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Attitude of farmers towards custom hiring centers: A study in Mandya district of Karnataka state

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Abstract

The present study was carried out Mandya district in Karnataka state during 2024-2025 to analyze the attitude of farmers towards custom hiring centres. A sample of 210 farmers from seven custom hiring centres in seven taluks of Mandya district were randomly selected for the research study. Expost-facto research design was adopted in the present study. A greater proportion of farmers (42.85%) had more favourable attitude towards custom hiring centres, while 39.06 per cent of farmers had favourable attitude towards custom hiring centres and the remaining 18.09 per cent of the farmers were having less favourable attitude towards custom hiring centres. Education, innovativeness, management orientation, mass media exposure and extension participation of farmers had significantly contributed in developing favourable attitude of farmers towards custom hiring centres. Non availability of machinery during peak season was the major constraint encountered by majority of the farmers (74.28%) in the custom hiring centres.

Keywords: Attitude, farmers, farm machineries, custom hiring centres

Introduction

Agriculture is a significant contributor to employment and livelihood creation and it continues to be the mainstay of India's rural economy. The sector remains crucial for the economy, to create a ripple effect on the services and manufacturing sectors of the economy, to meet the food and nutritional requirements of the population and to contribute to macroeconomic stability. Despite its vital role, the sector suffers from small farm holding size, low productivity and production, dependence on monsoon as well as water scarcity, timely and non-availability of farm labour, large number of market intermediaries, which are the main factors of growth. With the increasing population leading to rapidly growing food demand, it is critical to build efficiencies in agriculture to achieve food security for the nation. Hence, it is imperative to focus on increasing production, productivity and profitability in agriculture by improving the intensity of farm mechanization in the country (Anonymous, 2010) [2].

Indian agriculture is undergoing a gradual shift from dependence on human power and animal power to mechanical power because of the increasing cost of upkeep of animals and the growing scarcity of human labour. Further, the use of mechanical power has a direct bearing on the productivity of crops apart from reducing the drudgery

and facilitating the timeliness of agricultural operations. Thus, there is a strong need for taking farm mechanization. However, the farm power distribution is quite uneven across the States, wherein the highest use of mechanical power is in the order of 3.5 kW/ha in Punjab and less than 1kW/ha in states like Bihar, Orissa, Jharkhand etc. Mechanical power is largely consumed in big land holdings and is still beyond the reach of small/marginal holdings which constitutes around 80 per cent of the total land holdings. This is because the small/marginal farmers, by virtue of their economic condition are unable to own farm machinery on their own or through institutional credit. Therefore, to make farm machinery available within the reach of small/marginal holdings, collective ownership or Custom Hiring Centres need to be promoted in a big way. The farm power availability for small/marginal land holdings is the lowest. As the small/marginal holdings constitute 80 per cent of total land holdings, the potential for CHC which will cater to the farm machinery requirement of such a vast area, is quite huge.

Custom hiring of farm machinery was first introduced in Indian agriculture in the 19th century (Srinivasarao *et al.*, 2013) [6]. The launch of a scheme by the Government of India in 1971 to establish agro-service centers nationwide

further bolstered the growth of custom hiring services. Over the years, the custom hiring service centres have emerged as integral institutions that facilitate access to modern agricultural machinery, technology, and services for the farming community. The significance of custom hiring service centres (CHSCs) lies in their capacity to bridge the gap between traditional farming methods and contemporary agricultural advancements, fostering sustainable growth and development in the agriculture sector. Custom hiring service centres in Karnataka trace their roots in the late 20th century when the state recognized the need for modernizing its agriculture sector. Prior to the establishment of CHSCs, small and marginal farmers faced significant challenges in accessing advanced agricultural machinery and equipment. Traditional methods of farming prevailed, leading to productivity constraints and limited economic opportunities for farmers. Recognizing these challenges, the Government of Karnataka funded the custom hiring service centres (CHSCs) through the Primary Agricultural Credit Co-operative Societies (PACS), by supplying tractors and associated equipment and equipment under Rashtriya Krishi Vikas Yojana (RKVY) in 2010-11 to meet the needs of small and marginal farmers. The type of machinery was distributed across CHSCs in Karnataka, taking into account the agro-climatic conditions, crop pattern, farm machinery density, and demand for the farm implements.

The primary objective of custom hiring service centres in Karnataka is to provide small and marginal farmers with cost effective access to modern agricultural machinery, tools, and equipment. These centres aim to enhance productivity by providing access to mechanized equipment for ploughing, sowing, harvesting, and post-harvest processing reduces manual labor and time, allowing farmers to cultivate larger areas and improve yields. CHSCs helps to reduce production costs: By offering machinery on a rental basis, it promotes the use of eco-friendly and efficient farming methods, contributing to sustainable agricultural practices which includes precision farming, reduced chemical usage, and improved soil health management (Anil *et al.*, 2023) ^[1]. Against this background, the present study was carried out with the following specific objectives:

1. To analyse the attitude of farmers towards custom hiring centres
2. To find out the extent of contribution of profile of farmers on the attitude towards custom hiring centres
3. To document the constraints faced by the farmers in customer hiring centres

Methodology

The present study was carried out in all the seven taluks of Mandya district in Karnataka state during 2024- 2025. Hallegere, Arakere, Chinakuruli, Akkihebbala, Toreshetihalli, Kirgavlulu and Devihalli custom hiring services were selected from Mandya, Srirangapatna, K.R.Pet, Maddur, Malavalli and Nagamanagala taluks of Mandya district, respectively. A sample of 30 farmers from each of custom hiring centres were randomly selected for the study, thus the total sample constituted 210 farmers from seven custom hiring centres in seven taluks of Mandya district. Expost-facto research design was adopted in the present study.

Attitude towards Custom hiring centres: The attitude of farmers towards custom hiring centres was selected as dependent variable for the study. It was defined as the interpretation of farmers towards the services provided by the custom hiring centres' and the attitude was analyzed using the scale developed by Reddy *et al.*, (2022) ^[5] with slight modification. The attitude scale consisted of 15 statements and the responses were obtained on a five point continuum of agreement representing 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' weightage of 5,4,3,2 and 1, respectively. The perception score of a respondent was calculated by adding up the scores obtained by him/her on all 15 items/statements. The perception score of this scale ranges from a minimum of 15 to a maximum of 75. Higher score on this scale indicates that the respondent has more favourable attitude towards custom hiring centres. Further, the farmers were categorized into three groups based on the mean and half standard deviation as a measure of check.

Attitude category	Criteria	Score
Less favourable	< (Mean – ½ SD)	<47.18
Favourable	(Mean ± ½ SD)	47.18-54.98
More favourable	>(Mean + ½ SD)	>54.98

Information regarding 19 personal, socio-economic, psychological and communication characteristics (farmers profile) (independent variables) of farmers were collected using a structured schedule with suitable scales. The collected data was scored, tabulated and analyzed using frequency, mean, percentage and multiple regression test.

Results and Discussion

1. Statement-wise attitude of farmers towards custom hiring centres

A perusal of the results in Table 1 reveals that statement wise attitude of farmers towards custom hiring centres. With regard to the attitude of farmers, it was found that the statement: 'CHCs are boon to farmers' received the first rank, followed by the statements such as, Easy access to CHC leads to reduction of cost and increase in crop yields (Rank II), CHC reduces drudgery in farm operations(Rank III), it is easy to get services from CHC without any procedural delays(Rank IV), CHC are charging rents reasonably for farm machineries (Rank V), CHC provide time bound high-quality custom hiring services which is essential for the growth of agriculture (Rank VI), CHC staffs are greatly supportive and cooperative (Rank VII), CHC provides employment opportunities to skilled labour and artisans (Rank VIII), CHC services helps the farmers to reduce post-harvest losses (Rank IX), Repair and maintenance facilities of agricultural implements and equipment of farmers are also provided in CHC (Rank X), it is good that trainings are conducted to farmers to get the benefits of new technologies and services of CHC (Rank XI), I am aware of CHC and its services through media and extension activities by CHC (Rank XII), I observed increase in cropping intensity in my area, after establishment of CHC (Rank XIII), I strongly feel that subsidy provision acts as safeguard against risk for CHC in the initial years (Rank XIV) and CHC are located strategically within the radius of

5-7 kms and are within our reach(Rank XV) in the order of importance. It could be observed from the above results that farmers possess favourable attitude towards custom hiring

centres. More or less similar findings was reported by Gunjan Bhandari (2021)^[4].

Table 1: Statement-wise attitude of farmers towards custom hiring centres (CHC) (n=210)

Sl. No	Attitude statements	Farmers	
		Mean attitude score	Rank
1	CHCs are boon to farmers	4.92	I
2	Easy access to CHC leads to reduction of cost and increase in crop yields	4.90	II
3	CHC reduces drudgery in farm operations	4.89	III
4	It is easy to get services from CHC without any procedural delays	4.88	IV
5	CHC are charging rents reasonably for farm machineries	4.72	V
6	CHC provide time bound high-quality custom hiring services which is essential for the growth of agriculture	4.71	VI
7	CHC staffs are greatly supportive and cooperative	4.69	VII
8	CHC provides employment opportunities to skilled labour and artisans	4.61	VIII
9	CHC services helps the farmers to reduce post-harvest losses	4.59	IX
10	Repair and maintenance facilities of agricultural implements and equipment of farmers are also provided in CHC	4.51	X
11	It is good that trainings are conducted to farmers to get the benefits of new technologies and services of CHC	4.49	XI
12	I am aware of CHC and its services through media and extension activities by CHC	4.39	XII
13	I observed increase in cropping intensity in my area after establishment of CHC	4.01	XIII
14	I strongly feel that subsidy provision acts as safeguard against risk for CHC in the initial years	4.00	XIV
15	CHC are located strategically within the radius of 5-7 kms and are within our reach	3.96	XV

2. Overall attitude of farmers towards custom hiring centers

The results in Table 2 reveals that a greater proportion of farmers (42.85%) had more favourable attitude towards custom hiring centres, while 39.06 per cent of farmers had favourable attitude towards custom hiring centres and the remaining 18.09 per cent of the farmers were having less favourable attitude towards custom hiring centres. It could be inferred that a vast majority of the farmers (81.89%) had favourable/ more favourable attitude towards custom hiring centres. Custom hiring centres – (a) provide time bound

services and charge reasonable rent for farm machineries, (b) provide employment to skilled labourers and artisans, (c) are located strategically within a range a 5-7 kms and are within the reach of farmers, (d) staffs are greatly supportive and co-operative with the farmers, (e) has helped in reducing the post harvest loses, increased crop yield and cropping intensity etc., hence a vast majority of the farmers (81.89%) had favourable/ more favourable attitude towards custom hiring centres. Similar findings were reported by Chitra Das and Patil (2024)^[3].

Table 2: Overall attitude of farmers towards custom hiring centers (n=210)

Sl. No.	Attitude categories	Farmers	
		Number	Per cent
1.	Less favourable (<44.26 score)	38	18.09
2.	Favourable (44.26 to 59.89 score)	82	39.06
3.	More favourable (44.26 to 59.89 score)	90	42.85
Total		210	100.00

Mean = 51.08; Standard Deviation = 7.81

3. Extent of contribution of profile characteristics on the attitude of farmers towards custom hiring centers

It is observed from Table 3 that age, land holding, annual income, location from custom hiring centres and farming experience of farmers had no significant contribution in improving the attitude of farmers towards custom hiring centres, whereas the variables namely, education, innovativeness, management orientation, mass media exposure and extension participation of farmers had significantly contributed in developing favourable attitude

of farmers towards custom hiring centres. It could be concluded that education, innovativeness, management orientation, mass media exposure and extension participation of farmers have synergic effect on one another influencing the extension functionaries in developing a favourable attitude towards custom hiring centres. The R²value of 0.616 indicates that, all the ten independent variables chosen for the research study have contributed to the tune of 61.60 per cent in developing favourable attitude towards custom hiring centres.

Table 3: Extent of contribution of profile characteristics on the attitude of farmers towards custom hiring centers (n=210)

Sl. No.	Profile characteristics	Regression co-efficient (b)	Standard error of Regression co-efficient	't' value
1.	Age	0.367	0.287	0.780 ^{NS}
2.	Education	0.368	0.925	2.510*
3.	Land holding	0.485	0.481	0.990 ^{NS}
4.	Annual income	0.689	0.386	0.560 ^{NS}
5.	Location from custom hiring centers	0.120	0.019	0.150 ^{NS}
6.	Farming Experience	0.367	0.289	0.780 ^{NS}
7.	Innovativeness	0.248	0.911	3.660**
8.	Management orientation	0.357	0.861	2.410*
9.	Mass media exposure	0.200	0.411	2.050*
10.	Extension participation	0.306	0.916	2.990**

NS= Non-significant; * Significant at 5%; ** Significant at 1%; $R^2 = 0.616$

4. Constraints encountered by farmers in custom hiring centers

Nearly three-fourth (74.28%) of the farmers had the constraint of the non availability of machinery during peak season, while more than one-fourth of the farmers had the constraint of non availability of crop wise implements in

custom hiring centres (29.04%), high rental costs for the farm machineries (28.09%) and poor condition of farm machineries (25.23%) (Table 4). Less number of farmers had lack of awareness about available machinery and services (17.61%) and non availability of implements for horticulture crops in custom hiring centres (14.76%).

Table 4: Constraints encountered by farmers in custom hiring centers (n=210)

Sl. No.	Constraints*	Farmers	
		No.	Per cent
1	Non-availability of machinery during peak reason	156	74.28
2	Crop wise implements are not available in custom hiring centers	61	29.04
3	High rental costs of farm machineries	59	28.09
4.	Poor condition of machinery	53	25.23
5.	Lack of awareness about available machinery and service	37	17.61
6	Non availability of machinery for horticulture crops in custom hiring centers	31	14.76

*Multiple response

Conclusion

The results revealed that a vast majority of the farmers (81.89%) had favourable/ more favourable attitude towards custom hiring centres. Education, innovativeness, management orientation, mass media exposure and extension participation of farmers had significantly contributed in developing favourable attitude of farmers towards custom hiring centres. Further, the results also revealed that nearly three-fourth (74.28%) of the farmers had the constraint of the non-availability of machinery during peak season.

Sufficient number of farm machineries should be purchased by the custom hiring centres and be made available to the farmers during the peak season. The information on latest farm equipment and machineries available at custom hiring centres should be provided to the farmers by the extension functionaries in the extension programmes and also may be published/broadcasted/telecasted through mass media by the concerned agency so that farmers develop more favorable attitude towards custom hiring centres, leading effective utilization of farm machineries and services at the custom hiring centres.

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