

Constraints faced by tribal women in adoption of improved aonla cultivation and post harvest practices

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ABSTRACT : Aonla fruit is highly nutritive with great medicinal benefits. It is a wonderful fruit and one of the precious gifts of nature to man. The purpose of this study was to determine the constraints being faced by tribal women in adoption of improved aonla cultivation and post harvest practices. The present study was carried out in Udaipur district of Rajasthan. Total ten villages were selected from three clusters viz., Ogha, Jhadol and Baghpura. A sample of 200 tribal women was selected through random sampling technique from selected villages with proportion to the size of sample in the selected villages. Selected respondents were interviewed personally using well structured pre tested interview schedule. The collected data were analyzed by using appropriate statistical tool to infer results. The finding of the study indicates that economic and storage and marketing constraints perceived as major constraints by the respondents.

KEY WORDS : Tribal women, Aonla cultivation, Post harvest practices

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INTRODUCTION

Fruits and vegetables provide substantial amount of nutrients, important for human health and can play significant role for improving the nutritional intake especially of pre- dominantly vegetarian population. They are important source of micronutrients, vitamins, minerals and folic acid (Siddiqui and Dhua, 2010). Aonla is one of the most important provided by the nature to man. It can be grown successfully in dry and neglected regions owing to its hardy nature, suitability to various kinds of

wasteland. Aonla is the most common fruit grown in arid zones and saline soils. The aonla fruit is globular, small, round, six lobed fruit, thick and hard in consistency. It is light yellow in colour and is almost 1.5 cm to 2.5 cm in diameter. Aonla fruits are highly perishable in nature and its storage is very limited. Aonla is most suitable for cultivating under Agro-climatic zones of Rajasthan. It is cultivated in almost all the districts of Rajasthan. In Udaipur district, improved aonla cultivation and post harvest practices are promoted by the Bhartiya Agro

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Industry Foundation (BAIF) but there are several constraints faced by the respondents. Therefore, the present study is undertaken with an object to ascertain the constraints faced by respondents while adopting improved cultivation methods and post harvest practices.

Objective:

Constraints faced by the tribal women in adoption of improved *Aonla* cultivation and post harvest practices.

METHODOLOGY

The present study was carried out in Udaipur district of Rajasthan purposively. The present investigation was conducted in one *Panchayat samiti* namely Jhadol. The criterion for selecting this *Panchayat samiti* was the improved *aonla* cultivation and post harvest practices are promoted by the BAIF in this *Panchayat samiti* only in three clusters namely Onga, Jhadol and Baghpura. In selected areas, the organization works in 46 villages out of these, total ten villages were selected from the three areas proportionately using random sampling technique to have representative sample of the area and respondents. In all the villages BAIF formed the Women self-help groups (WSHGs) as a part of promotion strategy of improved *aonla* cultivation and post harvest practices. There were two WSHGs in each of the selected villages. Hence, 20 WSHGs from the 10 villages were included in the study from the clusters. In each WSHG there were 10-15 members and 10 members were selected randomly from each Women self-help group and 20 women from each village. Therefore, the total sample for the study comprised of 200 respondents.

The constraints perceived by the respondents were scored on four point continuum *i.e.* 3, 2, 1 and 0 on the basis of magnitude of the problem. The responses were recorded and converted into Mean per cent score (MPS), frequency and percentage were also calculated.

OBSERVATION AND ASSESSMENT

In the present study efforts were made to categorize into suitable categories *viz.*, personal, technical, economic and storage and marketing constraints perceived by the respondents. The result of present study as well as relevant discussion have been summarized under following constraints faced by the respondents in adoption of improved *aonla* cultivation and post harvest practices from Table 1 reveals that the major personal constraint

experienced by the respondents was lack of irrigation facility with MPS 98.16 also depicted in the categorization of the respondents that majority of the respondents (94.50 %) falling in great extent category. The other major constraint perceived by the respondents was lack of knowledge about *aonla* products and their medicinal importance with MPS 82.00 followed by increased workload with MPS 72.83 and lack of co-operation from family members with MPS 67.66 also revealed in the distribution of the respondents that more percentage of respondents were in the category of great extent *i.e.* 47.50 per cent to 62.50 per cent. Lack of interest and lack of knowledge about improved varieties as a personal constraint were reported to low extent with MPS 27.16 and 9.66, respectively.

Information related to technical constraints in adoption of improved *aonla* cultivation and post harvest practices presented in Table 1 shows that the major technical constraint faced by the respondents were lack of skill in using modern irrigation system (drip/sprinkle) with MPS 100 also reflected in the distribution of the respondents as all were in great extent category. Long juvenile period *i.e.* unproductive period as constraint experienced by the respondents to great extent depicted by MPS 71.33 and also visible in the distribution of the respondents as 54.50 per cent of the respondents were in great extent category. The other constraints reported by the respondents to some extent were lack of interest about intercropping (54.66 MPS) also revealed in the categorization of the respondents as 44.00 per cent of the respondents were in great extent category followed by 37.00 per cent of the respondents were in not at all category leading to some extent. Such finding were due to the reason that the organization's focus is only on *aonla* cultivation so, they do not motivate respondents or take interest for intercropping with *aonla*. Another reason for this result were that respondents had more workload so, they did not have time for intercropping because it requires extra time, care and money. Lack of reliable sources of plant materials as constraint was experienced to some extent by more number of respondents (48.00 %) also revealed by the MPS 61.00. Inadequate knowledge about plant protection measures (35.00 MPS) also experienced as a constraint to some extent by the respondents also revealed in the categorization of the respondents which shows good number of respondents *i.e.* 34.50 to 22.50 per cent of the respondents were in some extent and least extent category leading to some

extent but its lower side. Lack of need based training programme was another constraints faced by the respondents with 21.16 MPS. However, unavailability of improved varieties (9.66 MPS), inadequate knowledge of manure and fertilizer (14.00 MPS), timely technical guidance not available (23.16 MPS) and lack of knowledge about good transplanting method (14.66 MPS) were the constraints perceived by the respondents to

least extent. Lack of knowledge about improved cultivation practices also perceived as a constraint by the respondents also depicted in the categorization of the respondents which shows 68.50 per cent and 18.00 per cent of the respondents were in not at all and least extent category. Such findings were due to the reason that respondents used improved varieties with improved cultivation method of aonla as per the organizational

Table 1 : Distribution of the respondents according to the extent of constraints faced in improved aonla cultivation and post harvest practices (n=200)

Sr. No.	Various constraints	Extent of constraints				MPS
		Great extent f (%)	Some extent f (%)	Least extent f (%)	Not at all f (%)	
Personal constraints						
1.	Lack of knowledge about improved varieties	5 (2.50)	12 (6.00)	19 (9.50)	164 (82.00)	9.66
2.	Lack of interest	11 (5.50)	52 (26.00)	26 (13.00)	111 (55.50)	27.16
3.	Increased workload	95 (47.50)	63 (31.50)	26 (13.00)	16 (8.00)	72.83
4.	Lack of co-operation from family members	105 (52.50)	23 (11.50)	45 (22.50)	27 (13.50)	67.66
5.	Lack of knowledge about processed aonla products and their medicinal importance	125 (62.50)	42 (21.00)	33 (16.50)	0 (0.00)	82.00
6.	Lack of irrigation facility	189 (94.50)	11 (5.50)	0 (0.00)	0 (0.00)	98.16
Technical constraints						
1.	Long juvenile period i.e. unproductive period	109 (54.50)	26 (13.00)	49 (24.50)	16 (8.00)	71.33
2.	Unavailability of improved varieties	6 (3.00)	14 (7.00)	12 (6.00)	168 (84.00)	9.66
3.	Inadequate knowledge of manure and fertilizer application	12 (6.00)	10 (5.00)	28 (14.00)	150 (75.00)	14.00
4.	Timely technical guidance is not available	16 (8.00)	28 (14.00)	35 (17.50)	121 (60.50)	23.16
5.	Lack of knowledge about intercropping	88 (44.00)	26 (13.00)	12 (6.00)	74 (37.00)	54.66
6.	Lack of skill in using modern irrigation system	200 (100)	0 (0.00)	0 (0.00)	0 (0.00)	100
7.	Lack of knowledge about improved cultivation practices	13 (6.50)	14 (7.00)	36 (18.00)	137 (68.50)	17.16
8.	Inadequate knowledge about plant protection measures	9 (4.50)	69 (34.50)	45 (22.50)	77 (38.50)	35.00
9.	Lack of knowledge about good transplanting method	00	23 (11.5)	42 (21.00)	135 (67.5)	14.66
10.	Lack of reliable sources of plant materials	26 (13.00)	96 (48.00)	48 (24.00)	30 (15.00)	61.00
11.	Lack of need based training programme	7 (3.50)	15 (7.50)	38 (19.00)	140 (70.00)	21.16
Economic constraints						
1.	Perishable nature of commodity results in economic losses	142 (71.00)	25 (12.50)	24 (12.00)	9 (4.50)	83.33
2.	Cost of plant materials	113 (56.50)	52 (26.00)	23 (11.50)	12 (6.00)	77.66
3.	Cost of chemical fertilizer	141 (70.50)	40 (20.00)	0 (0.00)	19 (9.50)	87.00
4.	Lack of credit facilities in the area	96 (48.00)	83 (41.50)	00	21 (10.50)	79.16
5.	Cost of transportation	112 (56.00)	54 (27.00)	25 (12.50)	9 (4.50)	78.16
6.	Fluctuation in prices	153 (76.50)	39 (19.50)	8 (4.00)	0 (0.00)	90.83
Storage and marketing constraints						
1.	Risky due to perishable in nature	162 (81.00)	38 (19.00)	0 (0.00)	0 (0.00)	93.66
2.	Unpredictable demands on market	124 (62.00)	42 (21.00)	28 (14.00)	6 (3.00)	80.67
3.	Non- availability of storage facility	185 (92.50)	15 (7.50)	0 (0.00)	0 (0.00)	97.50
4.	Lack of transportation facility	114 (57.00)	56 (28.00)	30 (15.00)	0 (0.00)	80.66
5.	Mal practices of middleman	120 (60.00)	35 (17.50)	33 (16.50)	12 (6.00)	77.16
6.	Non-availability of processing units in the area	88 (44.00)	54 (27.00)	34 (17.00)	24 (12.00)	67.66
7.	Poor linkage between processing units and marketing agencies	127 (63.50)	28 (14.00)	21 (10.50)	24 (12.00)	76.33
8.	Lack of knowledge about products of aonla at commercial level	174 (87.00)	26 (13.00)	0 (0.00)	0 (0.00)	95.66

functionaries with regular contact and solve their problems time to time regarding to cultivation and post harvest practices. Respondents also had good knowledge about improved varieties, manure and fertilizer application and transplanting method.

Economic constraints faced by the respondents in adoption of improved aonla cultivation and post harvest practices presented in Table 1 reveals that there are number of constraints experienced by the respondents to great extent such as perishable nature of commodity results in economic losses (MPS 83.33), cost of plant materials (MPS 77.66), cost of chemicals and fertilizers (MPS 87.00), lack of credit facilities in the area (MPS 79.16), cost of transportation (MPS 78.16) and fluctuation in prices (MPS 90.83) also reflected in the distribution of the respondents that more percentage of respondents were in great extent category ranges between 46.00 per cent to 76.50 per cent. The findings of the study are in consonance with the findings of Bhandare *et al.* (2014) revealed that all the sweet orange growers faced constraints costly insecticides and pesticides followed by 99.16 per cent of sweet orange growers faced the constraints of non-availability of regulated market and transport facilities are expensive.

Further analysis of Table 1 regarding storage and marketing constraints, it is elucidating from the table that the major constraints reported by the respondents were non-availability of storage facility with MPS 97.50, lack of knowledge about processed products of aonla at commercial level with MPS 95.66 and risky due to perishable in nature with MPS 93.66 also visible in the distribution of the respondents were in great extent category 92.50 per cent, 87.00 per cent and 81.00 per cent, respectively. The other major constraints experienced by the respondents to great extent related to storage and marketing of aonla and its products were unpredictable demand in market with MPS 80.67, lack of transportation with MPS 80.66, mal practices of middleman with MPS 77.16, poor linkage between processing units and marketing agencies with MPS 76.33 and non-availability of processing units in the area with MPS 67.66 also revealed in the distribution of the

respondents that more percentage of the respondents were in great extent category *i.e.* 44.00 to 62.00 per cent followed by least extent category.

The findings are in line with the results of Pal *et al.* (2009) revealed that limited and inadequate marketing support and infrastructure facility for transportation, storage and processing industry were the major constraints in adoption of horticultural technologies.

Aspect wise constraints faced by respondents :

Data presented in Table 2 clearly reveal that the major constraints faced by respondents were storage and marketing and economic with MPS 83.66 and 82.69 and rank I and II followed by personal constraints and technical constraints with MPS 59.58 and 38.34 which were recorded rank III and IV, respectively.

Similar results were reported by Meena (2005) in a study on Adoption of improved technology of Aonla (*Emblia officinalis* Gaertn) plantation in Udaipur district of Rajasthan as economic constraints (MPS 65.51%) were most important constraints and ranked I followed by storage and marketing constraints (MPS 64.13%), general constraints (MPS 55.77%) and technical constraints (MPS 52.89%) which were accorded II, III and IV ranks in rank order by the respondents.

Conclusion :

It can be concluded from the present investigation that the most important constraint faced by the respondents was lack of water facility or inadequate irrigation facility with MPS 98.16, non-availability of storage facility with MPS 97.50, unawareness about products of aonla at commercial level with MPS 95.66, risky business due to perishable nature with MPS 93.66 and fluctuation in prices with MPS 90.83. The other constraints faced by the respondents were poor linkage between processing units and marketing agencies (MPS 76.33), mal practices of middleman (MPS 77.16), non-availability of processing units (MPS 67.66), lack of quick and satisfactory transportation facility (MPS 80.66), unpredictable demand on market (MPS 80.67), cost of transportation (MPS 78.16), lack of credit facilities in

Sr. No.	Aspects	MPS	Rank
1.	Personal constraints	59.58	III
2.	Technical constraints	38.34	IV
3.	Economic constraints	82.69	II
4.	Storage and marketing constraints	83.66	I

area (MPS 79.16), cost of chemical fertilizers (MPS 87.00) and perishable nature of commodity results in economic losses. Based on the findings it could be also concluded that tribal women experienced economic and storage and marketing constraints to great extent. This is due to the perishable nature of aonla fruits and non-availability of storage facility and processing units at commercial level. They also perceived high transportation cost and fluctuation in prices as major constraints. The other constraints like personal and technical faced by the respondents in improved aonla cultivation and post harvest practices to some extent. Similar work related to work efficiency of tribal women were also conducted by Sidam *et al.* (2012); Bhabhor *et al.* (2013); Sharma and Maheshwari (2014), Nashine *et al.* (2015) and Sujeetha *et al.* (2015).

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