Agricultural Information Needs of Rainfed Farmers: A Study from Telangana

C.N. Anshida Beevi¹, G.Nirmala², Jagriti Rohit³, K.Nagasree⁴ and B.M.K Raju⁵

ABSTRACT

A paradigm shift in rainfed agriculture can be obtained mainly through technological interventions. In this context, the role of extension and advisory services that are saddled with this responsibility should focus on novel approaches. Application of relevant information in agriculture sector brings positive impacts on farm productivity. Timely access to information on weather aspects, best farming practices, market information etc. help farmers to make correct decisions about what crops to plant, when to plant and where to sell their products. The best way to satisfy the rainfed farmers is to understand and consider their specific needs, constraints and capabilities properly, which helps to serve them in an efficient manner. A study has been undertaken to understand the different agricultural information needs of rainfed farmers in the Mahabubnagar district of Telangana state India. It is observed that farmers need various types of information related to agricultural activities and the major agricultural information needs of the farmers were found to be related to farm implements and machinery, water management, seed varieties, seed treatment, alternate crops and pest and disease management. In order to address these information needs, farmers were accessing a number of sources. It is important to enhance the information search capacity of the rainfed farmers to improve the farm productivity and income leading to enhanced livelihoods.

Keywords: Information needs; rainfed farmers; Telangana

Rainfed agriculture contributes significantly to India’s food production covering an area of 71.75mha which comes around 51 per cent of country’s net sown area. Similarly, in Telangana, almost 2.65mha i.e., 61 per cent of net sown area is rainfed. Rainfed agriculture is the major source of food where water constitutes a key limiting factor to crop growth. Therefore, the developmental needs of the rainfed regions would be of foremost importance to ensure the growth of agriculture sector. A paradigm shift in rainfed agriculture can be obtained mainly through technological interventions. In this context, the role of extension and advisory services that are saddled with this responsibility should focus on novel approaches.

Information has consistently been a significant
element in the development of human society and has shaped over a long period of time the way in which we think and act (Meyer 2005). Similarly, agriculture is also becoming information intensive over time. Information is the key input for the development of agriculture. Information is crucial for accelerating agricultural development through increased production and improved marketing and distribution strategies (Oladele 2006). The information needs of farmers change from time to time due to changing agricultural technologies, environmental changes, agricultural policies, and the emergence of agricultural innovations. Bachhav (2012) stated that, the use of information in agriculture sector is enhancing farming productivity in a number of ways. Hence, the present study has made an attempt to understand the different agricultural information needs of rainfed farmers of Telangana state.

METHODOLOGY

The study was conducted in the Gandeed Mandal of Mahabubnagar district of Telangana state, India. Mahabubnagar district falls in rainfed region. Following a multi stage random sampling procedure, 120 farmers were selected for the study. A pre-tested questionnaire was used to collect data on information needs of rainfed farmers. A five-point Likert-type scale ('Not Important' to 'Very Important') was used to collect information needs of farmers on various aspects related to farming. The data were collected in the form of primary data through survey method using questionnaire and focused group discussion. In addition to the descriptive statistics computed from the data, factor analysis is used. Factor analysis was applied to the different information needs of the rainfed farmers. Factor analysis was performed using principal component factor's method in SPSS 21 to reduce the information variables to broad categories.

FINDINGS AND DISCUSSION

Initially, a list of 18 information needs was identified through literature review and discussion with other experts. Rainfed Farmers’ importance of information needs for farming was assessed using a five point Likert scale. It is observed that farmers need various types of information related to agricultural activities. Information related to farm implements and machinery (83.33%) and water management (80.83%) were the important one where more than 80 percent of the farmers perceived them as somewhat important to very important followed by alternate crops (75.83%). Similarly, information on pest and disease management, planting method, planting time, seed varieties, seed treatment, market linkage and price, crop insurance and credit and loans were also considered somewhat important to very important by more than 50 percent of the farmers (Figure-1). The information given the lowest importance was related to weather (14.17%), nutrient management (18.33%), weeding (4.17%), harvesting (3.33%) and post harvest management (10.83%).

Factor analysis, using Principal components method was used to reduce the information needs to four comprehensive groups. Factor analysis, reduced the
information needs into four factors. Eigen values for each factor was greater than one. Variables with a minimum loading of 0.5 were selected for inclusion in each factor. Four factors emerged from the analysis and were named ‘Crop Production’, ‘Seed Related’, ‘Economic Related’ and ‘Crop Protection’.

Table 1:
Factors derived from Information Needs of Rainfed farmers

| Sl. No. | Factors              | Information needs                  | Factor loadings |
|--------|----------------------|-------------------------------------|-----------------|
| 1      | ‘Crop Production’    | Planting method                     | 0.889           |
|        |                      | Planting time                        | 0.824           |
|        |                      | Alternate crops                      | 0.550           |
|        |                      | Water management                     | 0.833           |
|        |                      | Farm implements & machinery          | 0.786           |
| 2      | ‘Seed Related’       | Seed varieties                       | 0.533           |
|        |                      | Seed treatments                       | 0.707           |
| 3      | ‘Economic Related’   | Crop insurance                       | 0.517           |
|        |                      | Credit & loans                       | 0.636           |
|        |                      | Market linkage & prices              | 0.517           |
| 4      | ‘Crop Protection’    | Pest management                      | 0.824           |
|        |                      | Disease management                   | 0.547           |
‘Economic Related’ and ‘Crop Protection’ (Table 1). The first factor is explained by 5 variables namely planting method, planting time, alternate crops, water management and farm implements and machinery as indicated by communality and high loading of these variables on factor-I. Two variables related to seed explained the second factor namely seed varieties and seed treatment. The third factor was explained by economic variables like crop insurance, credit and market. Fourth factor was explained by pest management and disease management with factor loadings 0.824 and 0.707 respectively. The findings of the present study is in line with the results of study conducted by Sajesh et al., (2017) where crop protection and seed related factors were emerged as the important factors.

The most important information needs for rainfed farmers are farm implements and machinery followed by water management and alternate crops. Information on pest and disease management, planting method, planting time, seed varieties, seed treatment, market linkage and price, crop insurance and credit and loans were also considered important. The information given the lowest importance was related to cultivation and post cultivation practices like such as nutrient management, weeding, harvesting, post harvest management. In order to address these information needs, farmers were accessing a number of sources. It is important to enhance the information search capacity of the rainfed farmers to improve the farm productivity and income leading to enhanced livelihoods.

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