

RESEARCH PAPER

Role of women entrepreneurship in agro processing centre-A case study in Tumkur district

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ABSTRACT

Agro processing could be defined as set of techno-economic activities carried out for conservation and handling of agricultural produce and to make it usable as food, feed, fibre, fuel or industrial raw material. The potential for agro-industrial development in the developing countries is largely linked to the relative abundance of agricultural raw materials and low-cost labour in most of them. Despite their important contribution to overall and agricultural development, agro processing industries in India is still at infant stage. In the regard, an Agro processing centre (APC) located at Tumkur district was identified for the purpose of the study. The study was conducted in Kuchangi village in Tumkur taluk of Tumkur district during 2015. SHG members of Sri Lakshmidevi Sthree Shakthi Sangha in Kuchangi village were interviewed using a pre-tested schedule. The results revealed that there is positive growth rate in savings of APC members, the highest growth rate was achieved in 2014 *i.e.*, 155 per cent and the per capita savings of members also recorded an increase during the study period. From this, it can be concluded that with a small initial investment, APC will not only provide additional and regular income to SHG but also provide employment and women empowerment.

KEY WORDS : Role of women, Processing centre, Agro-industrial, APC

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Agriculture provides raw materials for agrobased industries employs over half of the workforce and is source of livelihood for two-third of the population. Stagnation in productivity in Indian agriculture deceleration in public spending and poor composition of public expenditure characterize agricultural scenario in the country. The concept of Agro Processing Centre (APC) is to process the grains at village level to

substantially enhance the income of the farmers. These complexes consist of two or more machines for processing at farm/village level. The machines are mini rice mill, baby oil expeller, small attachakkies and large attachakkies with scouring machine, masala grinder, penja, cleaner and feed mill along with construction and installation costing approximate Rs. 25-30 lakhs.

In India, the processing units based on grains, horticultural products, livestock products, fish have ample opportunities. India has produced a record of 252.23 million tonnes of food grains which included wheat (94.04 MT), rice (103.36 MT), coarse cereals (37.78 MT) and pulses (17.06 MT) in the year 2015-2016 (The Economic Times, 2017). India ranked twelfth in the World in exports of food and food products in 2015. The contribution of the food processing sector to the Gross Value Addition (GVA) in 2014-15 amounts to USD 22 billion at 2011-12 prices. In 2014-15, GVA in food processing grew by 5.78%. The share of food processing sector in GVA of manufacturing sector was 8.6 per cent in 2014-15. Major industries constituting the food processing sector are grain milling, sugar, edible oils, beverages, fruits and vegetables processing and dairy products. The number of registered food processing units has increased from 37,175 in 2012-13 to 37,445 in 2013-14. Food is the biggest expense for an urban and rural Indian household constituting share of 38.5 per cent and 48.6 per cent of the total consumption expenditure of households. In developed countries, upto 14 per cent of the total work force is engaged in Agroprocessing sector directly or indirectly. However, in 2012-13 only about 3 per cent of the work force finds employment in this sector revealing its underdeveloped state and vast untapped potential for employment in India. Agro processing sector can make India a major player at the global level for marketing and supply of processed food, feed and a wide range of other plant and animal products. However, it has been more important in increasing emphasis on nutritional food security (<http://www.makeinindia.com/sector/food-processing>).

Under the aegis of Indian Council of Agricultural Research, New Delhi, The All India Coordinated Research Project on Post Harvest Technology was launched and has been working on establishment, monitoring and promotion of Agro Processing Centre's (APC). AICRP on post harvest technology works with the following mandates:

- To develop location and crop/commodity specific post harvest technologies for minimization of quantitative and qualitative losses of produce in agriculture and allied sectors.

- To adapt and develop improved post harvest processes and equipments for value addition to food grains and other produce at rural threshold for higher income and generation of rural employment.

- To develop processes and equipments for economic utilization on bio-wastes and by products.

- To conduct operational research and multi-location trials on developed technologies to identify technical, financial, managerial and social constraints for better market acceptability to technologies.

- To establish need based Agro Processing Centres to assure better economic returns to the farmers from their marketable surpluses.

- To assess, refine and transfer proven technologies.

The purpose of establishing Agro Processing Centre's is to reduce post harvest losses by establishing the processing unit in the production catchment itself and also to generate income and employment in rural areas through adoption of proven technologies and equipment. Establishment of new Agro Processing Centre and monitoring of existing processing centers are being undertaken by several AICRP on PHT Centre's across India.

The post harvest technology scheme of University of Agricultural Sciences, Bangalore has established Agro Processing Centres for processing and value addition of agricultural products at the production sites. This is being done on a participatory approach involving local institutions, NGO's and Self help Groups of women. During the 10th plan period, Bangalore centre established nine new APCs in Bangalore rural, Hassan, Tumkur, Mandya and Chitradurga districts of southern Karnataka. Out of these APC's, two APCs are managed by self help groups of women. The APC in Tumkur taluk was selected for the study as it was run by women members and the success pattern was inspiring.

The specific objective of the study was to examine socio-economic profile of members of self help group involved in Agro Processing Centre and performance of SHGs in managing APC.

Banerjee (2002) in his study conducted at various parts of South India reported that 49.00 per cent of the

group members belonged to poorest of the poor category and was represented mainly by landless laborers with seasonal employment. About 40.00 per cent of them were poor and they had income from other sources in addition to the wage earnings. The remaining 11.00 per cent of the group members were land owners with activities such as dairy, poultry etc.

Chengappa (2004) reported that processing of farm products offers great scope for conversion of farm produce to consumer commodities and in the process reduces wastage, increases shelf-life resulting in value addition and higher income transfer to the farmers from different classes of consumers, as the processed commodities have wider market.

Chitra (2011) in her study conducted at Kottayam district of Kerala revealed that three fourth (75.00%) of the Kudumbashree beneficiaries had high level of mass media exposure followed by 16.70 per cent and 8.30 per cent with medium and low mass media exposure, respectively. A significant percentage (45.00%) of the non-beneficiaries had fallen under medium level category followed by low (30.00%) and high (25.00%) category.

Devalatha (2005) in her study conducted in Gadag district of Karnataka revealed that 40.00 per cent of the respondents had studied upto high school, followed by 11.67 per cent each of them were having middle school level and college level education, while 4.16 per cent of them were having just primary school level education, 20.33 and 11.67 per cent of them were functionally literate and illiterates, respectively.

Gangaiah *et al.* (2006) defined SHG as an informal association of 10-15 women who have voluntarily come together for the business of saving and credit and it is a significant instrument in the process of empowerment.

Kumaran (1997) in the study conducted at rural areas of Tirupati blocks of Andhra Pradesh reported that, the mean age among the SHG members varied from 22 to 41 years.

Mehta (2012), defined Agro- Processing as a set of techno economic activities carried out for conservation and handling of agricultural produce and to make it usable as food, feed, fibre, fuel or industrial raw material.

METHODOLOGY

The present study was conducted in Tumkur taluk of Tumkur district and the description of the study area is given below.

Tumkur district profile :

Tumkur district is located in the eastern belt in the southern half of the State. It belongs to the Eastern dry zone with soils suitable for cultivation of most of the food crops. This district lies between the latitudinal parallels of 12° 45' North and 14° 22' North and the longitudinal parallels of 76° 24' East and 77° 30' East. Tumkur district is bounded on the north by Anantpur district of Andhra Pradesh, on the east by the district of Kolar and Bangalore and on the south by Mandya district and on the west and north-west by the districts of Hassan and Chitradurga.

Selection of the study areasample respondents and data collection :

The study was conducted in Kuchangi village in Tumkur taluk of Tumkur district during 2015. Agro Processing Centres (APCs) are an effective tool for women empowerment in rural and peri-urban areas. The APC's are managed by women members only and is successfully running from 2004 without any disputes and problems. Hence, Kuchangi village was selected purposively for the study.

SHG members of Sri Lakshmidevi Sthree Shakthi Sangha in Kuchangi village of Tumkur district was selected for the purpose of study. The data was collected with the help of pre-tested schedule prepared for the purpose during 2015. Five consecutive visits were made to study area to establish rapport with SHG members which helped to get reliable information from respondents. Each member was personally interviewed to study the socio-economic status of members and performance of SHGs in managing APC. Informal discussions and observations were also held to understand the respondents and the situation in detail, which in turn was helpful in better interpretation of the results in full context of Self help group.

Analytical tools and techniques employed :

To fulfill the specific objectives of the study, based on the nature and extent of data, the following analytical tools and techniques were used.

Descriptive statistics :

Descriptive statistics is the discipline of quantitatively describing the main features of collection

of information. Descriptive statistics was adopted to summarize the general characteristics of the SHG members, to determine the socio-economic status, resource structure, returns, profits etc. Simple averages and percentages were used to compare, contrast and interpret results meaningfully.

ANALYSIS AND DISCUSSION

The general information regarding year of establishment, number of members, main functions of SHGs, periodicity of group meetings and attendance, amount of savings, periodicity of election of managing member, repayment period, and amount of lease are presented in Table 1.

The SHGs are formed mainly to obtain benefits. The concept of establishing Agro Processing Centres in rural areas was developed at the National level by the Indian Council of Agricultural Research, New Delhi during late 1980's. As a result pilot –scale models were established through its Research Centres of All India Co-ordinated Research Project on Post Harvest Technology. The Agro Processing Centre at Kuchangi is one such centre established in Tumkur taluk with the help of SHG. Agro Processing Centre was established in the year 2004. The APC in Kuchangi village of is managed by Sri Lakshmidēvi Sthree Shakthi Sangha. Interestingly, this APC is running successfully since its inception (2004). There are 11 women members in the self help group and one member is nominated among them to run processing centre and that member manages the centre for one year. She has to pay Rs.1200 per month to the SHG and the maintenance charges of

processing centre is beared by the managing member and the rest of the income derived is utilized by the member.

The main functions performed by SHGs are savings collection, credit management, lending loans and running Agro Processing Centre. The self help group conducts meeting once in a week. In order to ensure, members participation in the meeting, penalty was collected for non-attendance. Rs.5 is the amount charged for not attending the meetings. Weekly savings per member is Rs. 10 and each member can avail loans for different purposes but repayment had to be made regularly based on income availability. The repayment period was within 1 year.

Socio-economic characteristics of SHG members:

The socio-economic characteristics of SHG members are presented in the Table 2. This includes information with respect to age, education, marital status, family size, occupation, land holding, income of the family, and material possession and extension participation.

It could be observed from the table that majority (90.90 %) of members in SHG belonged to middle age *i.e.* (>30 and below 50), and remaining 9.10 per cent of the members belonged to old age (50 and above) and there were no members less than 30 years of age in the group. about 36.36 per cent of the members in SHG were illiterates, 18.18 per cent members had education upto high school, followed by middle school (18.18 %), and primary school (18.18 %). It was surprising to know that only 9.10 per cent of members pursued PUC. Taking up the responsibility to run the family, incentives available

Table 1 : General information of self help group involved in Agro Processing Centre in Tumkur taluk

Sr. No.	Particulars	
1.	Name of the Sthree Shakthi Group	Lakshmidēvi Sthree Shakthi Sangha
2.	Year of establishment	2004
3.	Number of members	11
4.	Main functions	Helps to save, use and grow. Advancing credit
5.	Periodicity of group meeting	Weekly
6.	Average attendance in group meeting	90.90 %
7.	Penalty for non attendance (in Rs.)	5
8.	Periodicity of election of managing member	1 Year
9.	Amount of savings per week (Rs.)	10
10.	Savings utilization	For advancing loans
11.	Loan repayment period	1 Year
12.	Amount of lease (Rs.)	1200 per year

from SHG like access to loan and information is the reasons for predominance of middle aged respondents. This situation might have evolved due to low financial

position of the family, poor education facilities during their childhood days, schools located in faraway places, negligence of elders for children's education and labour

Table 2 : Socio-economic characteristics of respondents in Tumkur taluk (n=11)			
Sr. No.	Particulars	Number	Percentage to the total
1.	Age (years)		
	>30 to 40	5	45.45
	>40 to 50	5	45.45
	>50 to 60	1	9.10
	Total	11	100.00
2.	Education		
	Illiterate	4	36.36
	Primary	2	18.18
	Middle School	2	18.18
	High School	2	18.18
	PUC	1	9.10
	Total	11	100.00
3.	Marital status		
	Married	10	90.91
	Widow	1	9.09
	Total	11	100
4.	Family size		
	Small (1-4)	2	18.18
	Medium (5-6)	7	63.64
	Big(>6)	2	18.18
	Total	11	100
5.	Occupation		
	Agriculture and allied activities	9	81.82
	Agril. Labour	2	18.18
	Total	11	100.00
6.	Land holding (acre)		
	Landless labourer	4	36.36
	Small (1 to 5)	3	27.28
	Medium(>5 to 10)	4	36.36
	Total	11	100.00
7.	Annual income of family (Rs.)		
	>10,000-20,000	1	9.10
	>20,000-30,000	5	45.45
	>30,000	5	45.45
	Total	11	100.00
8.	Material possession		
	Radio	4	36.36
	Television	11	100.00
	Computer	1	9.09
	Mobile	11	100.00
	Agril. Implements	5	45.45
	Own Building	10	90.91

requirement in their own farm.

It could be seen from table that majority (90.91 %) of SHG members is married and 9.09 per cent were widows. The reason might be the predominance of middle aged group members and girls were married at younger age in villages. The table also revealed that majority (63.64%) of women SHG members belonged to medium family, 18.18 per cent SHG members belonged to small family and rest were from big family. This might be due to their awareness regarding the increased cost of living and difficulties in maintenance of big family and they might have found it beneficial to have medium and small families to lead a better and comfortable life. The socio-economic status of members can be gauged by one's primary source of income. The members mainly pursued two occupations mainly agriculture and allied activities and Agricultural labour. Majority of members (81.82 %) are mainly dependant on agriculture and allied activities, remaining 18.18 per cent of members are basically agricultural labourers. This clearly indicates that majority of the members depend on agriculture as their primary source of income.

Land holding pattern could be observed from the table that 27.28 per cent of members were small farmers with one to five acres of land, 36.36 per cent of members belong to medium farmer category and rests were landless labourers. This indicates that the members were basically among economically weaker sections of the society.

The table revealed that 45.45 per cent of members had an annual income more than Rs. 30,000 including SHG income, followed by 45.45 per cent SHG members belonged to income category of more than Rs. 20,000 and less than 30,000. And rest fall under the group with the income higher than Rs. 10,000 and less than Rs. 20,000. This might be attributed to poverty and small holdings of respondents and their dependency on agriculture.

The table revealed that all the members own television sets and mobile set. Majority of members (90.91 %) live in their own building, 45.45 per cent of members possess agricultural implements showing their occupation and 36.36 per cent of members own radio at their house and only one member has a computer at home. This indicates their income stability after joining SHG and their standard of living is considerably changing after the establishment of Agro Processing Centre (Table 2)

The table revealed that majority of the members were also members of Dharmasthala Gramabhivridhi Yojane, followed by Milk Producer Co-operative Society (45.45 %) and Gram Panchayath (18.18%). This clearly indicates that institutional participation of the sample respondents was better, because of awareness about the social organizations prevailing in the local area. It could also be inferred from the table that all (100 %) the members were guided by Agricultural extension officers and 27.27 per cent of members contacted University scientists for seeking guidance. As majority of them were engaged in agriculture in the study area, after joining SHG they were aware of Agricultural officers and university scientists working in that area and consulted them to get solutions for their problems. It can be seen from the table that 100 per cent of the respondents participated in group meetings, education tour, Agricultural exhibitions, followed by trainings (90.91 %) and field visits (81.82 %).

It is interesting to note that normally women hesitate to participate, because of the male member's presence. Further women, most of the times are busy with household work and farm activities, but in Kuchangi the SHG members are more innovative, and their interest to participate in extension activities are commendable. Most of them were not aware of extension activities before and now they eagerly participate in all the activities. Group meetings have helped them to build their confidence and attending agricultural exhibitions has brought a sort of trust on Agriculture extension officers and their instructions are followed without fail. Mass media are known for their accuracy, consistency, security, timeliness, completeness, conciseness, reliability and value-addition. TV was the most popular massmedia among members. Majority of respondents viewed agricultural programmes on TV regularly, and few had access to newspapers which might be due to their interest.

The details regarding participation and access to agricultural information from various extension agencies is furnished in Table 3.

Performance of SHGs managing APC :

To analyze functional performance of APC, indicators like savings, loan disbursement and recovery were considered and are discussed below.

Savings of members of APC :

The yearly savings has marked a positive growth between 2010 to 2014 (Table 4). There is 155 per cent increase in group savings from Rs. 4658 to Rs. 36,432 during 2010 and 2014. The per capita savings of APC members increased from Rs. 423.45 to Rs. 3312. This was mainly because the additional income generated by APC was given as additional loans to members other than bank and interest is added to group savings.

Loan disbursement and recovery performance :

The particulars of members availing loan indicates that 10 out of 11 members availed loan, and Rs. 2,80,000 is disbursed as loan in 2014 (Table 5). Thus, performance

of APC in terms of loan advance is satisfactory as more number of member's availed loan (90 %) and Rs. 92,000 is loan outstanding which constitutes to 32.86 per cent.

Conclusion :

The study clearly indicates that after establishment of Agro Processing Centres, SHGs are relatively better with respect to loan disbursement, recovery and savings. Not only the members of SHG but the non-members are also benefitted directly and indirectly by the APC. Hence, Agro Processing Centres started as pilot project by the University must be taken as an example and women must be encouraged to establish more units on their own and involve themselves in income generating activities.

Table 3 : Participation and access to agricultural information from various extension agencies by members of Agro Processing Centre in Tumkur taluk

Sr. No.	Participation in	Number	Per cent
1.	Institution		
	Milk Producer Co-operative Society	5	45.45
	Dharmasthala Gramabhivridi Yojane	8	72.73
2.	Gram Panchayath	2	18.18
	Extension contact		
	Agril. extension officers	11	100.00
3.	University Scientists	3	27.27
	Extension activities		
	Group Meeting	11	100.00
	Training	10	90.91
	Field Visit	9	81.82
	Education tour by SHG	11	100.00
4.	Agril. Exhibition	11	100.00
	Mass media communication		
	Newspaper	1	9.09
	TV(Watch agri related programmes)	9	81.82

Table 4: Pattern of savings of members of Agro Processing Centre from 2010 to 2014 in Tumkur taluk (n=11)

Sr. No.	Year	Savings amount (Rs.)	Per capita savings (Rs.)	Percentage increase over previous year
1.	2010	4658	423.45	-
2.	2011	7085	644.09	52
3.	2012	10,250	931.81	45
4.	2013	14,262	1296.54	39
5.	2014	36,432	3312.00	155

Table 5 : Loan disbursement and loan recovery during 2013-14 of self help group in Tumkur taluk (n=11)

Sr. No.	Particulars	Value
1.	Loans disbursed (No.)	10
2.	Amount disbursed (Rs.)	2,80,000
3.	Outstanding amount (Rs.)	92,000
4.	Outstanding amount (%)	32.86

Persistent efforts and continuous supervision with a small amount of investment can change economic picture of family.

It can be concluded that with a small initial investment, APC will not only provide additional and regular income to SHG but also provide additional employment and women empowerment. It also helps in improving standard of living and family welfare.

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