Original Research Article

A study on Resource of Productivity and Efficiency of Cotton in Mancherial District of Telangana, India.

ABSTRACT

A present study entitled " Resource of Productivity and Efficiency of Cotton in Mancherial District, of Telangana" was carried during the session 2021-2022.One hundred and twenty farmers were selected by using pre tested schedule and analyzed using appropriate statistical tools. It was found that majority of respondents were having medium level of socio economic profile. Analyzing the production level highest level of respondents i.e.52.50 percent were having medium level of production fallowed by 25.50 percent, and low level fallowed by 22.50 percent. On analyzing the marketing strategy level, highest level of respondents 31.67 percent, were medium level allowed marketing strategies were fallowed by 50.00 percent, 18.33 having low level. Independent variables namely age, education, family type, caste, house type, occupation, landholding, mass media exposure, extension contact source of information, economic motivation. had positive and significant relationship with production and marketing respectively. The major constraints were faced by high cost of fertilizers, lack of knowledge about disease and pest, high cost of seeds, lack of transportation facilities, lack of knowledge about market, lack of storage facilities respectively.

Key words: Resource, Production, Efficiency.

Introduction

Cotton (Gossipier spp.) it belongs to the family Malvaceae. is the most important fibre crop being in many countries, cotton is the king of fibres, is often quoted as white gold because its higher commercial value. Cotton is an important fibre crop of global significance for its lint seed, Cotton is considered to be important cash crop. Gujarat is the largest producer of cotton in India. Indian sub-continent has a long History of cultivating traditional varieties of cotton found in India. Cotton was used in old world at least 700 years ago. Dating back in 1904, and further strengthened with constitution of Indian central cotton committee (ICCC) in 1923. The Indian economy is agrarian, and agriculture is its cornerstone, serving as the backbone of the rural livelihood security system. In provides a living for approximately 58% of the Indian people. Agriculture has been continuous to be the lifeline of the Indian economy, as economic security is largely depend on agricultural and allied sectors.

UNDER PEER REVIEW

It is an important raw material for the Indian textile industry. India holds the first position in the Cotton cultivation. It is also stands at second in the consumption and export in the world. Chief cotton producing countries are India, China, USA, Brazil, Pakistan, West Africa, Uzbekistan, Egypt, Argentina, Australia, Grace and Turkey. The introduction and adoption of new technologies and expansion of the area under cotton had led to sustainable productivity improvements in cotton the world. Cotton is the king of fibers is one of the largest kharif crop of the country. India has largest cotton cultivated area which constitutes about 30 percent of the global area.

Long stapled cotton (27.50 to 32.00mm) also called Sea Island Cotton. Originate in South America. Long stapled cotton featured by long fibre and high intensity, which is suitable for high intensity, which is suited for high country yarn spinning.

Medium stapled cotton (20.to 27.00 mm) also named upland cotton, originated in Central American cotton. This kind of cotton characterized by wide application, high output, long fibre and quality, which is fit for medium count yarn spinning.

Short stapled cotton (2.00 mm and below) also called Asiatic cotton, originated in India. This cotton has rarely grown for its low out put short, rough fibre.

Research Methodology

The study was conducted in Mancherial District of Telangana. Mancherial district was purposively selected for the study because of availability of maximum cotton growers. There are 18 blocks in Mancherial district. Out of which Bheemini block were selected purposively for study. 5 villages were selected purposively (Rampur, Bitturpalli, Bheemini, malledi, Achalapur) thus in all 120cotton growers constituted sample for the investigation. Based on the objectives of the study, an interview schedule was prepared. The information was elucidated from respondents with the help of pre structured schedule through descriptive research design. The information was collected by personally interviewing respondents using pre structured interview schedule.

Objectives of the study

1. To find out the socio-economic profile of the respondence.
2. To estimate the resource of productivity and efficiency of cotton

UNDER PEER REVIEW

Results and Discussion

Table: 1 Socio economic profile of the respondents

Sl.no.	Independent variables	Category	Frequency	Percentage
1.	Age	Young 20-30	25	20.83
		Middle36-55	62	51.67
		Above 55	33	27.00
2.	Education	Illiterate+ Primary	36	21.67
		High school + Intermediate	59	49.17
		Graduate	35	29.16
3.	Family type	Nuclear family	66	55.00
		Joint family	54	45
4	Caste	General	28	23.34
		OBC	53	44.16
		ST&SC	39	32.5
5.	House type	Hut(kachha)	25	20.83
		Semi-cemented	39	32.50
		Cemented	56	46.67
6.	Landholding	Marginal (<1)	25	20.84
		Small (1-3)	28	23.33
		Medium (3-4)	41	34.16
		Large (>4)_	26	21.67
7.	Annual income	Low (<80,000)	26	21.70
		Medium (80,000-2 lakhs)	37	30.80
		High (above 2 lakhs)	57	47.50
8.	Occupation	Agriculture	23	19.17
		Agriculture+labour	40	33.33

UNDER PEER REVIEW

		Agriculture+business	30	25.00
		Agriculture+service	27	22.50
9.	Mass media exposure	Low (7-10)	33	27.50
		Medium (11-12)	45	37.50
		High (13-15)	42	35.00
11.	Extension contact	Low	28	23.40
		Medium	61	50.80
		High	31	25.80
12.	Source of Information	Low	26	21.66
		Medium	51	42.50
		High	43	35.84
13.	Economic motivation	Low	31	25.80
		Medium	53	44.20
		High	36	30.00

Table 2. To estimate the resource of production and of cotton cultivation practice:

Sl.no.	**Statements**	**Fully Agree (%)**	**Evaluation Partially Agree (%)**	**Never Agree (%)**
1.	Which soil is suitable for cotton crop?	59 (49.36)	42 (35.42)	19 (15.22)
2.	Do you follow chisel ploughing or deep ploughing?	31 (49.36)	48 (40.00)	41 (34.10)
3.	Seed rate (12-16kg / ha)	52 (43.34)	27 (43.34)	41(34.16)
4.	Seed selected a. Previous year	71 (59.16)	23 (19.17)	26 (21.67)

UNDER PEER REVIEW

	b. KVK c. Krishi service center d. Fertilizer			
5.	Do you prefer cotton or Bt cotton in your field?	60 (50.00)	42 (35.00)	18 (18.33)
6.	Do you prefer intercropping in your main fields?	45 (37.50)	53 (44.17)	22 (18.33)
7.	Do you prefer any seed treatment methods before sowing?	33 (27.50)	56 (46.66)	31 (25.84)
8.	How much cost do you get per quintal?	51 (42.51)	29 (24.16)	40 (33.33)
9.	What is the maximum selling price do you get?	20 (16.66)	66 (55.00)	34 (28.34)
10	Do you prefer Hand weeding or Application of weedicides?	19 (15.84)	57 (47.50)	44 (36.66)
11.	Which month is the best suitable for production purpose?	53 (44.17)	35 (29.19)	32 (26.66)
12	At what time you harvest the crop?	35 (29.16)	55 (45.84)	30 (25.00)
13.	How many pickings you follow in your field?	53 (44.17)	44 (36.670	23 (19.16)
14.	What are the markets you sell your product?	61 (50.83)	40 (33.34)	19 (15.83)
15.	Do you observe any bollworm pest incidence in your crop?	34 (28.33)	59 (49.17)	27 (22.50)
16.	How much yield you get from your field?	71 (59.16)	30 (25.00)	19 (15.84)
17.	What are storage conditions you follow the crop?	53 (44.16)	37 (30.84)	30 (25.00)
18.	Soil type (Medium / well drained)?	62 (51.67)	23 (19.16)	35 (29.17)

UNDER PEER REVIEW

It can be reported that regarding soil suitable for cotton crop 49.36 percent, 35.42 percent, 15.22 percent of respondents reportedly fully correct, partially correct and not correct respectively. Chisel ploughing or deep ploughing 49.36 percent, 40,00 percent, 34.10 percent of respondents reportedly fully correct, partially correct and not correct response respectively. Regarding seed rate 43.34 percent, 43.34 percent, 34.16.67 percent of respondents fully correct partially correct and not correct response respectively. Regarding seed selected 59.16 percent, 19.17 percent, 21.67 percent respondents fully correct partially correct and not correct response respectively. Cotton or Bt cotton in your field 50.00 percent,35.00 percent, 18.33 per cent respondents fully correct, partially correct and not correct response respectively. Regarding Seed treatment methods before sowing 27.50 percent, 46.66 percent, 25.84 percent respondents fully correct, partially correct and not correct. Regarding cost do you get per quintal 42.51 percent, 24.16 percent, 33.33 percent respondents fully correct partially correct ad not correct response respectively.

Maximum selling price 16.66 percent, 55.00 percent, 28.34 percent respondents reportedly fully correct, partially correct and not correct response respectively. Regarding hand weeding or Application of weedicides 15.84 percent, 47.50 percent, 36.66 percent respondents reportedly fully correct partially correct and not correct response respectively. Regarding which month is best suitable for production 44.17 percent, 29.19 percent, 26.66 percent response respectively. Regarding harvesting time of crop 29.16 percent, 45.84 percent, 25.00 percent respondents reported fully correct partially correct and not correct response respectively. Regarding how many pickings you follow in your field 44.17 percent, 36.67 percent, 19.16 percent respondents reported fully correct partially correct and not correct response respectively. Markets you sell your product 50.83 percent, 33.34 percent, 15.83 percent respondents reported fully correct, partially correct and not correct response respectively. Regarding observe any bollworm pest incidence in your crop 28.33 percent, 49.17 percent, 22.50 percent respondents reported fully correct partially correct and not correct response respectively. Yield you get from your field 59.16 percent, 25.00 percent, 15.84 percent respondents reported fully correct, partially correct and not correct response respectively. Storage conditions 44.16 percent, 30.84 percent, 25.00 percent respondents reported fully correct partially correct and not correct response respectively. Regarding soil type 51.67 percent, 19.16 percent, 29.17 percent respondents fully correct partially correct and not correct response respectively.

Table 3. Overall category of Production and Marketing of cotton crop

UNDER PEER REVIEW

Sl.no.	Production level	Frequency	Percentage
1.	Low (14-21)	27	22.50
2.	Medium (22-28)	63	52.50
3.	High (29-35)	30	25.00
	Total	120	100.00

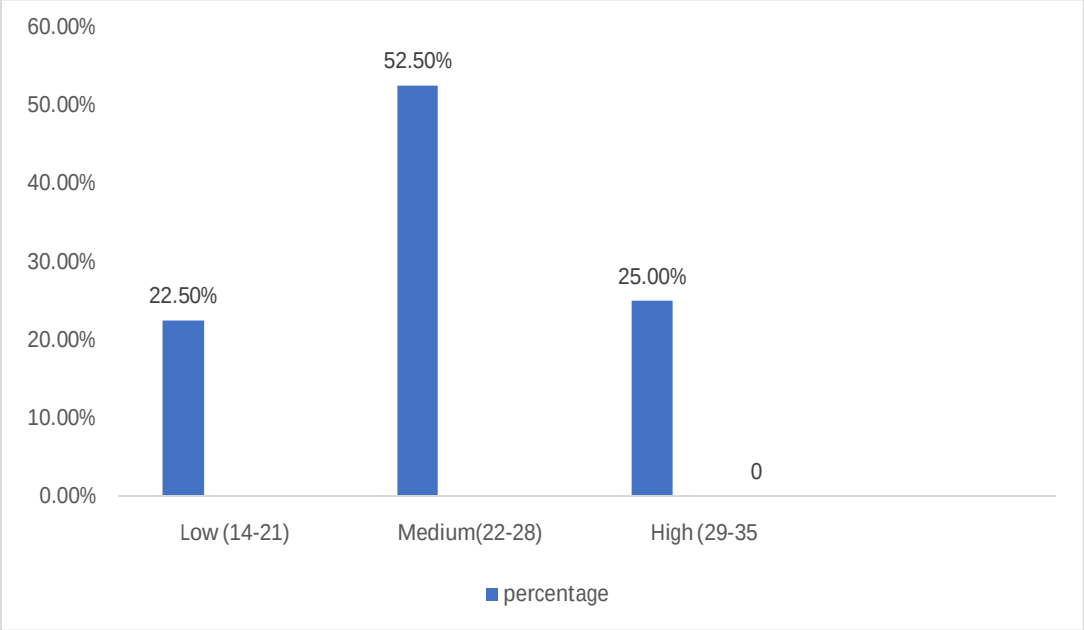

Fig 1. Figure shows in parentheses is percentage

Table 4. Associated between selected dependent variables production of marketing respondents towards improved towards cotton production practices:

Sl.no.	Variables	Correlation Coefficient
1.	Age	0.9913*
2	Education	0981665*
3.	Family type	0.76465*
4.	Caste	0.928938*
5.	Type of house	0.019349NS
6.	Landholding	0.057259NS
7.	Occupation	0.826033*

8.	Income	0.56321**
9.	Mass media exposure	0.745528*
10.	Extension contact	0.999975*
11.	Source of information	0.794044*
12.	Economic motivation	0.989743*

*= Correlation is significant at the 0.01% level of profitability

**=Correlation significant at the 0.05% level of profitability

From this above Table 4. Analyzed the variables namely age, education, family type, caste, type of house, landholding, occupation, income extension contact, source of information, economic motivation were positively and significantly correlated with production of cotton growers towards improved cotton production practices at 0.1% of profitability. Therefore, the null hypothesis was rejected for these variables, whereas the variable type of house and landholding availed negatively and significantly correlated with the production of cotton growers towards improved cotton production of cotton growers towards improved cotton production practices at both 0.01% & 0.05% of profitability respectively. Therefore, the null hypothesis was accepted for this variable.

Conclusion

It is concluded that middle-aged individuals constituted that largest group among the respondents, majority of the respondents were illiterate category. majority of the respondents belongs to the OBC category, majority of respondents occupation have medium level, majority of the annual income is medium level, most of them have cemented type of house, most of the families are nuclear family, in terms of landholding medium sized landholding were prevalent among respondents. It was further reported that majority of respondents have medium level of source of information, majority of the respondents have medium level of extension contact, majority of respondents have medium level of economic motivation. Most of the respondents have medium level of production. It was found that the respondents were having medium level of production. Among constraints faced by the respondents lack of knowledge about diseases and pest, the respondents suggested that Reduce the cost of fertilizers and pesticides and maintain constant price of cotton.

UNDER PEER REVIEW

Reference

Ghintala, A. and Singh, K. 2013. Knowledge and adoption of sprinkler irrigation system by the farmers of Banasakatha district of north Gujarat. *Indian Journal of Extension Education Research Development.* 21:26-29.

Gurupremsingh Bedi, Saran, S.K and Taptej Singh.2015. Measuring the technical eficency of cotton production: Stochastic Frontier Production Function Approach. *Indian J. EconDev., 11(1): 53-60.*

Jagtpal, R. K., Prasad, and Singh, S. N. 2017. Socio economic profile of the sugarcane growers in Sitapur District Uttar Pradesh. India. *International Journal of current Microbiology and Applied Sciences.* 6(3): 2021-2031.

Sharma, Amod. 2015. 2015. Growth and variability in area, production and yield of cotton crop. *International Journal of Agriculture Innovations & Research,* 4(30, 509-511.

Shruthi, G., Rao, B.D., Devi, Y.L., & Msih. J. 2017. Analysis of area production and productivity of groundnut crop in Telangana. *Agricultural science Digest a Research Journal,* 37(2), 151-153.

Vinay, M.; Kumari, R. and Ravi, M. 2018. Study on socio economic profile of the selected pulses growing farmers in Mahabubnagar district of Telangana state. International Journal of Agricultural Science. 10(2): 6428-6431.

UNDER PEER REVIEW