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## Women farmer producer company for increasing production and collective marketing of aromatic rice: A case study of tribal communities in Koraput district of Odisha

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#### Abstract

The most important economic sector in India is agriculture and this is the largest sector to provide employment to rural women. Agriculture persists as the central component of Odisha's economy and source of sustenance of rural people. Most commonly cultivated crops in the state are rice, pulses, oil seeds, jute, sugarcane, coconut and turmeric and one-tenth of the rice production in India is contributed by the state. Though women play a major role as farmers and producers, however their access to resources and opportunities to enable them to move from subsistence agriculture to higher value chains is much lower than men. One of the major shortcomings of the agricultural sector is to be found in the production, processing and marketing of agricultural products. Women farmers and entrepreneurs face a number of disadvantages as compared to men, including lower mobility, less access to training, market information, agricultural credit, crop loans and productive resources ultimately, they find it hard to maintain a profitable market niche. The challenge is to assure that women retain control over their production, processing, and marketing through producing a Women Farmers' Producer Company. The key objective of this paper is to identify the constraints and strengthen the Producer Groups for leadership, group management, value chain in post harvest, quality management and collective marketing in order to form a Producer Company for increasing production and collective marketing of aromatic and organic rice. The conceptual framework on which this paper is anchored is the role of rural women in aromatic rice production and management practices, capacity building through training, enhancing the decision making capacity of those rural women and to form a Producer Group for marketing of aromatic rice.

**Keywords:** Farmer producer company, producer group, aromatic rice, marketing, leadership

#### Introduction

The most important economic sector in India is agriculture. Around 68.9 percent of the population of India is rural, of those rural household, 72.3 percent population are engaged in agriculture as per census (2011) [1, 5]. This agriculture sector is the largest sector to provide employment to rural women so that more than quarter of the world's population is comprised of women farmer [4]. Nearly 77.3 percent of economically active rural women are engaged in agriculture as compared to 69.6 percent of all economically active men in the country. Agriculture persists as the central component of Odisha's economy and source of sustenance of rural people. Out of the total population of 4.19 crore in Odisha, 1.06 crore population in rural areas work in agriculture either as cultivator or agricultural labourer. Out of which more than 67 lakh are men and more than 39 lakh are women [5]. All these data showed that the role of women in agriculture and allied sector as cultivator and agricultural labourer is highly significant.

Odisha is an agrarian state as the majority of population depends on agriculture for their livelihood. Total cultivated land of Odisha is about 61.80 lakh hectares which constitutes about 39.69 percent of the total geographical area of the state. Most commonly cultivated crops in the state are rice, pulses, oil seeds, jute, sugarcane, coconut and turmeric. The principal crop rice, constituting more than 90 percent of total food grain production, recorded a bumper harvest of 96.4 lakh MT and productivity of 24.5 qtl/ha in 2019-20 [3, 6]. One-tenth of the rice production in India is contributed by the state. A comprehensive overview of rice in the state of Odisha is available in Das, 2012 [2].

Though women play a major role as farmers and producers, however their access to resources and opportunities to enable them to move from subsistence agriculture to higher value chains is much lower than men. One of the major shortcomings of the agricultural sector is to be found in the production, processing and marketing of agricultural products. Generally men take over production and marketing-even of traditional “women’s crops”-when it becomes financially remunerative to do so. These limitations reduce women’s effectiveness as performer in value chains and overall market effectiveness. In fact women tend to lose income and control as a product moves from the field to the market. Women farmers and entrepreneurs face a number of disadvantages as compared to men, including lower mobility, less access to training, market information, agricultural credit, crop loans and productive resources ultimately, they find it hard to maintain a profitable market niche. The challenge is to assure that women retain control over their production, processing, and marketing through producing a Women Farmers’ Producer Company. The objective of groups formation and the promotion of inter-group collaboration are to broaden the local economies-of-scale, strengthen the market and bargaining power of the farmers, enhance their access to support services and to enhance community participation and cooperation.

### Materials and Methods

The key objective of this paper is to identify the constraints and strengthen the Producer Groups for leadership, group management, value chain in post harvest, quality management and collective marketing in order to form a Producer Company for increasing production and collective marketing of aromatic and organic rice. The conceptual framework on which this paper is anchored is the role of rural women in aromatic rice production and management practices, capacity building through training, enhancing the decision making capacity of those rural women and to form a Producer Group for marketing of aromatic rice.

Training plays a crucial role in the development of human performance in a given situation as it provides a systematic improvement of knowledge and skills which in turn helps them to function efficiently and effectively in their given task on completion of the training. Training is a process of acquisition of new skills, attitude and knowledge in the context of preparing for entry into a vocation or improving ones productivity in an organization or enterprise [7].

In order to use the scarce resources of land, labour, capital and technical skills more efficiently, group forming can be considered as one of the efficient approach. By working together, women farmers can acquire knowledge on the scale economies of bulk acquisition and gain access to more stable trade agreement with suppliers. Group members have easy access to goods and services than individual. Since, most of the outside agencies are more willing to work in those areas where rural people are well organised in groups, the groups may draw additional support and fund in long run. Because from the donor perspective there are more advantages in using groups rather than individual as recipients of interventions like lower cost, resources can be rapidly and uniformly disbursed and get a better means of impact monitoring. For promoting skills such as enterprise development and management, groups can be used as learning platform and allows more people to reach out. It provides a channel for

information and mass education and reduces default through collective risk taking.

The project was implemented in four Gram Panchayats of Kotpad block in Koraput district. These project area were selected because of their relative importance in aromatic rice production. Around 1031 tribal women farmers, covering 30 Producer Groups, mostly involved in production and marketing of aromatic rice were selected to receive the training. The women farmers were organised into Producer Groups at the village level for increasing their bargaining power, access to resources and markets. Different trainings on leadership, group management, record keeping, post harvest, improved quality management, and collective marketing were provided to the leaders and Community Resource Persons of those Producer Groups to disseminate their learnings in their respective groups. Video production and dissemination was carried out for training the women on leadership, group management, book keeping and interventions in value chain. Four videos were produced (post harvest, quality management, leadership and group management) and also relevant videos were utilized as audio-visual means are cost effective and efficient methods of orientation for the women farmers.

A total of 10 members of Producer Company were provided training and exposure to the Board of Directors of Producer Company. The need and objective of Producer Company has been shared among the Producer Group members for collective marketing of aromatic rice. All the trainings were facilitated by the professional staff of Pragati a NGO selected under IRRI-ICAR-CIWA collaborative project. The training methods used were based on the need and capacity of the participants. The trainers used participatory processes and local language. After receiving training the women farmers of Producer Group practised aromatic paddy cultivation through SRI (System of Rice Intensification) method in group mode. Primary data were collected with semi-structured questionnaires based on interviews and also through participant observations from 30 randomly sampled women farmers of Producer Group. Different indicators used under the semi structured questionnaire are, access to seed, collective seed production and Producer Group dynamics, knowledge, attitude and practices. Both qualitative and quantitative data were collected and analysis was carried out in MS excel. These data and information were contextually analyzed to generate complete, meaningful and useful understanding of the whole process.

### Result and Discussion

The women farmers of the producer groups procured adequate quantity of aromatic paddy seeds from other sources apart from their own saved seeds well in advance. The other sources they preferred for seeds are mainly block level, NGO (Pragati), nearby village and locally in the village. Most of the participants procured paddy seeds from NGO (Pragati) (60%) followed by block level (23.3%) (Table.1).

**Table 1:** Sources preferred for paddy seeds by women farmers,

(N=30)

Sl. No.	Sources preferred for seeds	Frequency	Percentage (%)
1.	Block level	7	23.3
2.	NGO (Pragati)	18	60.0
3.	Nearby village	3	10.0
4.	Locally in the village	2	6.7

The women farmers are confident about communicating the new seed production technology and have replaced the traditional varieties with new varieties in last two years. The new paddy varieties used by them are, Kalajeera, Govindabhog, Basubhog, Geetanjali, Samudrabali, Lalbadshah and Dhalamali. These are the long duration aromatic rice varieties. The women farmers of producer groups cultivated these varieties in SRI (System of Rice Intensification) methods. They believe that, there is a demand for the seed produced by them or their groups due to high

yield and high market demand of aromatic rice. They prefer producing seed in a group over doing individually, as it gives more profit with less labour and investment. The women farmers have formed a Producer Company for processing and marketing of aromatic rice.

The women farmers of the producer groups faced several constraints during the whole process. The major constraints are lack of processing facilities, followed by delayed registration, finding traders and inadequate knowledge (Fig.1).

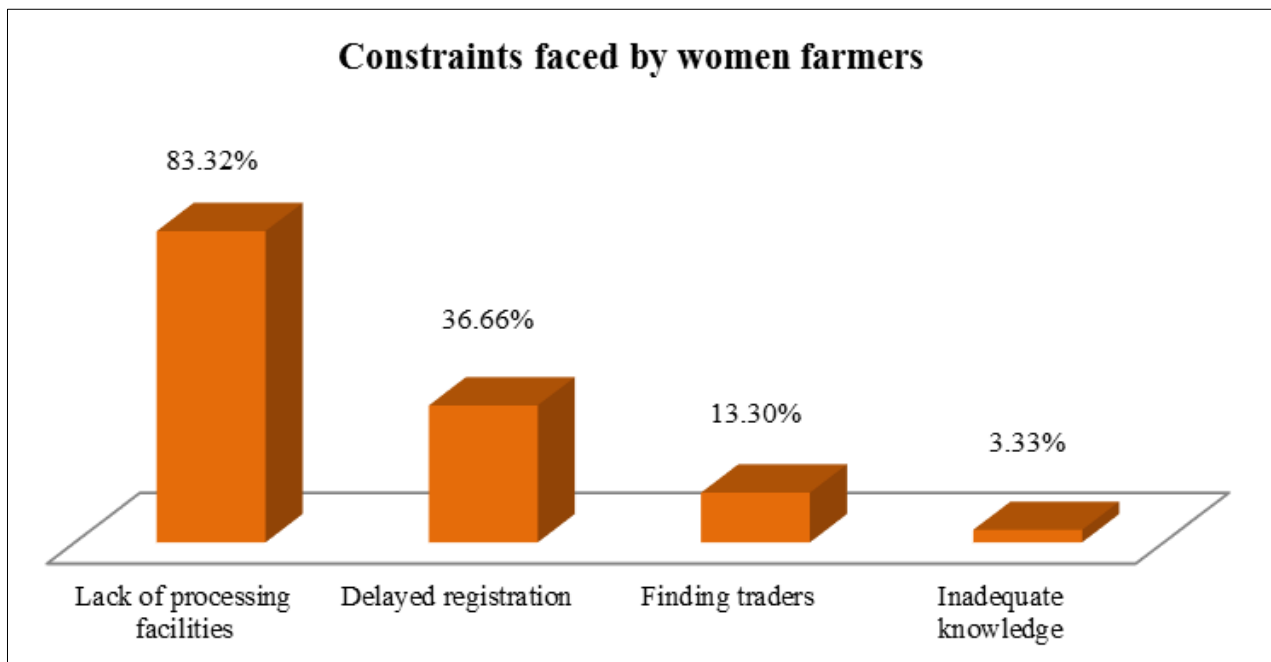


Fig 1: Constraints faced by women farmers of producer group

Women’s active involvement in decision making is considered as essential factor for rapid economic development of the country. The women farmers of producer groups were actively involved in paddy variety selection during last season though the same were not involved 5 years back. Around 53.3

percent of the respondents have suggested the variety to the family members whereas 46.66 percent has selected the paddy variety to be cultivated. This shows that the decision making capacity has been increased drastically in those women farmers.

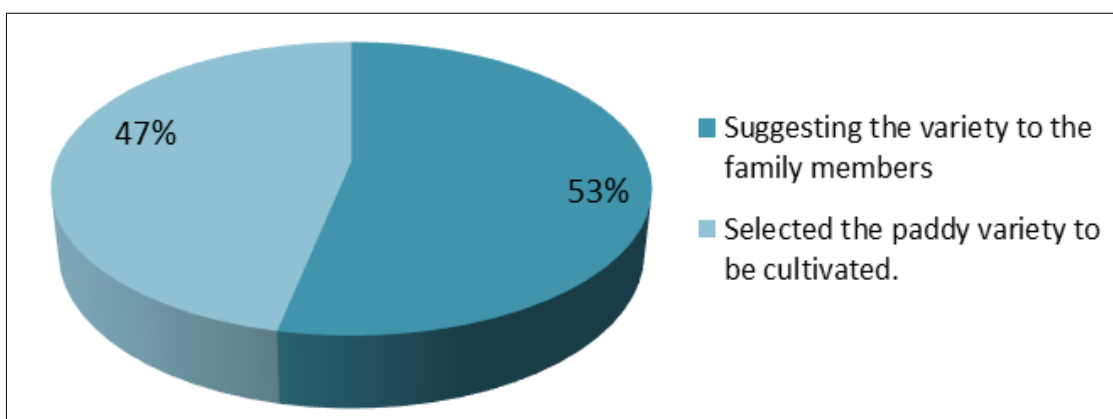


Fig 2: Decision making of women farmers in paddy variety selection

In terms of agricultural practices, the awareness percentage has been increased. The details of the agricultural practices followed are given in Table 2 and 3. Out of selected 14 agricultural practices, 10 practices are such that are fully

known by all the women farmers. The average awareness percent is found to be 77.14 percent. The actual practices adopted by the women farmers in quantified terms are given in the following Table 3.

**Table 2:** Awareness level of women farmers in agricultural practices (N=30)

Sl. No.	Awareness in agricultural practices	Fully Aware	Partially Aware	Not Aware	Mean score
1.	Average quantity of seeds used per acre	30 (100.0)	0 (0.00)	0 (0.00)	2.0
2.	Average quantity of fertiliser used per acre	22 (73.3)	8 (26.66)	0 (0.00)	1.6
3.	Average number of plants in each row	3 (10.0)	27 (90.0)	0 (0.00)	1.1
4.	Average quantity of DAP to be used per acre	0 (0.0)	10 (33.33)	20 (66.66)	0.3
5.	Average number of plants in a bush	30 (100.0)	0 (0.00)	0 (0.00)	2.0
6.	Total number of panicles within 1mtr X 1mtr of land	0 (0.0)	10 (33.33)	20 (66.66)	0.3
7.	Average distance between line to line and plant to plant	30 (100.0)	0 (0.00)	0 (0.00)	2.0
8.	Average level of water to be maintained during rice cultivation	30 (100.0)	0 (0.00)	0 (0.00)	2.0
9.	Numbers of insects/pests affected the crop	30 (100.0)	0 (0.00)	0 (0.00)	2.0
10.	Pesticides used for main pest disease	30 (100.0)	0 (0.00)	0 (0.00)	2.0
11.	Primary method of weeding / weed management	30 (100.0)	0 (0.00)	0 (0.00)	2.0
12.	Average days they spent on paddy harvesting	30 (100.0)	0 (0.00)	0 (0.00)	2.0
13.	Methods and type of machine used for harvesting	30 (100.0)	0 (0.00)	0 (0.00)	2.0
14.	Storage area where seeds primarily stored post-harvest	30 (100.0)	0 (0.00)	0 (0.00)	2.0

(The numbers in braces indicates percentage)

**Table 3:** Actual agricultural practices followed by women farmers of Producer Group

Sl. No.	Agricultural Practices	In numbers/methods
1.	Average quantity of seeds used per acre	2 kg (SRI)
2.	Average quantity of fertiliser used per acre	50 kg
3.	Average number of plants in each row	7-8
4.	Average number of plants in a bush	3 to 4
5.	Average distance between line to line and plant to plant	25 x 25
6.	Average level of water maintained	4 to 6 cm
7.	Number of pests/ insects affect the crop	2 types
8.	Pesticides used for main pest disease	Pot manure
9.	Primary method of weeding / weed management	Weeder
10.	Average days they spent on paddy harvesting	8 to 10 days
11.	Methods and type of machine used for harvesting	Manual, Tractor
14.	Storage area where seeds primarily stored post-harvest	Store house in jute bags

The Producer Group members were trained on processing and marketing of aromatic rice. One Farmer Producer Company (FPO) named "Chitri Dora" has been created under the collaborative project. The FPO has been incorporated on 17<sup>th</sup> January 2019 under the Companies Act, 2013, Government of India, Ministry of Corporate Affairs. The company is managed by women farmers and they started selling aromatic and organic rice produced by the women groups. The FPO has taken over the responsibility of any one or more activities in the value chain of the produce right from procurement of raw material to delivery of the final product at the ultimate consumers' doorstep. The Company procures market inputs for its shareholders, negotiates with traders, and do collective aggregation and marketing of aromatic rice based on business plan which fetches 20-30 percent higher price for the farmers. The women group produced 6786 quintal of aromatic paddy from 612 acre of land. They have marketed 2650 quintal of paddy with an average price of Rs.2200/- quintal. These 20 Producer Groups processed and marketed around 375 quintal

of aromatic rice and 36 quintal of paddy seed. No. of farmers mobilised to come together to form a collective/ Producer Group during the project period is 1031.

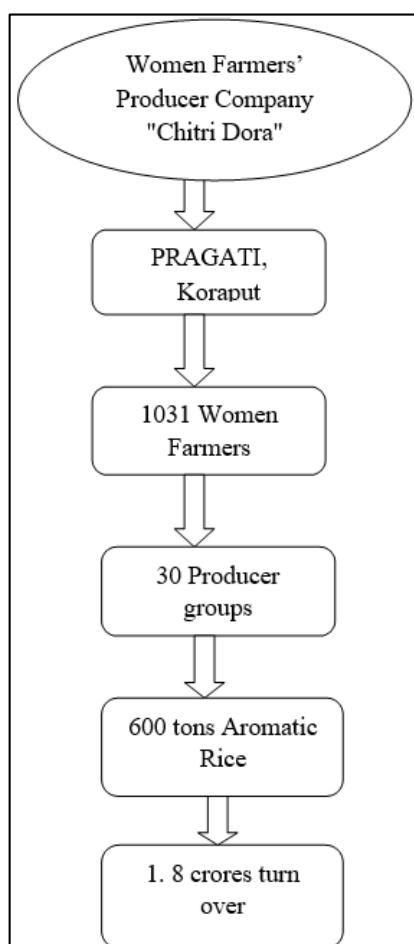
The Producer Company has participated in the farmers' fairs and dissemination events at district and state level which helped them in increasing its visibility and created opportunities for market linkage. As the women were organised into Company, they gained the confidence to participate in the events to display and market their produce for publicity, widen trader contacts and build a brand. These forums were helpful in getting wider publicity of their produces, negotiated and contacted traders and marketing agencies and attracted the bankers for finance. Almost 136 women farmers participated in seed fairs or contributed to community seed banks (individually or collectively). For the first time, 8 Producer Groups processed and marketed aromatic rice. Almost 387 shareholders got mobilised (Table-4).



**Table 4:** Output indicators of the Producer Group

Sl. No.	Output	In numbers
1.	Total certified / truthfully labelled seed produced by the group	6786 quintal
2.	Area under STRVs (Stress Tolerant Rice Variety) /aromatic rice/quality seed production.	612 acre
3.	Total number of trainings on seed quality / storage / management conducted	9
4.	Total participation of women at each level of the training (Attendance indicators)	286
5.	Seed sales generated by the individual producer / group (In Rupees) and percentage of profit (If applicable) /Sale of paddy (in tonnes)	Marketed 2650Q paddy with avg. price Rs.2200/Q, and 375Q processed aromatic rice and 36 quintal paddy seed
6.	No. of farmers participated in seed fairs or contributed to community seed banks (individually or collectively)	136
7.	No. of farmers mobilised to come together to form a collective/ producer group during the project period	1031
8.	No. of new activities/ service provisions taken up by the trained farmers in the producer group	For the first time 8 Producer Groups processed and marketed aromatic rice. One Producer Company namely” Chitri Dora Farmers Producer Company is registered.”
9.	No. of farmers identified as shareholders and members of the BoD (Board of Directors)	10
10.	Collective sale of certified seeds produced	387 shareholders mobilised
11.	Business plans in place	The Producer Company Board members are trained on Business Plan. Development.
12.	Partnerships with government organisations and financial institutions (list them out)	Linkage has been established with EdelGive and NABARD for strengthening the Producer Groups and Producer Company.

As a result of the interventions, the skills, self confidence and leadership enhanced through the training courses played an important role in boosting the income generating activities pursued by their women members <sup>[8]</sup>.

**Fig 3:** Women Farmers' Producer Company

### Conclusion

The study enlighten on the role played by SHGs and Producer Groups in promoting socio-economic empowerment of women in India through aromatic rice production in tribal area. Apart from efficiency gains, food security is also strongly linked to the provision of greater economic opportunities for women. The analyses has confirmed the strategic role that such types of interventions and training programme can play an important role in rural and urban situations where women are too often marginalized in income generation activities and decision making processes. As a result of capacity building interventions to enhance local skills and confidence to form a Producer Group for easy access to market, these women were able to generate higher income and negotiate with traders and use this towards their own family welfare developments.

The training approach of women farmers demonstrated that community participatory processes have the capacity to create conducive conditions for empowering farm women to distinguish their rice production problems and options related to access to technical and financial support in the domain of agricultural practices like seedbed preparation, transplanting, irrigation, pest and disease control, crop harvesting and marketing. To mainstream women's role in agriculture appropriate structural, functional and institutional capacity building measures for women are being promoted by Ministry of Agriculture and other Ministries to improve their access to inputs, technologies and other farming resources. Assisting women farmers to access niche export markets for high-value and brand-marketed products such as fair trade and certified organic products is one way forward.

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**Ethical Matters:** This article does not contain any studies with human participants or animals performed by any of the authors.

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