

## RESEARCH NOTE

## Accelerating Socio-economic Condition of Women through Makhana Cultivation in Bihar

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### ABSTRACT

*Makhana is a unique selling product (USP) of Bihar where about 13000 ha area is being covered under Makhana mainly in Madhubani, Darbhanga, Sitamarhi, Saharsa, Katihar, Purnia, Supaul, Kishanganj and Araria districts. Cultivation of makhana is highly cumbersome, labour intensive and involves human drudgery. But being a cash crop, it gives a considerable amount of cushion to withstand the impact of poverty in these districts. Over the generation mainly the mallah community (fishermen community) championed techniques of the cultivation, harvesting and processing of makhana. Hence, it is interesting to assess efficacy of makhana in accelerating socio-economic condition of women belonging to one of the most downtrodden community of the state.*

**Key word :** *Makhana; Mallah community; Unique selling product (USP);*

**B**ihar is an agrarian society where nearly 8/0.00 per cent population depends on agriculture directly or indirectly and contributes roughly 40.00 per cent to state GDP. It is one of the important states of India for the production of makhana. In Bihar, area under makhana cultivation is about 13,000 ha and accounts a total yield of 85 per cent. More than 85 per cent of Makhana produced is from the districts of Madhubani, Darbhanga, Sitamarhi, Saharsa, Katihar, Purnia, Supaul, Kishanganj and Araria. Amongst these, the major contribution is credited to the districts of Madhubani and Darbhanga where about 2.3 lakh people's livelihood is solely dependent on makhana cultivation and processing. This gives a considerable amount of cushion to withstand the impact of poverty in these districts. Cultivation of makhana is highly cumbersome, labour intensive and involve human drudgery while sweeping bottom of the water body for seed collection. It is followed by processing of raw seeds, which is equally painstaking activity. Over the generation mainly the mallah community (fishermen community) championed techniques of the cultivation, harvesting and processing of makhana. They are mostly illiterate and migrate from one place to another during makhana harvesting season. The average family size is around 6-8 persons and the

whole family is involved in this occupation. Male folks are involved in cultivation, harvesting and processing of makhana and women are primarily involved in processing. Recently, a new trend has been observed in the districts of Purnia and Katihar that women have started to participate in production techniques viz. spraying fertilizers and weeding operations in makhana cultivation. Participation in the activities from planning to marketing, will improve confidence, skill and competency of the women folk in their adopted enterprise including makhana cultivation and processing (Sajesh, 2013).

### METHODOLOGY

The study was conducted in two hamlets of Bahadurpur block in Darbhanga district of Bihar. Altogether 50 respondents (consisting of twenty five men and twenty five women) were selected randomly from each of the hamlets. The responses of the respondents (total respondents 100) regarding their participation in crop husbandry activities and decision-making were collected through the interview schedule developed for this purpose. In this study a total of nine practices related to makhana production and storage, six practices related to makhana processing and

marketing, seven practices of household activities were identified in which the rural women were expected to participate. The data were analyzed by using suitable statistical techniques like mean, frequency and per cent.

### RESULTS AND DISCUSSION

The research findings are based upon responses of *makhana* growers in the studied area encompassing *makhana* cultivation, processing, storage, marketing, household works and social activities. These findings are presented in Tables 1-3.

*Gender based disaggregated activities in makhana cultivation, processing, marketing and household activities:* The women participation in cultivation of *makhana* is very low in the area. This may be due to the fact that traditionally *makhana* grows in fallow wet lands of standing shallow water of about 2.5m depth. Hence, most of the cultivation operations performed by male members. Among nine activities of *makhana* cultivation initial two namely selection of pond and cleaning of pond is virtually done by male only (Table 1). Whereas, during seed sowing, thinning, gap filling and pest management women started participating with man counterpart. Remarkably, during cleaning and storage of nuts women participation significantly increases, probably they participate in spreading nuts over mat for drying (Mandal, 2010).

During first frying of nut and rubbing as well as storage women participation is found to be greater than man (Table 2). Second frying of nut, which is the most labour intensive activity, involves both men and women equally (Mandal, 2010). Whereas, men enjoy far greater participation during grading as well as marketing of final produce. This may be due to the fact that women counterpart are largely illiterate and unskilled ([designclinicsmsme.org/ .../Makhana Cluster.pdf](http://designclinicsmsme.org/.../Makhana_Cluster.pdf)).. Moreover, women are more engaged in health hazards activities like frying of nuts which take a toll on their health (Pandey, 2010).

Among household activities, women were fully responsible for cooking and have to bear about 80.00 per cent of the workload in the childcare and cleanliness of the house (Table 3). Regarding education of the children women participation was found to be 40.00 per cent only. Overall, the finding revealed that in terms of decision making, male members dominated over female members in almost all activities in general, and in economic activities in particular. Women enjoy greater participation in social

**Table 1. Participation of male and female in decision making related with cultivation, harvesting and storage of Makhana**

Activity	Male %	Female %
Selection of pond	100	00
Cleaning of pond	100	00
Seed sowing	90	10
Thinning	90	10
Gap filling / transplanting	88	12
Weed management	95	05
Pest management	94	06
Harvesting	90	10
Cleaning and storage	65	35

**Table 2. Participation of male and female in processing and marketing of makhana**

Activity	Male %	Female %
Gradation	80	20
First frying of nut	22	78
Storage	55	45
Second frying of nut	48	42
Rubbing and Storage	10	90
Marketing	87	13

**Table 3. Participation of makhana grower male and female in household activities**

Activity	Male %	Female %
Fuel collection	20	80
Cooking	00	100
Childcare	15	85
Children education	60	40
Cleanliness	20	80
Marketing of household goods	80	20
Social function	60	40

**Table 4: Constraints experienced by women members of makhana growers in participating makhana cultivation and processing**

Constraints	No.	%
Dominance of male member in family	89	89
The process of seed collection	76	76
Improper method of makhana processing	60	60
Lack of risk bearing ability	59	59
Lack of adequate knowledge about disease and pest management	42	42
Lack of help in problem solving	39	39
Lack of information about preparation of diversified products using makhana seeds	36	36
Difficulties in marketing chain	29	29
Higher time consumption for household work	26	26
Lack of confidence while taking decision	16	16

activities, child care and cleanliness. In aquatic crop like makhana involvement of rural women in the area was higher in those practices which are easier for housewives to perform.

*Constraints experienced by women in makhana cultivation, processing and marketing:* The data in the Table 4 revealed that 89.00 per cent respondents feel that dominance of male member in family is the main constraint. While, 76.00 per cent respondent viewed that the cultivation process per se of makhana favour male counterpart. Remarkably, 60.00 per cent women practicing improper method of makhana processing due to lack of training which causes pain/burns and injuries to them. It was also observed that 59.00 per cent respondents experienced lack of risk bearing capacity due to poor economic empowerment in the region hinders their participation in these activities. Moreover, 42.00 per cent respondents suffer with lack of adequate knowledge about disease and pest management in makhana cultivation. 39.00 per cent women feel helpless and guideless during problem time. Importantly, 16.00 per cent women suffer with lack of confidence. These findings highlighted the need for training and confidence building activities in the region to accelerate women participation in the sector.

## CONCLUSION

The study revealed that participation of women was found mainly in those areas / activities which were safe to perform as well as can be undertaken at their leisure time. Still importance is not recognized in decision-making. The data led to the conclusion that the women in general are not given equal opportunity for participating in various technical and extension activities and the key problem cause for the lower participation may lie in their present economic position. In order to increase their involvement in decision-making we need to strengthen their economic position and independence. Some constraints coming in the way of women participation in the sector which is required to be overcome by proper training, awareness and mobilisation through various programmes on capacity building of women by extension agencies in the area. Since various ecological, climatic, economical, technical, social and cultural factors influences pattern of participation, decision making and responsibility shared. Hence, future research must underline influence of these factors in makhana sector.

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## REFERENCES

- Mandal, R. N.; Saha G S and Sarangi N, (2010). Harvest and Processing of Makhana (*Euryale ferox* Salisb.) – An unique assemblage of traditional Knowledge, *IJTK*, **9**(4): 684-688
- designclinicsmsme.org/.../MakhanaCluster.pdf ; DIRTYHANDS/ study cluster level report/ makhana cluster/ MSME scheme,
- Pandey, Sadhna; Meena, B.S.; Sharma, P. and Dwivedi, R.N. (2010). Health hazards among farmwomen in different on-farm operations. *J. of Community Mobilization and Sustainable Development*, **5** (1) : 038-040
- Sajesh, V.K. (2013). Factor discriminating the effectiveness of women's joint liability group in agriculture:evidence from kerla, *Indian Res. J. Ext. Edu.*, **13** (3), 98-102.

