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Opportunities and Threats of Custom Hiring Centre in Farm Mechanization

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ABSTRACT

Establishment of Custom Hiring Centre (CHC) in farm mechanization is a boon for farmers especially for the small and marginal farmers to combat the labour scarcity. Thus, an extension study was taken up with an objective to know the opportunities and threats in CHC in farm mechanization. About 30 Custom hiring centres located in five sub divisions of the district were selected purposefully for the study. The respondents selected for the study were 30 each from CHC owned farmers, hired farmers and non-hired farmers, thus total sample size was 90. An exploratory research design used for the study. Results revealed that cent per cent of the respondent farmers perceived labour scarcity and high wage rates as the opportunity to establish custom hiring centers. About ninty five per cent farmers perceived the disappearance of cattle for field operations as an opportunity for CHCs. Govt. schemes and subsidy on farm machinery for farmers perceived as opportunity by the 93.33 per cent of the respondent farmers . Cent per cent of the respondent farmers perceived small land holdings as a threat for establish CHCs, high initial investment perceived as threat by the 97.78 per cent farmers, 94.44 per cent farmers perceived the farmers migration to other sectors as a threat and lack of trained personnel for repairs as threat by 91.11 per cent. Farmers suggested that at least one CHC should be established by the Government at mandal level so the price of custom hiring of agricultural machinery is fixed and low as compared to that offered by private CHCs. Policy makers may consider the weaknesses to formulate solutions for these problems and consider the strengths for further improvement in promotion and establishment of CHCs.

Key Words: Agriculture, Machines, Power, Farm tools.

INTRODUCTION

Agricultural mechanization implies the use of various power sources and improved farm tools and equipment, with a view to reduce the drudgery of the human beings and draught animals, enhance the cropping intensity, precision in metering and placement of inputs and timelines of efficiency of utilization of various crop inputs (seed, chemical, fertilizer, irrigation, water etc.) and reduce the losses at different stages of crop production. Mechanization of farm activities is the need of hour to increase production and productivity. Though subsidy is being provided for farm machinery, due to prohibitive cost of farm machinery all farmers may not come forward to own them. Hence, establishment of Custom Hiring service Centre (CHC) is required to resolve the labour scarcity and to improve the farm machinery a boon for farmers especially for the small and marginal farmers. CHCs are basically a unit comprising a set of farm machinery, implements and equipment meant for custom hiring by farmers. Though certain implements and equipment are crop specific, the traction units like tractors, power tillers etc., and self-propelled machinery like combine harvesters etc., are used in common. Therefore, an ideal model envisaged in this project comprise farm machinery that are commonly used for tillage operations for all crops, multi crop equipment and

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Table 1. Particulars of Sample selection.

Sr. No	Sub-Division	Mandal	Villages selectec	Owned farmers	Hire farmers	Non Hire farmers	Total
1	Palakonda	Palakonda	Ampili	3	3	3	9
		Burja	Singannapeta	3	3	3	9
2	Rajam	Rajam	MJ Valasa	3	3	3	9
		Vangara	R.Gummada	3	3	3	9
3	Srikakulam	Gara	Gara	3	3	3	9
			Srikurmam	3	3	3	9
4	Tekkali	Kotabommali	Regulapadu	3	3	3	9
		Nandigam	D G Puram	3	3	3	9
5	Ranastalam	Ranastalam	Velpurai	3	3	3	9
		G Sigadam	G Kancharam	3	3	3	9
		Total		30	30	30	90

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a minimum of crop specific machinery (Sharma and Singh, 2020).

The CHC shall have to be located in a place where by and large small land holdings are located within a radius of 5 to 7 km. This will reduce the transport cost and time of transport of agricultural machinery. In other terms, one CHC is expected to cater to 4/5 villages and therefore, a common place equidistant from the villages catered is advisable. Criteria for selection of the village to establish the farm machinery banks: (a) Low ratio of farm power availability. (b) Low number of tractor population (c) Small & marginal operational Holdings (d) Less productivity of food grains but potential to enhance productivity. Keeping this in view, an extension study has been taken up to know the opportunities and threats in CHC in farm mechanization.

MATERIALS AND METHODS

Selection of the respondents

The study conducted in Srikakulam district of Andhra Pradesh and 30 Custom hiring centers located in five sub divisions of the district were selected purposefully. The respondents selected for the study were CHC owned farmers, hired farmers and non-hired farmers each 30, thus total sample size was 90.

Interview schedule developed for the study and data were collected and analyzed with the use of appropriate statistical tools.

RESULTS AND DISCUSSION

The data (Table 2) revealed that cent per cent of the respondent farmers perceived labour scarcity and high wage rates as the opportunity to establish custom hiring centres. This was evidenced with the findings of Mohanty and Bhuyan (2020) that mechanized weeding can produce large reductions in the weeding costs and significant reductions in labour time, whereas hand weeding (95.55% farmers) perceived the disappearance of cattle for field operations as an opportunity for CHCs. Govt. schemes and subsidy on farm machinery for farmers perceived as opportunity by the 93.33 per cent of the respondent farmers. It has been in tune with results that the majority (75%) of the farmers had moderate perception towards CHS of Kisku *et al* (2022). It is the time to form cohesive groups which could be avail the Govt. subsidy and bank credit to establish the CHC to mitigate the labour scarcity. Syed Mazaril *et al* (2017) farmers opined that adoption of mechanization not only reduces the drudgery, reduces cost of cultivation but also increases more returns per unit time and area.

Based on preliminary discussion with the experts, officials, owners, dealers the following Criteria considered for SWOT Analysis of CHCs.

Sr. No	Criteria	Sr. No	Criteria
1	Establishment of CHCs,	7	Field suitability for CHC Machinery,
2	Availabilityof the equipment,	8	Depreciation of the machinery in CHC,
3	Cost of the machinery,	9	Decision empowerment while establishing CHCs,
4	Source of the machinery.	10	Repairs and maintenance of farm machinery
5	Procurement of the machinery,	11	Profitability of CHCs
6	Suitability of the machinery offered for CHCs,	12	Promotion of CHCs

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Table 2. Opportunities as perceived by the farmers

Sr. No	Perceived item	Frequency	Percentage
1	Labour scarcity and higher wages	90	100.00
2	Disappearance of cattle for field operations	86	95.55
3	Govt. schemes and subsidy on farm machinery for farmers	84	93.33
4	Covering more area/work per day	67	74.44
5	Diversified cropping systems	66	73.33
6	Availability of strong SHGs and farmer FPOs	57	63.33
7	Availability of the machinery	54	60.00
8	Dept. officials facilitates the farmers to take decisions for Selection of machinery company	51	56.67
9	It can be used for other purposes (multiple purposes)	45	50.00
10	No import duties and taxes on farm machinery	27	30.00

It can be gleaned (Table 3) that cent per cent of the respondent farmers perceived small land holdings as a threat for establish CHCs, High initial investment perceived as threat by the 97.78 per cent farmers, 94.44 per cent farmers perceived the farmers migration to other sectors as a threat and lack of trained personnel for repairs as threat by 91.11 per cent. To sustain and maintenance of CHCs Govt support for grant to meet the initial high investment and time to encourage the cooperative farming and may establish CHC maintenance centres with trained and skilled persons for smooth running of the CHCs. Verma *et al* (2016) reported that In Punjab, about 91 per cent of area under paddy cultivation is harvested by combines and generally not fed to the animals whereas, paddy straw has some end uses in areas like briquetting, bedding for ruminants, thermal power generation, liquid and gaseous fuel. Despite several uses of paddy straw, major portion goes as waste and is generally burnt in fields because of its availability in loose form scattered on the farms. Therefore, creation of CHC was required to be established so that farmers can make use of machines available at the CHC at reasonable hiring charges instead of purchasing every machine at individual level. Singh *et al* (2013) reported that custom hiring system is better for the smaller farmers for availing non-farm employment opportunities.

Table 3. Threats as perceived by the farmers

Sr. No	Perceived item	Frequency	Percentage
1	Small land holdings	90	100.00
2	High initial investment	88	97.78
3	Farmers migrating to other sectors	85	94.44
4	Lack of trained personnel for repairs	82	91.11
5	Unavailability of spare parts in time	81	90.00
6	Lack of group cohesion for longer periods	80	90.00
7	Delayed supply by the dealers	76	84.44
8	Taking too much time for repair	74	82.22
9	Escalation of fuel charges	70	77.78
10	Frequent problems during farm operation	65	72.22
11	Mandatory for certain machines which are not required	55	61.11
12	Seasonal work	45	50.00
13	Decisions dominated by the dealers while selecting the equipment	40	44.44
14	Climate changes at the time of different operations	27	30.00

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Suggestions given by the farmers

A government custom hiring centre should required at mandal level, so the price of custom hiring of agricultural machinery is fixed and low as compared to offers by private CHCs.

Training relating to farm machinery and equipment should be given to the farmers and artisans. The farm machinery should be tailored to feasable for different types of soil and operations Technical know-how should be provided to the farmers with respect to appropriateness of farm machinery for the situation and for its proper use. Standardization and quality-marking centres of farm equipment should be established in potential areas of the country. Social audit also required for the sanction and maintenance of CHC units.

CONCLUSION

Policy makers may consider the threats and formulate solutions for these problems and consider the opportunities for further improvement in promotion and establishment of CHCs. Government should establish custom hiring centres atleast at mandal level, so the price of custom hiring of agricultural machinery is fixed and low as compared to offers by private owner of machinery.Take the measures to provide trainings relating to farm machinery and equipment should be imparted to the skilled personnel, farmers and artisans.

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