

## KNOWLEDGE OF POTATO GROWERS UNDER CONTRACT FARMING REGARDING POTATO PRODUCTION TECHNOLOGY

J. J. Mistry<sup>1</sup>, D. B. Patel<sup>2</sup> and R. C. Prajapati<sup>3</sup>

1 & 2 Assoc.Prof. (Ext. Edu.), DEE, SDAU, Sardarkrushinagar - 385506  
3 Assistant Extension Educationist, DEE, SDAU, Sardarkrushinagar - 385506  
Email: mistryjanak99@gmail.com

### ABSTRACT

*Major potato processing companies are making contract farming agreement at pre agreed price directly or through agents for processing varieties of potato crop with the farmers in the Sabarkantha district. Thus, a study on adoption of contract farming in potato crop was undertaken Sabarkantha district. Out of eight talukas, four talukas having maximum area under potato crop were selected purposively. Four villages from these four selected talukas having potato crop under contract farming were selected randomly. Total sixteen villages were selected for the study. Ten potato growing farmers under contract farming from each randomly selected village were selected. Thus, total 160 potato growing farmers under contract farming were selected for present study. The results revealed that majority of the respondents belonged to young to middle age group, graduate level of education, up to 8 years of experience under contract farming, medium size of family, big farmers category and medium total annual income. Majority of the respondents had medium to high level of knowledge (89.38%) of potato cultivation technology. Majority of the respondents had high level of knowledge in relation to improved varieties and harvesting & grading.*

**Keywords:** contact farming, potato production technology, knowledge

### INTRODUCTION

The production, marketing and distribution of agricultural products are becoming sophisticated. Modern advances in technology have made feasible for agricultural products to be produced to specifications. This provides a strong rationale, from the demand side for the contract farming as a means of raw material supply. Contract farming is defined as a system of production and supply of agricultural and horticultural produce by farmers under forward contracts. The essence of such arrangements is a commitment to provide agricultural and horticultural produce of a type, at a specified price and in a specified quantity to a known buyer. Sabarkantha district is a major potato growing district and area under potato crop is increasing. Farmers of Sabarkantha district have adopted potato cultivation under contract farming. Major potato processing companies are making agreement directly or through agents

for processing varieties of potato crop with the farmers in the district. These contracting companies brought potato at pre agreed price. Thus, to study knowledge of potato growers under contract farming regarding potato production technology was felt necessary with following specific objectives.

### OBJECTIVES

- (1) To study the personal, social and economic characteristics of the potato growing farmers under contract farming
- (2) To study the knowledge level of the potato growing farmers under contract farming
- (3) To know reasons for adoption of contract farming in potato crop

### METHODOLOGY

The present study was conducted in Sabarkantha district during the year 2017-18. The multi stage sampling technique was used. Sabarkantha district has eight talukas. Four talukas having maximum area under potato crop viz; Prantij, Himatnagar, Talod and Idar were selected purposively for the study. Four villages from these four selected talukas having potato crop under contract farming were selected randomly for the study. Total sixteen villages were selected for the study. Ten potato growing farmers under contract farming from each randomly selected village were selected. Thus, total 160 potato growing farmers under contract farming were selected for present study.

The data were collected by personal interview. The interview schedule was developed through discussion with experts, scientists and extension officers working in the district. Total 9 practices were identified to know the level of knowledge of potato crop by the farmers under contract farming. These packages of practices had sub questions. Overall knowledge level and practices wise knowledge level of respondents were calculated. The data were analyzed using frequency, per cent, mean and standard deviation.

## RESULT AND DISCUSSION

### Personal, social and economic characteristics

In order to study the personal, social and economical characteristics of the potato growing farmers under contract farming, the data were collected from respondents are presented in Table 1.

**Table 1: Distribution of the respondents according to their personal, social and economic characteristics n = 160**

Sr. No.	characteristics	Categories	Frequency	Per cent
1	Age	Young age (up to 35 years)	48	30.00
		Middle age ( 36 to 50 years)	73	45.63
		Old age (above 50 years)	39	24.37
2	Level of education	Illiterate	03	01.87
		Primary (1 <sup>st</sup> to 7 <sup>th</sup> std.)	12	07.50
		Secondary (8 <sup>th</sup> to 10 <sup>th</sup> std.)	30	18.75
		Higher secondary (11 <sup>th</sup> to 12 <sup>th</sup> std./ Diploma course)	35	21.88
		Graduation	80	50.00
3	Experience under contract farming	Less (up to 3 years)	68	42.50
		Medium ( 4 to 8 years)	70	43.75
		High (above 8 years)	22	13.75
4	Size of family	Small (up to 4 members)	28	17.50
		Medium ( 5 to 7 members)	84	52.50
		Large (above 7 members)	48	30.00
5	Size of land holding	Marginal farmers (up to 1.00 ha)	00	00.00
		Small farmers (1.01 to 2.0 ha)	26	16.25
		Medium farmers (2.01 to 4.0 ha )	44	27.50
		Big farmers ( above 4.0 ha)	90	56.25
6	Total annual income Mean=741714, S. D.= 329076	Low (up to ₹ 412638)	31	19.37
		Medium ( ₹ 412639 to 1070790)	87	54.38
		High (above ₹1070790)	42	26.25

The data given in table 1 indicates that more than 75.00 per cent farmers were young to middle age group. Only 24.37 per cent farmers had old age group. The half of farmers (50 per cent) had graduate level of education. More than 48 per cent farmers had primary to higher secondary level of education. Only 1.87 per cent farmers were illiterate. The 85.00 per cent farmers had upto 8 years of experience in potato cultivation under contract farming. While 13.75 per cent farmers had more than 8 years of experience in potato cultivation under contract farming. Majority of farmers (52.50 per cent) had medium size of family. The 30.00 per cent and 17.50 per cent farmers had large and small size of family, respectively. The 56.25 percent farmers were big farmers

having more than 4.0 ha land. The medium farmers having land between 2.01 ha to 4.0 ha were 27.50 per cent, while 16.25 per cent farmers were small farmers. The majority (54.38 per cent) of farmers had medium total annual income. The 26.25 per cent and 19.37 per cent farmers had high and low total annual income, respectively.

### Level of knowledge

The data regarding knowledge of potato cultivation technology of the potato growing farmers under contract farming were collected from respondents and are presented in Table 2.

**Table 2: Distribution of the respondents according to their level of knowledge of potato cultivation technology n = 160**

Sr. No.	Level of knowledge	Number	Per cent
1	Low (up to 70 %)	17	10.62
2	Medium (70% to 90%)	62	38.75
3	High (above 90 %)	81	50.63

The data given in table 2 indicate that 89.38 per cent farmers had medium to high knowledge level of potato cultivation technology. Only 10.62 per cent farmers had low knowledge level of potato cultivation technology.

**Practice wise knowledge**

Assessment of practice wise knowledge of potato cultivation technology was also done which is presented in table 3.

**Table 3: Distribution of the respondents according to their practice wise knowledge of potato cultivation technology**

**n = 160**

Sr. No.	Recommended practices	Category of knowledge level		
		Low (up to 70 %)	Medium (70% to 90%)	High (above 90 %)
1	Land preparation	10 (10.00)	108 (67.50)	36 (22.50)
2	Improved varieties	00 (00.00)	05 ( 3.13)	155 (96.87)
3	Seed treatment	40 (25.00)	91 (56.87)	29 (18.13)
4	Seed rate & sowing method	04 (2.50)	31 (19.37)	125 (78.13)
5	Fertilizer management	40 (25.00)	82 (51.25)	38 (23.75)
6	Weed control	24 (15.00)	104 (65.00)	32 (20.00)
7	Irrigation management	08 (5.00)	22 (13.75)	130 (81.25)
8	Plant protection measures	16 (10.00)	120 (75.00)	24 (15.00)
9	Harvesting & grading	08 (5.00)	12 (7.50)	140 (87.50)

Note: Figures in parenthesis indicate percentage

In respect to practice wise knowledge, the data presented in table 3 reveal that improved varieties (96.87 per cent), harvesting & grading (87.50 per cent), irrigation management (81.25 per cent) and seed rate & sowing method (78.13 per cent) of the farmers had high knowledge level of potato cultivation technology. While, in relation to plant protection measures (75.00 per cent), land preparation (67.50 per cent), weed control (65.00 per cent), seed treatment (56.87 per cent) and fertilizer management (51.25 per cent) of the farmers had medium knowledge level of potato cultivation technology.

**CONCLUSION**

Majority of the potato growers under contract farming had young to middle age group, graduate level of education, up to 8 years of experience under contract farming, medium size of family, big farmers category and medium total annual income. Majority of the respondents

(89.38%) had medium to high knowledge level of potato cultivation technology. Majority of the potato growers had high knowledge level of potato cultivation technology in relation to improved varieties, harvesting & grading and irrigation management.

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