

Factors Influencing Farmers Decision in Rainfed Areas

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ABSTRACT

The study was undertaken to understand the different production factors affecting decision making process of the farmers in rainfed areas of ten states in India. From each state 40 farmers were selected from the lowest rainfall raining areas as respondents. Data were collected using specially designed structured pretested schedule. The results show that in rainfed areas majority of the farmers considered factors related to inputs along with other factors viz., risk bearing ability, agro-climatic conditions and market situation for taking decisions in Agricultural production.

Rainfed Crops are prone to breaks in the monsoon during the crop growth due to water stress. This water stress may be due to variability of rainfall, delay in sowing, diversity in crop management practice and variability of the soil type. The prolonged breaks can result in partial or complete failure of the crops.

In the resource constrained and dry areas, the farming is a survival mechanism rather than a growth oriented activity. Still farmers use to take many decisions like selection of inputs (seeds, fertilizers, and pesticides), marketing, processing etc. for bringing agricultural production. Successful farm management depends on farmer's ability to take correct decisions. There are so many alternatives available to the farmers. Before making decisions all alternatives should be evaluated from which the advantages and disadvantages are known. It helps to make the best decisions. Situation specific Decision-making has becoming more complicated for

the farmers with the locally available information. Certain factors are influencing in selecting the best among the different alternatives.

An attempt was made in the study to understand the factors that influenced farmers decision making in relation to the choice of crops, cropping pattern, enterprises, investments to be made etc. Keeping the situation in view the present study was taken up with the following objectives.

- 1) To understand the different production factors affecting decision making process of the farmers in rain fed areas.
- 2) To observe the risk bearing ability of the farmers.
- 3) To know the extent of utilization of farm machinery in rainfed areas.

METHODOLOGY

Ex-post -Facto Research Design was followed. The study was carried out in 10

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states since many developmental activities have been undertaken in all the areas over a period of time. One district representing the lower levels of irrigated area in the state was selected randomly from among the districts with lower rainfall in each state. From each district one block with lowest rainfall was selected. Two villages from each block was selected comprising of 20 villages for the study. From each one of the villages, four categories of the farmers were selected representing marginal, small, medium and large holding categories. Five farmers from each of the categories were selected on a random sampling basis. In all 20 farmers from each village comprising 400 farmers were included in the study. The data were collected by using a specially designed structured pre tested schedule. Interview method was adopted to collect the primary data from the farming community. For collecting the data, various institutions were involved in collaboration viz., State Agricultural Universities, ICAR Institutes, State Department of Agriculture and NGOs in different states. The data collected have been analyzed by using means and percentages.

FINDINGS AND DISCUSSION

The results and discussions pertaining to the factors influencing farmer's decisions in Rain fed Areas were presented below.

1. Andhra Pradesh

The factors influencing farmer's decisions

in agriculture in Andhra Pradesh state are presented below.

A perusal of the table 1 indicates that the major factors influencing decision making were found to be the availability of labour (78 %) followed by irrigation potential (63 %), home needs (56 %) , market situation (55 %) and availability of credit (27.8 %). A similar pattern of factors was found among most of the indicators. However, in the case of marginal farmers, the home needs were found to be a crucial factor among only 33 % of the community. This was possibly seen since these farmers being marginal had also the access to other supplies through the public distribution system at a cheaper cost, hence, could meet their home requirements.

Any further intervention for improving the farmer's situation should take into account that the factors considered by the farmers are crucial to take up decisions. The situation demands promotion of labour saving devices so that availability of labour may not act as a major factor to influence adoption decisions. Similar is the case with credit, markets etc. which can help to improve the risk bearing ability of the farmers and influence faster decision making in favour of improved technologies.

2. Gujarat

Availability of irrigation, seeds and labour were found to be crucial to decide the type of technology being followed by the farming community. Apart from this, the soil type and

Table 1.
Factors Influencing Farmers' Decisions in Andhra Pradesh **n = 40**

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	78	64	80	90	78.0
2	Availability of Irrigation	67	55	70	60	63.0
3	Availability of Credit	33	18	30	30	27.8
4	Availability of Animal labour	-	-	10	10	5.0
5	Availability of Machinery	-	-	-	10	2.5
6	Crop varieties and their duration	11	-	-	-	2.8
7	Home needs	33	73	70	50	56.5
8	Market situation	56	45	80	40	55.3
9	Agro climatic conditions	-	-	20	-	5.0
10	Availability of seeds	-	18	20	-	9.5
11	Availability of Fertilizers	-	-	10	20	7.5
12	Risk bearing ability	44	64	50	70	57.0

fertility was also considered by the farmers. Since, the first three factors are management related it would be necessary to create an

appropriate infrastructure for regular supply of these inputs so that they do not affect the decision making among the farming communities.

Table 2.
Factors Influencing Farmers' Decisions in Himachal Pradesh **n = 40**

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	100	87	89	100	94.0
2	Availability of Irrigation	42	67	56	100	66.3
3	Availability of Credit	17	7	22	25	17.8
4	Availability of Animal labour	67	80	78	100	81.3
5	Availability of Machinery	25	20	11	-	14.0
6	Crop varieties and their duration	42	93	78	75	72.0
7	Home needs	92	93	89	100	93.5
8	Market situation	33	67	100	75	68.8
9	Agro climatic conditions	33	13	56	25	31.8
10	Soil type and fertility	83	87	89	50	77.3
11	Availability of Seeds	75	80	89	100	86.0
12	Availability of Fertilizers	17	53	56	100	56.5
13	Risk bearing ability	17	60	44	100	55.3

3. Himachal Pradesh

Many factors influence the decision making of the farmers. Some important factors are mentioned in Table 2.

It could be observed from the below table that the crucial factors influencing farmer's decision making irrespective of the category of farmer was the home needs. Farming

Table 3.
Factors Influencing Farmers' Decisions in Madhya Pradesh **n = 40**

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	86	100	100	100	96.5
2	Availability of Irrigation	43	82	67	85	69.25
3	Availability of Credit	57	45	67	69	59.5
5	Availability of Machinery	71	91	78	100	85
6	Crop varieties and their duration	86	91	89	100	91.5
7	Home needs	86	100	78	92	89
8	Market situation	86	100	78	92	89
9	Agro climatic conditions	86	100	78	100	91
10	Soil type and fertility	86	100	89	100	93.75
11	Availability of Seeds	86	91	100	92	92.25
12	Availability of Fertilizers	86	100	89	92	91.75
13	Risk bearing ability	29	64	33	62	47
14	Others	-	-	-	8	26

activity is being undertaken by the farmer to meet the personal needs of the farm family. This was followed by availability of major resources like labour, seeds, fertilizers etc. The third set of factors relate to natural conditions such as soil type with fertility and agro climatic situations. The fourth one relates to risk bearing ability of the farmers. However, the crucial factors seem to be family needs, availability of inputs.

4. Karnataka

Major factors influencing the farm decisions by the farmers were availability of

labour, irrigation, credit, machinery, animal labour, seeds apart from the home needs. The farmers in the rainfed areas seem to be operating not only on the uncertainties of the rainfall but also the uncertainties of the input supplies during the needed times. Hence, there seems to be an uncertain start for the farming activity, this reveals lack of management of supplies and planning by the concerned. Hence it is necessary to develop a system of formulating a development strategy document incorporating needs of all the farmers for the district that could be supported by each actor.

Table 4.
Factors Influencing Farmers' Decisions in Orissa

n = 40

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	62	57	100	-	73.0
2	Availability of Irrigation	100	100	100	-	100.0
3	Availability of Credit	75	71	100	-	82.0
4	Crop varieties and their duration	31	7	-	-	12.7
5	Home needs	56	64	20	-	46.7
6	Market situation	25	100	100	-	75.0
7	Agro climatic conditions	38	43	60	-	47.0
8	Soil type and fertility	38	-	-	-	12.7
9	Availability of Seeds	56	64	20	-	46.7
10	Availability of Fertilizers	25	-	-	-	8.3

5. Madhya Pradesh

Various factors influence the decision making at farm level. An attempt was made in the study to understand the factors that farmers use to make their decisions.

The information in table 3 reveals that availability of various inputs such as seeds, fertilizers, labour, irrigation, credit have been one of the key sources for the farmers to undertake decisions for crop production apart

Table 5.
Factors Influencing Farmers' Decisions in Rajasthan

n = 40

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	-	64	11	55	32.5
2	Availability of Irrigation	33	36	89	55	53.3
3	Availability of Credit	11	-	11	9	7.8
4	Availability of Machinery	67	91	89	73	80.0
5	Crop varieties and their duration	67	27	56	36	46.5
6	Home needs	100	73	89	82	86.0
7	Market situation	67	55	78	45	61.3
8	Agro climatic conditions	44	18	22	9	23.3
9	Soil type and fertility	22	55	44	36	39.3
10	Availability of Seeds	22	64	33	64	45.8
11	Availability of Fertilizers	22	73	33	36	41.0
12	Risk bearing ability	11	-	22	9	10.5

from the requirements from the home front to meet the home needs. The second type of factors were to agro climatic conditions, crops and their duration, market situation and soils and soil fertility. The third type of factor was risk bearing ability of the farming community. Since most of the factors indicated by the farmers are manageable within the capacities of the delivery systems, it is necessary that the support systems for agricultural

development are streamlined so that farmers do not feel a constraint in taking farm decisions at their level.

6. Orissa

Many factors influence the production decisions being taken by the farmers. An attempt was made in the study to identify the factors being considered by the farmers.

Table 6.
Factors Influencing Farmers' Decisions in Tamil Nadu **n = 40**

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	40	58	73	57	57.0
2	Availability of Irrigation	100	83	100	100	95.8
3	Availability of Credit	70	83	73	100	81.5
4	Availability of Machinery	-	8	18	29	13.8
5	Crop varieties and their duration	40	25	18	14	24.3
6	Home needs	40	42	55	29	41.5
7	Market situation	40	67	55	57	54.8
8	Agro climatic conditions	80	75	45	57	64.3
9	Soil type and fertility	60	17	36	29	35.5
10	Availability of Seeds	40	58	64	57	54.8
11	Availability of Fertilizers	20	42	27	29	29.5
12	Risk bearing ability	20	-	9	-	7.3

The results table 4 indicate that farm decisions were mainly influenced by the availability of the inputs such as irrigation, credit, market situations, labour, seeds and fertilizers. Nearly half of the farmers were influenced by the home needs.

7. Rajasthan

Farm decision making is influenced by various factors for the rain fed farmers.

The data presented in table 5 highlights that meeting home needs was found to be a crucial factor among all the farmers. This was followed by the availability of animal labour and machinery being crucial to undertake any agricultural activity. The other important factors influencing farm decision making were the market situation and the availability of irrigation. Apart from this, availability of inputs and the risk bearing ability of the

Table 7.
Factors Influencing Farmers' Decisions in Uttar Pradesh

n = 40

Sl.No.	Factors	Category of farmers (%)				Average
		Marginal	Small	Medium	Large	
1	Availability of Labour	44	67	57	62	57.5
2	Availability of Irrigation	78	100	86	75	84.8
3	Availability of Credit	56	44	50	38	47.0
4	Availability of Machinery	56	33	36	12	34.3
5	Crop varieties and their duration	33	44	36	38	37.8
6	Home needs	56	44	50	62	53.0
7	Market situation	33	67	57	62	54.8
8	Agro climatic conditions	56	67	43	50	54.0
9	Soil type and fertility	22	33	100	50	51.3
10	Availability of Seeds	78	67	79	62	71.5
11	Availability of Fertilizers	44	33	57	38	43.0
12	Risk bearing ability	67	56	57	25	51.3

farmers were found to influence quick decision making among the farmers.

8. Tamil Nadu

Many factors influence the farm decision making by the farmers in rain fed areas.

The results in table 6 highlight the availability of irrigation and credit as the crucial factors influencing in more than 80 % of the cases followed by agro climatic conditions, availability of labour, seeds and market situation. The third set of factors influencing farm decisions were soil type and fertility, crop duration and availability of fertilizer. However, home needs were found to be crucial among 40 – 55 % among different categories of farmers.

9. Uttar Pradesh

The table 7 indicates that the various

factors considered by the farmers in taking decisions relating to farming activity.

It could be observed from the table that the availability of irrigation has been a major factor in deciding the technology to be used by the farmers and the cropping pattern. This is followed by availability of seeds, soil fertility, availability of labour, risk, home needs, market, credit etc. The crucial factors in making decisions relating to farm activity were found to be home needs, availability of inputs including irrigation and labour, market situation and the risk involved in undertaking the activity. Any strategy to improve the farming systems has to consider the criteria set by farmers to evaluate their own situations.

10. West Bengal

Farm decision making is influenced by various factors among different categories of farmers.

The major factors influencing were found to be availability of seeds, labour, machinery, fertilizers etc. 56 % of the farmers indicated home needs as a factor influencing farm decision. Apart from the above factors, agro climatic situations, market situations, credit availability, risk bearing ability etc. also influence the farmers decisions. It could be observed from the result indicate that the major factors influencing decisions were the input availability, home needs apart from agro climatic situations. Since agro climatic situations cannot be modified, the possibility of organizing appropriate input supply and meeting the home requirements of the farming

community by effective planning process is a crucial requirement in improving the condition of the rainfed farmers.

CONCLUSION

In rain fed areas farmers considered not only factors related to inputs but also other factors like risk bearing ability, agro climatic conditions & market situations for taking decisions in Agricultural production. Keeping this scenario in the view the Agriculture and allied departments including marketing has to retune their delivery mechanisms for increasing productivity in rainfed areas.