

Original Research Article

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A Study on Production Constraints of Rice Cultivation in Kurnool District of Andhra Pradesh and Suggestions to Overcome Them

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ABSTRACT

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The present study was conducted in Kurnool district of Andhra Pradesh, to study the production constraints faced by rice farmers and various suggestions given by them to overcome the constraints. The major agro ecological, technical, socio-economical and marketing constraints perceived by farmers were high temperature during crop growth, scarcity of labour during peak periods, diversion of farmers from rice cultivation to irrigated dry crops and involvement of middlemen respectively. Important suggestions as given by the farmers were fetching better market price/provision of Minimum Support Price (MSP) by the government (93.33%) was ranked first followed by prioritization of agricultural activities in MGNREGA scheme, development of pest and disease resistant varieties and development of suitable implements and equipments for all operations.

Introduction

Indian agriculture has undergone many noteworthy changes from a condition of begging bowl to self-sufficiency in the production of food grains. The first significant change is the attitude of the farmer towards farming. He considers it not merely as a way of life but also a kind of business. The second significant change is the interest of farmers in the adoption of new technology. The projections indicate that Indian population will be around two billion by 2050. Rising population and per capita income are obviously pushing up the food demand which needs to be met through enhanced productivity per unit area. In Andhra Pradesh area under

rice mostly depends on the monsoon pattern and availability of water in reservoirs. The cultivable area under rice has alarmingly gone down to 5.67 lakh ha from 8 lakh ha (2017). There is no scope for increasing area under rice as rice area is replaced by some profitable dry crops due to insufficient water. The reasons for shrinking of paddy lands in the district are due to numerous constraints that are present in this aspect. Some of the farm level rice production constraints include stagnating yield, declining profit, high cost of labour, unavailability of the labour, unavailability of quality seed in time, marketing problems which in turn lead to distress sale, economic factors like price fluctuation and existing gap between rice grain and parboiled rice are adversely affecting rice

production. Therefore, enhancing adaptability and stability of productivity and providing more entitlement to livelihood to the rice growing population is a major challenge to the agricultural research and development system. Keeping this in view, the production constraints faced by the farmers in rice cultivation was studied.

Materials and Methods

Kurnool district was purposively selected for the research study as it is the largest rice growing district in Rayalaseema region. Three mandals out of 54 mandals of Kurnool district were purposively selected for the study based on the highest area under rice cultivation. Four villages were selected from each mandal based on the highest area under rice cultivation thereby making a total of twelve villages for the study. From each selected village 10 members were selected randomly, thus making a total of 120 respondents for the study. The selected respondents were interviewed personally with the help of well-structured interview schedule. Constraints faced by the rice farmers were classified in to four categories *i.e.*, Agro-ecological, technical, socio-economic and marketing constraints. The responses were documented as 'major', 'medium' and 'minor' assigning scores of 3, 2 and 1 respectively.

Results and Discussion

The data in table 1 revealed that high temperature during crop growth (I rank), heavy rains at the time of harvest (II rank), conversion of paddy fields in to commercial ventures (III rank), drainage problems (IV rank), indiscriminate use of irrigation water (V rank), low fertility of the soil (VI rank) and intensive rice cultivation (VII rank) were the major agro-ecological constraints expressed by rice farmers in order of priority. The findings are in agreement with the findings of

Rahul (2016). The technical constraints were in the following rank order Scarcity of labour during peak periods (I rank), lack of proper local storage and processing facilities locally (II rank), high cost of labour (III rank), epidemics of pest and diseases (IV rank), weed infestation (V rank), lack of awareness on various departmental subsidy schemes (VI rank), lack of custom hiring centers (VII rank), high cost of HYV/hybrid seed (VIII rank), hike in rental charges of certain farm machinery during peak season (IX rank), difficulty in using machinery in scattered & fragmented plots (X rank), more occurrence of pests and diseases to stored grain (XI rank), difficulty to carryout repairs locally (XII rank), floods during crop period (XIII rank) and poor quality of seed (XIV rank). This finding is in accordance with the findings of Deepthi (2017).

Diversion of farmers from rice cultivation to irrigated dry crops (I rank), younger generation not interested in rice farming (II rank), high rate of interest on loan (III rank), high cost of inputs (IV rank), inadequate insurance coverage (V rank), untimely supply of inputs (VI rank), non-utilization of Farmers Call Center services by the farmers (VII rank), delay in advancing institutional finance (VIII rank) and poor extension services (IX rank) were the socio-economic constraints expressed by the rice farmers. The findings are in agreement with the findings of Sriharinarayana (2013).

With regard to the marketing constraints, involvement of middlemen (I rank), distress sale (II rank), dominance of millers in marketing the produce (III rank), lack of knowledge about market prices (IV rank), fluctuation in the market prices (V rank), very low MSP in paddy (VI rank) and lack of rice growers societies (VII rank). The result is in agreement with Aarathybalakrishnan (2011).

Table.1 Production constraints faced by rice farmers

S. No	Production Constraints	Score	Rank
A	Agro-ecological constraints		
1.	High temperature during crop growth	292	I
2.	Heavy rains at the time of harvest	254	II
3.	Conversion of paddy fields in to commercial venture	205	III
4.	Drainage problems	146	IV
5.	Indiscriminate use of irrigation water	143	V
6.	Low fertility of the soil	138	VI
7.	Intensive rice cultivation	135	VII
B	Technical constraints		
1.	Scarcity of labour during peak periods	356	I
2.	Lack of proper local storage and processing facilities locally	352	II
3.	High cost of labour	349	III
4.	Epidemics of pest and diseases	348	IV
5.	Weed infestation	344	V
6.	Lack of awareness on various departmental subsidy schemes	344	VI
7.	Lack of custom hiring centers	341	VII
8.	High cost of HYV/hybrid seed	326	VIII
9.	Hike in rental charges of certain farm machinery during peak season	316	IX
10.	Difficulty in using machinery in scattered & fragmented plots	315	X
11.	More occurrence of pests and diseases to stored grain	305	XI
12.	Difficulty to carryout repairs locally	258	XII
13.	Floods during crop period	218	XIII
14.	Poor quality of seed	157	XIV
C	Socio-Economic constraints		
1.	Diversion of farmers from rice cultivation to irrigated dry crops	348	I
2.	Younger generation not interested in rice farming	340	II
3.	High rate of interest on loan	327	III
4.	High cost of inputs	317	IV
5.	Inadequate insurance coverage	308	V
6.	Untimely supply of inputs	281	VI
7.	Non utilization of Farmers Call Center services by the farmers	190	VII
8.	Delay in advancing institutional finance	180	VIII
9.	Poor extension services	164	IX
D	Marketing Constraints		
1.	Involvement of middlemen	339	I
2.	Distress sale	321	II
3.	Dominance of millers in marketing the produce	303	III
4.	Lack of knowledge about market prices	286	IV
5.	Fluctuation in the market prices	273	V
6.	Very low MSP in paddy (in spite of increase in production costs of paddy)	219	VI
7.	Lack of rice growers societies	156	VII

Table.2 Suggestions given by the rice farmers to overcome the production constraints

S. No	Suggestions	F	%	Rank
1.	Fetching better market price/provision of minimum support price (MSP) by the government	112	93.33	I
2.	Prioritization of agricultural activities in MGNREGA scheme (Mahatma Gandhi National Rural Employment Guarantee Act) to avoid labour shortage	109	90.83	II
3.	Development of pest and disease resistant varieties	106	88.33	III
4.	Development of suitable implements and equipments for all operations	105	87.50	IV
5.	Improvement in transportation and marketing facilities	102	85.00	V
6.	Establishment of custom hiring centers at local level	101	84.16	VI
7.	Ensure public warehousing facilities in the vicinity of farmers villages	93	77.50	VIII
8.	Low cost of inputs (seeds, fertilizers, weedicides, pesticides, diesel etc.)	92	76.66	IX
9.	Provision of loans by government agencies at lower interest rates	85	70.83	XI
10.	Provision of processing, trading and export facilities	83	69.16	XII
11.	Conducting regular farmer training programmes to the farmers	80	66.66	XIII
12.	Increasing subsidies for rice farming	78	65.00	XIV
13.	Encouraging seed village programme	74	61.66	XV
14.	Facilitating direct marketing in rice	69	57.50	XVI
15.	Ensuring availability of High yielding variety (HYV) seed at proper time	66	55.00	XVII
16.	Supply of good quality seed by Department of Agriculture	64	53.33	XVIII
17.	Adopting group farming approach in rice cultivation	51	42.50	XX
18.	Implementation of crop insurance schemes	41	34.16	XXII
19.	Recruitment of sufficient extension staff	29	24.16	XXIII

An overview of table 2 indicates the various suggestions given by farmers. Among the suggestions given by the farmers fetching better market price/provision of Minimum Support Price (MSP) by the government (93.33%) was ranked first followed by prioritization of agricultural activities in MGNREGA scheme (90.83%), development of pest and disease resistant varieties (88.33%), development of suitable implements and equipments for all operations (87.50%), improvement in transportation and marketing facilities (85.00%), establishment of custom hiring centres at local level (84.16%), ensure public warehousing

facilities in the vicinity of farmers villages (77.50%), low cost of inputs (seeds, fertilizers, weedicides, pesticides, diesel etc.) (76.66%), provision of loans by government agencies at lower interest rates (70.83%), provision of processing, trading and export facilities (69.16%), conduct regular farmer training programmes (66.66%), increase subsidies for rice farming (65.00%), encourage seed village programme (61.66%), facilitate direct marketing in rice (57.50%), ensure timely supply of High Yielding Variety seed at proper time (55.00%), supply of good quality seed by Department of Agriculture (53.33%), adopt group farming

approach in rice cultivation (42.50%), implementation of crop insurance schemes (34.16%), recruitment of sufficient and extension staff (24.16%).

It is very much evident from the study that there existed a wide gap between development of technologies and their transfer to actual farming situations. Hence, these constraints perceived by the farmers could be overcome by following proper strategies like prioritization of agricultural works through MGNREGA, direct marketing, creation of proper storage facilities at panchayat or mandal levels, developing suitable farm machinery for small holdings, rice varieties resistant to lodging, specific pests and diseases and conducting on farm testing at different sites in order to develop effective adaptive research and technology verification capability. Apart from these providing credit facilities with low interest will encourage the farmers for extensive cultivation in the district.

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