



Diversified Utilization of Potato and Marketing Constraint Faced by Farm Women in Potato Production

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Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

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ABSTRACT

The objective of this study was to Diversified Utilization of potato, and marketing constraint faced by farm women in potato production kannauj division. In India, potato is cultivated in almost all states under diverse agro-climatic conditions. About 85 percent of potatoes are cultivated in Indo-Gangetic plains of North India. The states of Uttar Pradesh, West Bengal, Punjab, Bihar and Gujarat accounted for more than 80 percent share in total production. Fruits and vegetables are usually more difficult to market than to produce. Perishable and bulky nature of the produce makes marketing process more difficult and vulnerable to uncertainties to a higher extent. As for as potatoes area concerned India has experienced potato revolution over last 55 years. In 1949 (when CPRI was established), India produced 1.54 million tons potato out of 0.234 million ha with an average yield of 6.58 t/ha. Based on the average of three years ranging from 1998-99 to 2000-01, the country produced 23.63 million tons of potatoes from 1.29 million ha with an average yield of 18.23 t/ha showing an increase of 5.5, 15.3 and 2.8 times in area, production and yield of potato, respectively. At present India is facing a problem of plenty as far as potato is concerned. However CPRI is believed to take this production to 40 million tons by the year 2020.

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1. INTRODUCTION

Potato acreage across Punjab, Haryana, Uttar Pradesh and West Bengal — the major potato producing states — has been 5-7 percent lower this year as last year's glut has forced farmers to pare acreage. Productivity and quality of the tuber are likely to suffer as farmers have used last year's carryover seed for this year's sowing. Uttar Pradesh had a bumper potato crop with production touching a record of 160 lakh metric tonnes in 2017. The Yogi Adityanath government had, for the first time, announced a minimum support (MSP) price of Rs 487/quintal and ordered for 1 lakh metric tonne purchase by the government, to help the 25 lakh potato growers of the state. "Acreage will be down by 5 per cent as there is no money left with farmers to sow the fresh crop. Both cold storage owners and farmers suffered heavily last year. Potatoes were selling at? 1-4/kg instead of? 10/kg (wholesale market). Farmers have landed in huge debt. Though the government had announced MSP, it was only effective between April 7 and May 7. It did not help potato farmers much" [1]. Potato production is not a problem in India and planners need to think from marketing end for further improvement. The demand for processed potato products like chips, French fries, flakes, etc is increasing continuously in the present liberalized economy mainly due to improved living standard, increased urbanization, preference for fast foods, rise in per capita income, increase in the number of working women preferring ready cooked food and expanding tourist trade. To meet this demand potato processing industry is emerging as a fast growing industry with more entrepreneurs joining and existing ones increasing their capacity of processing units. In spite of this recent spurt, both organized and unorganized Indian processing industries [2]. Potato cultivation has become highly commercialized. But still there is a wide gap between current production and potential productivity. Women participation in the family farming system is crucial to the sustenance of rural economy. The farm women need to be involved in agriculture sector to push up considerable increase in production level and area under vegetables. [3] women play an important role in agricultural production and marketing. However, their contribution to the local economy and household livelihoods has not been maximized due to the lack of support.

Identifies issues facing by women farmers in the highlands in their Endeavour to generate income from potato marketing. This indicates that specific marketing issues facing women farmers are: heavy work load, high cost and unreliable transport, poor facilities at the open markets, harassment and violence against women and uneven distribution of income within the household. Group marketing, based on the CI&I process to improve business and marketing skills, appears to be a possible solution to many of the problems facing women farmers. [4] potato production is constrained by a number of factors among which diseases, storage problems, low market prices of tubers at harvest, and insufficient quality seed tubers for planting were the four major constraints challenging potato production [5] Women play a pivotal role in ensuring potato diversifications utilization at the household level to till potato industry. They participate in developing products such as chips, papads, kachri, flakes, powder, etc.

2. RESEARCH METHODOLOGY

The study was conducted in Kannauj district. Two blocks Kannauj and Chhibramau were selected in this study. Ten villages were selected out of both selected blocks Total 300 farm women were selected. Dependent and independent variables such as age, education, caste, landholding and milch animals were selected. The statistical tools such as mean, rank, Fisher 't' test, Cr were used.

3. RESULTS

The perusal of Table 1 reveals the distribution of respondents according to the occupation. 49.0 percent of respondents were engaged in agriculture in the study area whereas, 31.3 percent of farm women were labour class. 12.0 percent of farm women were engaged in business occupation, while only 7.7 percent of farm women were found to be in service class. In this study women were mostly engaged in an agricultural occupation such as vegetable growing, paddy cultivation, weeding, harvesting, etc. But, 31.3 percent of women were found to work as labourers who were engaged in weeding, transplanting, grain storage and livestock management. In India, agriculture is one of the most important occupations of farm women.

Table 1. Distribution of farm women according to occupation (N=300)

Sl. no.	Occupation	Frequency	Percent
1.	Agriculture	147	49.0
2.	Service	23	7.7
3.	Business	36	12.0
4.	Labour	94	31.3
	Total	300	100.0

Table 2. Diversified utilization of potato (N=300)

Sl.No.	Diversified utilization value addition	Yes	No	Mean score	Rank
1.	Cold storage	261(87.0)	39(13.0)	1.87	I
2.	Sell out of session	246(82.0)	54(18.0)	1.82	II
3.	Develop product	196(65.3)	104(34.7)	1.65	III

Table 3. Consumer preferences for potato products (N=300)

Sl. No.	Products	Yes	No	If yes, then				
				Easy availability	Convenient packaging	Affordable prices	Nutritious value	Only taste
1.	Aloo Bhujia	290 (96.7)	10 (3.3)	210 (70.0)	80 (26.7)	180 (60.0)	-	45 (15.0)
2.	Potato flakes	50 (16.7)	250 (83.3)	5 (1.7)	28 (9.3)	-	-	30 (10.0)
3.	Potato powder	-	300 (100.0)	-	-	-	-	-
4.	French fries (Finger chips)	91 (30.3)	209 (69.7)	-	-	-	-	91 (30.3)
5.	Masala fries	76 (25.3)	224 (74.7)	-	-	-	-	76 (25.3)
6.	Potato chips	300 (100.0)	-	60 (20.0)	80 (26.7)	30 (10.0)	6 (2.0)	260 (86.7)
7.	Potato papad	160 (53.3)	140 (46.7)	20 (6.7)	95 (31.7)	20 (6.7)	10 (3.3)	120 (40.0)
8.	Potato wedges	-	300 (100.0)	-	-	-	-	-
9.	Potato waffle	-	300 (100.0)	-	-	-	-	-
10.	Aloo Vadi	119 (39.7)	181 (60.3)	90 (30.0)	8 (2.7)	-	-	62 (20.7)
11.	Potato bites	-	300 (100.0)	-	-	-	-	-
12.	Mumbai vada	-	300 (100.0)	-	-	-	-	-
13.	Aloo Tikki	288 (96.0)	12 (4.0)	202 (67.3)	-	160 (53.3)	-	200 (66.7)
14.	Frozen potato snacks	-	300 (100.0)	-	-	-	-	-
15.	Aloo paratha	291 (97.0)	09 (3.0)	220 (73.3)	-	-	-	168 (56.0)

Table 4. Marketing constraints faced by farm women.(N=300)

Sl. no.	Constraints faced	Yes	No	Mean score	Rank
1.	Lack of knowledge and awareness	219 (73.0)	81 (27.0)	1.73	III
2.	High marketing cost and margin	162 (54.0)	138 (46.0)	1.54	VI
3.	Wide price fluctuation	196 (65.3)	104 (34.7)	1.65	V
4.	Bottleneck in storage facilities	259 (86.3)	41 (13.7)	1.86	I
5.	Lack of long term Indian export policy	207 (69.0)	93 (31.0)	1.69	IV
6.	Rent of cold storage	225 (75.0)	75 (25.0)	1.75	II

The data depicted in Table 2 shows the diversified utilization and value addition of potato. 87.0 percent of farm women kept their potato produce in cold storage with mean score 1.87 and ranked I whereas, 82.0 percent of respondents sold out of session with mean score 1.82 and ranked II. 65.3 percent of farm women developed products of potato with mean score 1.65 and ranked III.

Data presented in Table 3 reveals the consumer preferences for potato products in the selected study area. 96.7 percent of respondents preferred aloo bhujia which was easily available (70.0 %), was in convenient packaging (26.7 %), at affordable price (60.0 %) and good for taste (15.0 %) whereas, 96.0 percent farm women gave their preference for aloo tikki in which 67.3 percent said that it was easily available in all places, 53.3 percent opined about affordable price and 66.7 percent preferred it only for taste. 97.0 per cent respondents preferred aloo paratha out of which 73.3 per cent were of the opinion that aloo paratha is the most easily available full meal in houses for both children and adults and 56.0 per cent consumed it only for taste. 100.0 percent farm women preferred potato chips in which 20.0 percent liked its easy availability, 26.7 percent found convenient packaging, 10.0 percent bought it at affordable prices and 86.7 percent consumed it only for taste. 53.3 percent farm women preferred potato papad of which 6.7 percent consumed it due to easy availability, 31.7 percent found convenient packing, 6.7 percent said that papads are available at affordable prices and 40.0 percent consumed it only for taste while, 30.3 percent of respondents liked finger chips only for taste. 25.3 per cent of respondents preferred potato masala fries for taste whereas, 16.7 per cent respondents preferred potato flakes (1.7 per cent) due to easy availability, 9.3 per cent found convenient packaging and 10.0 per cent consumed only for taste.

The data pertaining to Table 4 shows the mean scores of marketing constraints faced by farm

women. 86.3 percent respondents were having bottleneck in storage facilities with mean score 1.86 and ranked I whereas, 75.0 percent of farm women faced rent of cold storage as major marketing constraint with mean score 1.75 and ranked II. 73.0 percent respondents had lack of knowledge and awareness about potato with mean score 1.73 and ranked III, while 69.0 percent respondents felt that lack of long term Indian export policy was a major marketing constraint with mean score 1.69 and ranked IV. 65.3 percent respondents were facing wide price fluctuation problem with mean score 1.65 and ranked V. About 54.0 percent respondents faced high marking cost and margin with mean score 1.54 and ranked VI.

4. CONCLUSION

Potato is one such crop which has a bulk production all over the world, so it becomes necessary for our farmers to do diversified utilization of the bulk produce. Our farmers first sell it in the local market and some of them in the urban market as well. Those who can afford store their produce in cold storages at affordable prices. Those farmers who cannot afford to store their produce in cold storages, sell out of session at very low prices or divert the left out produce for livestock feed. Farmers who have a good net work sell their produce to big companies for commercial use and small farmers especially use it in developing products such as chips, papads, kachri, flakes, powder, etc., sell in local market and generates good income.

5. RECOMMENDATIONS

- Production system management
- Extending the shelf life of produce
- Export marketing and trade
- Capacity building and technology transfe

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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