RESEARCH PAPER

Attitude of rice farmers towards Green Army Labour Bank (GALB) and agricultural mechanization

■ **Sachu Zachariah John, A. Prema, Binoo P. Bonny and P.K. Sureshkumar**

ABSTRACT

Agriculture in Kerala is faced with the agrarian crisis of farmers and farm labourers leaving the sector. The worst hit is rice production which has been the main employment provider for rural population in the state. Green Army Labour Bank (GALB) fostered by the local body of Wadakkanchery Block in Thrissur district of Kerala was organised on the lines of Food Security Army (FSA) of Kerala Agricultural University and started functioning from 2008. It was conceptualised as an efficient work force in the form of labour bank equipped with modern farm techniques and has succeeded in infusing modern methods into conventional farming especially in rice through mechanisation and other labour-saving techniques. Paper describes the results of a systematic study taken upto assess the attitude of rice farmers towards GALB and mechanization in rice. Attitude of rice farmers towards GALB was measured using Likert's summated rating method. Responses from a sample of forty randomly selected rice farmers from the study area was used. Mean attitude score for the sample was 52.25 which indicated overall positive attitude to GALB and farm mechanization. It indicated high reputation of the GALB members among the farmers. Ninety-five per cent of farmers agreed that they preferred GALB for farming operations as GALB showed better efficiency in farm operations. There was also complete agreement among farmers that farming wasmore remunerative and easier with machines compared to manual practices. Hence, there is good scope for mechanization of field operations in other crops and need to be extended throughout the state.

KEY WORDS : Green army labour bank, Farmers' attitude, Food security army, Agricultural mechanisation

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Kerala is faced with the agrarian crisis of farmers and farm labourers leaving agricultural sector. According to the 2011 census, there has been a record reduction in the number of farmers by over 8.5 million in the past decade. Also, there has been a steep fall in the share of agriculture and allied sectors in the State Domestic Product (SDP) from 22 per cent (1999-2000) to 8.33 per cent (2014-15). Prabhakar *et al.* (2011) noted that proportion of agricultural workers to the total workers has been declining over the years since 2001 while the corresponding ratio of the secondary and

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tertiary sector is on the rise. The worst hit is rice production which has been the main employment provider for rural population in the state. High volatility of market price of agricultural products, scarcity and high cost of labour have resulted in an unfavourable benefit cost ratio. Moreover, younger generations are not attracted towards rice farming mainly due to lack of life security, drudgery in farming operation and lack of social accreditation to farming job and lack of social security (Jayakumaran, 2012). Even though mechanization has evolved as the remedial measure, lack of skilled and trained personnel, insufficiency of public and private hiring services and lack of repair facilities operate against its widespread adoption. Therefore, it is essential that a strategy integrating the protection of interests of farmers as well as labourers is needed to reverse the present declining trend in rice area and production. The strategy should focus on enhancing the net income of rural labourers by providing more days of employment and to increase the net income of the farmers by curtailing the cost of production.

It was in this back drop an initiative called Food Security Army (FSA) was taken up by Kerala Agricultural University. It has been conceptualized as an efficient work force in the form of labour bank for the state for achieving food security and was implemented in different parts of the state under different names. These interventions aimed to organize, train and assure steady supply of labour and credit support to the farmers. It is presumed to ensure better living conditions both to farmers and farm labourers. Green Army Labour Bank (GALB) fostered by the local body of Wadakkanchery block in Thrissur district of Kerala was organized on these linesand started functioning in 2008 as a self-sustaining group of skilled labour. The trained members of this group are equipped with modern farm techniques and farm machineries. They tried to infuse modern methods into conventional farming especially in rice through mechanisation and other labour-saving techniques.

Attitude which forms the mental disposition of a person towards various aspects of GALB and use of machineries defines the acceptance or rejection of the process. Therefore, it is of paramount importance to have an empirical measure of farmers' attitude to evolve GALB policy interventions and programmes. It was in this back drop a systematic study was taken upto assess the attitude of rice farmers towards GALB and mechanization in rice and the results are presented here.

METHODOLOGY
Locale and sampling :
The study was conducted in Thrissur, the third most urbanized district among the 14 districts of Kerala (PLS 2013). Wadakkanchery block was purposively selected from the 16 blocks of Thrissur as GALB was first implemented in rice under this block. The study locale is presented as Fig. A.
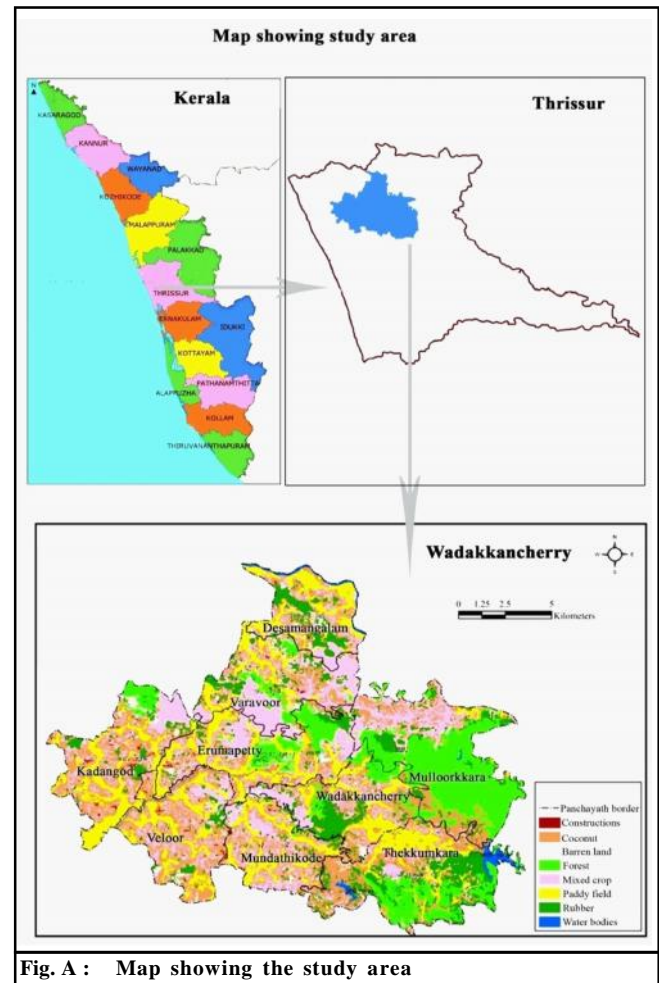

Fig. A :   Map showing the study area

Rice is the largest single crop grown in the area and covers 3074.80 ha spread in the nine grama panchayats under the block. List of rice farmers of the block was collected and 40 rice farmers who cultivated rice during the last two consecutive seasons prior to survey were randomly selected for the study.

Attitude scale :

Attitude of rice farmers towards GALB and farm mechanization was measured using the scale constructed for the purpose using Likert's summated rating method (Likert, 1932). Thirty statements that reflected various dimensions of the perceived disposition of user-farmer towards Green Army and its activities were selected. The selection was based on literature review and discussions with experts and officers working in the area. Dimensions selected covered easiness to avail services, timeliness of operations, impact on farm resources, effect on input use and related issues, reduction in labour drudgery, farming efficiency and profitability. Care was taken that the items dealt with issues directly related to the rice production of the block. The items were edited using informal criteria suggested by Wang (1932) and Edwards (1957) and expert rating. After the elimination of ambiguous and redundant ones, 20 statements that covered negative and positive items were selected. Pre-testing was done on non-sampling population of 30 rice farmers in Ollukkara block. Item-total correlation, a standard psychometric technique by Beus and Dunlap (1994) was used to investigate the appropriateness of these items in creating the scale to measure the attitude

by combining responses of all the items. It helped to evaluate internal consistency and uni-dimensionality of responses to items. The results given as Table A indicated that responses to only 13 items exhibited strong degree of internal consistency at 1 per cent and 5 per cent levels of significance. These 13 items which included 2 negative statements and 11 positive statements were combined into a summated rating scale that ranged from 13 to 65 score. The scoring was done on a five-point continuum ranging from 1-5 (Strongly disagree, Disagree, Undecided, Agree, Strongly agree) for positive statements and the rating was reversed for negative statements. Cumulative score of each respondent for all the statements was constructed from the attitudinal scale, assigning equal weightage. High scores indicated positive attitude and low scores reflected a negative attitude.

Validity and reliability :

Content validity assessed through expert rating gave the presumed representativeness or sampling adequacy of the content to cover full spectrum of issues addressed by GALB. Co-efficient alpha was used to measure reliability of the scale and it recorded a value of 0.89 which indicated high degree of consistency.

ANALYSIS AND DISCUSSION

Mean attitude score for the sample was 52.25 which indicated overall positive attitude to GALB and farm mechanization. This indicated the high reputation of the GALB members among the farmers. There was a cent per cent agreement from the farmers' side to that, the GA members works should be extended to other crops. Also, majority of farmers (95 %) agreed that they prefer GA for farming operations since GA is having higher reputation. There was a complete agreement from the farmers towards mechanization on the point that farming is easier with machines than manual practices, machine operations are more remunerative and hence there is good scope for mechanization of field operations in other crops as well.

Based on the attitude score expressed as the deviation from the mean, the respondents were classified as low, medium and high category. Respondents whose total score was below the value of the difference between Mean total score and Standard Deviation were classed as low attitude category, respondents whose total score fell between Mean total score ± Standard deviation were categorised as medium attitude and respondents whose

Table A : Item-total correlations of items selected for attitude scale		
Sr. No.	Item code	Item-total correlation
1.	A	0.03
2.	B	0.06
3.	C	0.59**
4.	D	0.03
5.	E	0.50**
6.	F	0.64**
7.	G	0.65**
8.	H	0.58**
9.	I	0.61**
10.	J	0.07
11.	K	0.08
12.	L	0.37*
13.	M	0.69**
14.	N	0.55**
15.	O	0.58**
16.	P	0.42**
17.	Q	0.72**
18.	R	0.04
19.	S	0.09
20.	T	0.24*

* and ** indicate significance of value at P=0.05 and 0.01, respectively

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Table 1 : Items selected for attitude scale of farmers towards GALB and farm mechanization		
Sr. No.	Items selected for attitude scale	Item Code
1.	GA members are more sincere in their work	C
2.	GA members are strictly following time norms	E
3.	GA members are showing good group synergy	F
4.	GA members are keeping their promise/coming on days as promised	G
5.	GA members are having good knowledge about cultivation practices	H
6.	There is involvement of people from all sectors in farming after GA	I
7.	GA members take initiative in crop protection and after cultivation	L
8.	Farmers cultivation activities should be supported with Green Army	M
9.	Green Army has more reputation than agricultural labourers	N
10.	Green Army works are not available for crops other than rice	O
11.	Scope of mechanization of farms is attributed to poor labour culture	P
12.	Farming is easier with machines than manual practices	Q
13.	Machine operations are more remunerative	T

Table 2 : Distribution of respondents based on attitude towards GA members		
Attitude level	Number of respondents	Percentage
Low	8	20.00
Medium	25	62.50
High	7	17.50
Total	40	100.00
	Mean = 52.25 SD = 3	

total score was above the value of mean total score added to standard deviation had high attitude level. The results are presented as Table 1 which indicate that majority, 62.50 per cent of the respondents were in medium category. Moreover, there is an almost equal distribution of respondents in both low (20%) and high (17.5%) categories.

In order to counter the labour scarcity, high labour cost and drudgery in human labour, partial to complete mechanization in rice farming can be promoted as indicated by the high positive attitude of farmers to GALB and farm mechanization. It also has the potential to combat factors like inadequate access to the finance to purchase the implements/ machinery, lack of skilled and trained personnel for repair, maintenance and working of agricultural machinery, insufficiency of public and private hiring services, lack of repair facilities, lack of suitable machinery for varying geography of rice fields operate that works against the widespread adoption of farm mechanization.

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