the problem of non-availability of improved and quality seeds in respect of the agricultural products. (P<0.001). The given below Table No.2 indicates that 131(84%) of the farmer respondents who grow maize; 22(92%) of the respondents who grow paddy, 8(80%) of the farmer respondents who grow areca nut;120(98%) of the farmer respondents who grow both areca nut and paddy; 50 (94%) of those who grow areca nut and maize; 151(86%) of farmer respondents who grow maize and paddy and 148(93%) of those who grow all the three products say that they have the problem of non-availability of sources of irrigation in time for adaptation of farming system. Therefore, statistically, it is concluded at 5% level significance that there is an association between the production and problems of non-availability of sources of irrigation in time for adaptation of farming system in the case of the agricultural products. (P<0.001)

Table 2. Production problem of improved and quality seeds

| Production Problem | Type of crops | Chi-Square | Degrees of freedom | P-value |
|--------------------|---------------|------------|--------------------|---------|
|                    | Maize | Paddy | Areca nut | Areca nut + Paddy | Areca nut + Maize | Maize + Paddy | Maize + Paddy + Areca nut |
| Improved and quality seeds are not available | No | 32 | 0 | 2 | 3 | 3 | 39 | 8 | 20.5% | 0% | 20.0% | 2.4% | 5.7% | 22.3% | 5.0% | 50.42 | 6 | <0.001 |
| Yes | 124 | 24 | 8 | 120 | 50 | 136 | 151 | 79.5% | 100.0% | 80.0% | 97.6% | 94.3% | 77.7% | 95.0% | | | | | | | | |
Table 3. Production problem of source of irrigation

| Production Problem | Type of crops | Chi-Square | Degrees of freedom | P-value |
|--------------------|---------------|------------|--------------------|---------|
| Sources of irrigation non-available in time for adaptation farming system. | | | | |
| No | Maize | Paddy | Areca nut | Areca nut + Paddy | Areca nut + Maize | Maize + Paddy | Maize + Paddy + Areca nut | | |
| | 25 | 2 | 2 | 3 | 3 | 24 | 11 | | |
| | 16.0% | 8.3% | 20.0% | 2.4% | 5.7% | 13.7% | 6.9% | | |
| Yes | 131 | 22 | 8 | 120 | 50 | 151 | 148 | | |
| | 84.0% | 91.7% | 80.0% | 97.6% | 94.3% | 86.3% | 93.1% | | |
| Supply of power is insufficient | | | | | | | | 20.76 | 6 | 0.001 |

From the given below Table No.3, it is clearly understood that 135(87%) of the farmer respondents who grow maize, 20(83%) of those who grow paddy, 9 (90%) of farmer respondents who grow areca nut, 120(98) of those who grow both areca nut and paddy, 51(96%) who grow both areca nut and maize, 147(84%) of farmer respondents who grow maize and paddy and 153(96%) of those who grow all the three products have the problem of insufficient supply of power. So, statistically, it is concluded at 5% level of significance that there is an association between production and problems of insufficient supply of power in the agricultural products. (P<0.001).

Table 4. Production problem of supply of power

| Production Problem | Type of crops | Chi-Square | Degrees of freedom | P-value |
|--------------------|---------------|------------|--------------------|---------|
| Supply of power is insufficient | Maize | Paddy | Areca nut | Areca nut + Paddy | Areca nut + Maize | Maize + Paddy | Maize + Paddy + Areca nut | | |
| No | 21 | 4 | 1 | 3 | 3 | 24 | 11 | | |
| | 13.5% | 16.7% | 10.0% | 2.4% | 3.8% | 16.0% | 6.9% | | |
| Yes | 135 | 20 | 9 | 120 | 51 | 147 | 153 | | |
| | 86.5% | 83.3% | 90.0% | 97.6% | 96.2% | 84.0% | 96.2% | | |
| | 28.65 | 6 | | <0.001 |

From the given below Table No.4, it is clearly understood that 21(13.5%) of the farmer respondents who grow maize, 4(16.7%) of those who grow paddy, 1(10.0%) of farmer respondents who grow areca nut, 3(2.4%) of those who grow both areca nut and paddy, 3(3.8%) of those who grow both areca nut and maize, 24(13.7%) of those who grow maize and paddy, 11(6.9%) of those who grow all the three products have the problem of insufficient supply of power. So, statistically, it is concluded at 5% level of significance that there is an association between production and problems of insufficient supply of power in the agricultural products. (P<0.001).

Production and problem of most of the farmers of having to depend on local moneylenders and commission agents with reference to the agricultural products. (P<0.001).

- The result of chi-square depicts that at 5% level of significance and there is an association between the production problems and production of the selected agricultural crops (P<0.001)

8.3 Suggestions:

- The Government should provide regular supply of electricity at a concessional rate.
- The Government should take an initiative to provide timely financial assistance to the farming community and prevent the dependency of farmers on local moneylenders and commission agents.
- The Government and concerned department should provide updated market information about price of the agricultural products through various means of communication.
Improved and high-quality seeds are the foundation for successful crop production and better yield.

Malpractices prevailing in the market like delay in payment, delay in weighing, loading, unloading and excess weighment etc., should be prevented.

Conclusions:
Agriculture is an important sector than the other sectors because it is providing food grains to human beings and supplies inputs to the industries. During the course of agricultural activities. Where farming community may face the production problems, marketing problems, marketing facilities or natural problems. The both State and Central government and non-government organizations for the benefit of backbone of the agricultural community can overcome all these problems with timely action, initiation, credit support and other support.

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