

Package of Practices of the Market Oriented Cultivation of Summer Cabbage Followed by the Farmers

Desai, J.D.^{1*}, Solanki, K.D.² and Patel, P.P.³

1 Senior Research Assistant, Directorate of Extension Education, AAU, Anand – 388 110

2 Ex. Associate Director of Extn. Edu., Directorate of Extension Education, SD AU, Sardarkrushinagar – 385 506

3 Director of Extension Education, Directorate of Extension Education, AAU, Anand – 388 110

Email : jaydip.desai22290@gmail.com

ABSTRACT

The cultivation of vegetables, which is done mainly for marketing purpose, is known as commercial vegetable cultivation. The average productivity of cabbage in India is 22.0 tonnes / ha which is too low as compare to the hectare production of cabbage 55.3 tonnes in Korea Republic. In last one decade cabbage production has multiplied 2.02 times, due to the availability of potential and high temperature resistant varieties. Cabbage crop is harvesting during December, January and February as a traditionally in Gujarat, so the cabbage production supply is not uniform through out the year. The highest price during the summer season is the driving force within the farmers of the Sabarkantha district and they are motivated to cultivate the cabbage as a summer crop. Cabbage crop normally occupied in large area in winter and produces good yield between 5° C to 30° C day temperature. However, the farmers of Sabarkantha are cultivated cabbage crop in average 43° C temperature in summer season and earn highest wholesale price during summer. Therefore, it is interested to know the practices of the market oriented cultivation of summer cabbage followed by the cabbage growers. Considering the area & production of cabbage crop Sabarkantha district, as well as Prantij taluka was also purposively selected. Twelve villages form taluka were selected purposively. Using random sampling techniques, equal number of respondents were selected. Thus, total 120 respondents were selected. The present study was confined to “Ex-Post facto” research design. The twelve important practices and 30 sub-practices were enlisted after discussion with professors of horticulture, agronomy and research scientist and finally were included in the test. The questions were objective type. Based on the frequency and percentage of the farmers, a list of practices was prepared, which are followed by the majority cabbage growers. It can be concluded that majority of the respondents have developed the practices as per requirement of the crop production by their self experiences, which should be rationally tested by scientists community and should be suggested as well as should be advised to farming community.

Keywords : Package of practices, Market oriented, Summer cabbage cultivation

INTRODUCTION

The cultivation of vegetables, which is done mainly for marketing purpose, is known as commercial vegetable cultivation. The average productivity of cabbage in India is 22.0 tonnes / ha which is too low as compare to the hectare production of cabbage 55.3 tonnes in Korea Republic (Gopalakrishnan, 2007).

In last one decade cabbage production has multiplied 2.02 times, due to the availability of potential and high temperature resistant varieties (Singh and Malhotra - 2010). Cabbage crop is harvesting during December, January and February as a traditionally in Gujarat, so the cabbage production supply is not uniform through out the year. Also, the concept of marketing is not focus on the product, but to

focus on the users. Hence user needs are vital in marketing. Owing to this, the average wholesale price of cabbage was also recorded highest in various cities of country during the period of April to August (Indian Horticulture Database - 2011). The highest price during the summer season is the driving force within the farmers of the Sabarkantha district and they are motivated to cultivate the cabbage as a summer crop.

The current advances in market oriented summer cabbage cultivation have not recommended and demonstrated for increasing the cabbage production by the agricultural scientists. Cabbage crop normally occupied in large area in winter and produces good yield between 5° C to 30° C day temperature. However, the farmers of Sabarkantha are cultivated cabbage crop in average 43° C temperature in

summer season and earn highest wholesale price during summer. Therefore, it is interested to know the practices of the market oriented cultivation of summer cabbage followed by the cabbage growers, which are evolved by them by their self experience.

METHODOLOGY

Considering the area & production of cabbage crop Sabarkantha district, was purposively selected for the study. Prantij taluka was also purposively selected, because this taluka have more cabbage growing area as compared to other talukas. Twelve villages form taluka were selected purposively. Using random sampling techniques, equal number of respondents *i.e.*, Ten from each village were selected. Thus, total 120 respondents were selected.

The present study was confined to “Ex-Post facto” research design. To know the practices of the market oriented cultivation of summer cabbage, a teacher made test was developed. The twelve important practices and 30 sub-

practices were enlisted after discussion with professors of Horticulture, Agronomy and Research Scientist and finally were included in the test. The questions were objective type. The respondents were asked to reply each question. Based on the frequency and percentage of the farmers, a list of practices was prepared, which are followed by the majority cabbage growers.

RESULTS AND DISCUSSION

The market oriented cultivation of summer cabbage has great potentiality and scope for improving socio-economic condition of small and marginal farmers since it provides higher yield and high economic return in short time as compared to grains. Secondly summer cabbage cultivation is not getting as popular by the scientist community particular in Gujarat. Therefore, the important 12 practices and 30 sub-practices of the market oriented cultivation of summer cabbage followed by cabbage growers were studied and presented in the Table 1.

Table 1 : The important practices of the market oriented cultivation of summer cabbage followed by the respondents.

n = 120

Sr. No.	Name of practices	Description of practices	Frequency	Percentage
1	Soil and land preparation	1 Alluvial sandy loam (Heavy clay loams)	100	83.84
		2 Two time primary tillage	85	70.84
		3 Planking	109	90.84
2	Seeds & Nursery Management	1 Raising of seedling by own nursery	120	100.00
		2 Raise bed plot	120	100.00
		3 Seed rate 500 gm to 600 gm/ha	79	65.84
		4 Seed treatment	00	00.00
		5 Date of sowing (15 th Feb to 15 th March)	94	78.34
3	Use of improved varieties	1 Golden cross (Pahuja)	45	37.50
		2 Cent (Syngenta)	28	23.34
		3 Lucky (Sent)	18	15.00
		4 Indu (Semini, Monsanto)	13	10.84
		5 Branko (Bijo shital)	53	44.16
		6 Kranti (Mahyco)	25	20.84
4	Transplantation	1 3 weeks old seedlings (20 to 25 days after sowing)	120	100.00
5	Spacing	1 Row to Row: 15 to 35 cm	116	96.66
		2 Plant to Plant: 10 to 20 cm	116	96.66

Sr. No.	Name of practices	Description of practices	Frequency	Percentage	
6	Manures & fertilizers	1	FYM: 15 to 25 t / ha	98	81.66
		2	Chemical fertilizers		
		(A)	Basal dose N – P – K (kg / ha)		
		(i)	100 – 80 – 40	46	38.34
		(ii)	120 – 80 – 40	69	57.50
		(B)	40 kg N / ha as top dressing after 30 and 45 days of transplanting	109	90.84
7	Irrigation	1	8 to 13 irrigation each at 4 to 7 days interval	120	100.00
8	Method of controlling temperature	1	Live hedge as wind braker	10	08.34
		2	Use of net	49	40.84
		3	Frequent irrigation	96	80.00
9	Pest management	1	Diamond back moth controled by Flubendiamide 20 WG @ 0.5 kg/ha with two sprays at 20 to 30 days interval	73	60.84
		2	Sucking insects controled by Imidaclopride 17.8 SL @ 0.5 lit/ha with two sprays at 20 to 30 days interval	94	78.34
		3	Green semi looper controled by Emamectin benzoate 5% SG or 1.9 % EC @ 0.5 kg or lit/ha with two sprays at 20 to 30 days interval	94	78.34
10	Diseases management	1	Damping off and white rust controled by Hexaconazole 5 % SC or Carbandazim 50 % WP @ 0.5 to 1.0 lit or kg/ ha with two sprays at 20 to 30 days interval	28	23.34
11	Time of harvesting	1	After 60 to 80 DAT. (depend upon variety)	120	100.00
12	Yield (kg / ha)	1	20,000 to 30,000 kg / ha	110	91.66

From the analysis of total important practices and respondents, it can be observed that the most (83.84 per cent) of the respondents are cultivated summer cabbage in Alluvial sandy loam (Heavy clay loams) soil and 70.84 per cent and 90.84 per cent of the respondents are prepared their land with two time primary tillage and planking. Among seeds and nursery management practice, cent per cent respondents are raising of seedling by own nursery in raise bed plot. Nearly two-thirds (65.84 per cent) of the respondents are used 500 gm to 600 gm seed rate per hectare for transplantation of

cabbage. Non of the respondent is not treated the seed and 78.34 per cent of respondents are sown the seeds in nursery during 15th February to 15th March. Cent per cent of the respondents are cultivated private improved research varieties namely, Golden Cross, Cent, Lucky, Branko and Kranti, and also transplanted 3 weeks (20 to 25 days) old seedling in field. The majority (96.66 per cent) of the respondents are maintained 15 to 35 cm spacing between row to row and 10 to 20 cm within plant to plant.

In the practice of manures and fertilizers 81.66 per cent respondents are used FYM 15 to 25 t/ha, while 57.50 per cent of the respondents are applied 120N-80P-40K kg/ha as basal dose of chemical fertilizers and 38.34 per cent respondents are used 100N-80P-40K kg/ha as basal dose of chemical fertilizers. The majority (90.84 per cent) of the summer cabbage growers are applied 40 kg N/ha as top dressing of chemical fertilizer after 30 and 45 days of transplanting. Cent per cent of the respondents are irrigated the summer cabbage by 8 to 13 irrigation each at 4 to 7 days interval. Cabbage is a winter season crop, however it is cultivated in summer so the controlling of temperature is an important practice. 80 per cent of summer cabbage growers are used frequent irrigation method for controlling temperature, followed by 40.84 per cent and 8.34 per cent respondents are maintained temperature by use of net and live hedge as wind breaker for controlling temperature.

More than third-fifth (60.84 per cent) of the respondents are controlling Diamond back moth by Flubendiamide 20 WG @ 0.5 kg/ha with two sprays at 20 to 30 days interval. More than three-fourth of the respondents are controlled sucking insects and Green semi looper by Imidaclopride 17.8 SL @ 0.5 lit/ha and Emamectin benzoate 5 % SG or 1.9 EC @ 0.5 kg/ha or lit/ha with two sprays at 20 to 30 days interval, respectively.

Very less (23.34 per cent) respondents are managed Damping off and White rust disease by Hexaconazole 5 % SC or Carbandanzim 50 % WP @ 0.5 lit or kg/ha with two sprays at 20 to 30 days interval. Cent per cent of the summer cabbage grower respondents are harvested the cabbage after 60 to 80 DAT (Depend upon Variety). It is also interested that 91.66 per cent of the respondents are produced summer cabbage 20,000 to 30,000 kg/ha.

CONCLUSION

It was observed that majority of the respondents are cultivated summer cabbage in alluvial clay loam soil, prepared their land with two time primary tillage and planking. Cent per cent of the respondents are raising of seedling by own nursery in raise bed plot. Nearly two-thirds of the respondents are used 500 gm to 600 gm seed rate per hectare for transplantation of cabbage without seed treatment. About three-fourth of the summer cabbage growers are sown the seeds in nursery during 15th February to 15th March and transplanted 3 weeks old seedling in field. Cent per cent of respondents are cultivated private improved research varieties namely Golden cross, Cent, Lucky, Branko and Kranti and maintained 15 to 35 cm spacing between row

to row and 10 to 20 cm within plant to plant. Majority of the respondents are used FYM 15 to 25 t/ha and are applied 120 N – 80 P – 40 K kg/ha as well as 100 N – 80 P – 40 K kg/ha as basal dose of chemical fertilizer, respectively. Above 90 per cent of the summer cabbage growers are applied 40 kg N/ha as top dressing of chemical fertilizer after 30 and 45 days of transplanting. Cent per cent of the respondents are irrigated the summer cabbage by 8 to 13 irrigation each at 4 to 7 days interval. Majority of summer cabbage growers are used frequent irrigation method for controlling temperature.

More than third – fifth of the respondents controlling Diamond back moth, sucking insects and green semi looper by chemical control measures. Very less respondents are managed Damping off and white rust disease by chemicals. Cent per cent of the respondents are harvested the cabbage after 60 to 80 DAT, and produced summer cabbage 20,000 to 30,000 kg/ha.

From the above discussion, it can be concluded that majority of the respondents have developed the practices as per requirement of the crop production by their self experiences, which should be rationally tested by scientists community and should be suggested as well as should be advised to farming community.

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