

Study on the cropping pattern followed by summer cabbage growers in Sabarkantha district of Gujarat state

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ABSTRACT

About 60.00 Per cent of population in the country depends on agriculture for their primary livelihood. A farmer who is a good manager should be able to make as much profit, the aim of the most of the farmer should be to earn profits. Crop should be grown only to earn profit. Thus, market oriented agriculture in the mixed economy of the India need to promote farmers that produce products that local people need. It is managed by the farmers through following various cropping pattern. Among the cole crops only cabbage (*Brassica oleracea* L. var *capitata*) and cauliflower (*Brassica oleracea* L. var *botrytis*) are grown in winter within India and produce good yield between 5°C to 30°C day temperature. 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. This is the transformation of farmer from the traditional to the modern farming method. Considering the highest area & production of cabbage crop Sabarkantha district, was purposively selected for the study. Prantij taluka was also purposively selected, because this taluka have highest cabbage growing area as compared to other talukas. Twelve villages from 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. Cropping pattern in this study was defined as a sequence of crops sown by the respondents on a given area. The information about cropping pattern followed by the cabbage growers was collected. Based on the frequency and percentage of the farmers adopting different cropping pattern, each cropping pattern has been assigned rank. Major cropping pattern of Chilli – Chilli – Cabbage (49.17 per cent), Okra – Okra – Cabbage (33.34 per cent), Cauliflower – Cabbage (29.16 per cent), Cotton – Wheat – Pearl millet (27.5 per cent), Bottle guard – Bottle guard – Cabbage (25.00 per cent), Brinjal – Brinjal – Brinjal (24.16 per cent), Cabbage – Cabbage (22.50 per cent) and Tomato – Tomato – Tomato (22.50 per cent) were adopted by the respondents with the first to seventh rank, respectively.

Key words : Cropping pattern, cabbage growers, summer

India is the largest food producer in the world. It produces 150 million tones fruits and vegetable every year (MFPI, 2011). About 60 per cent of population depends on agriculture for their primary livelihood. A farmer who is a good manager should be able to make as much profit from farming as from any other business, if he determine the objectives. In deciding how to use his productive resources, a farmer must be guided by certain objectives. However, the

conditions under which farming is carried on are changing fast. To be efficient, farmers must be prepared to learn and use new methods of production and true subsistence farming methods (Upton and Anthonio, 1975). In the present era, the aim of the most of the farmer should be to earn profits. Crop should be grown only to earn profit and therefore, farming as a business means farming for profit, not just some profit but as much profit as a possible. This is the transformation of farmer from the traditional to the modern farming method. Thus, market oriented agriculture in the mixed economy of the India need to promote farmers that produce products that local people

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need also to produce unique products for national and global markets, which should be managed by the farmers through following various cropping pattern.

In vegetables, prime position in the production of cauliflower, second in onion and in third cabbage in the world. The cabbage thrives in a relatively cool moist climate and produce good yield between 5 °C to 30 °C day temperature. It is eaten raw as well as cooked. It is normally used in social events and festivals as a "SALAD" and therefore, there is a demand of cabbage during round the year. In last one decade cabbage production increased by 2.02 times. Due to availability of potential and high temperature resistant varieties of cabbage, its productivity has increased more than 1.46 times higher as compared to its productivity in 1990 -91 (Singh and Malhotra, 2010). Climate has also best own agro-climatic conditions enabling our country to grow vegetables in temperate and humid tropic and from sea level to snow line. Owing to this, the harvesting season of cabbage has varies in various states of India. Cabbage crop is harvesting during December, January and February as a traditionally in Gujarat. Due to the seasonality of the cabbage production, supply is not uniform through the year, but the user needs are vital in marketing. Considering this facts, the average wholesale price of cabbage was recorded from 9477 Rs/qlt to 12681 Rs/qlt during the period of April to August-2011 at Ahmedabad and in other cities of country (Indian Horticulture Database, 2011). The highest price during the summer season is the driving force within the farmers of the Sabarkantha district and there are motivated to cultivate the cabbage as a summer crop. It is totally unfavourable climate condition for the cabbage crop, however the farmers are cultivated the cabbage during the summer.

The current advances in market oriented summer cabbage cultivation have not recommended and demonstrated for increasing the cabbage production by the agricultural scientists. Raising the efficiency of the growers, it essential for getting desire profit from the summer cabbage cultivation. Understanding that, no detail study has yet carried out in this regards so, to know the cropping pattern of the summer cabbage growers was under taken with specific objectives.

METHODOLOGY

Considering the area and 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 a 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. Cropping pattern were measured with help of structured schedule and receiving response of appropriate questions. Cropping pattern in this study was defined as a sequence of crops sown by the respondents on a given area. The information about cropping pattern followed by the cabbage growers was collected. Based on the frequency and percentage of the farmers adopting different cropping pattern, each cropping pattern has been assigned rank.

RESULTS AND DISCUSSION

Cropping pattern means a sequence of crops sown by the respondents on a specific given area. It ensures the greatest efficiency to land, fertilizer, irrigation water and other inputs. It also offers some alternative plans for the farmers to maximize production and as much profit as possible per unit area and time. The cropping pattern was thus studied. Data with respect to cropping pattern followed by the respondents are presented below in Table 1.

The data in Table 1 revealed that 49.17 per cent of the farmers had adopted Chilli-Chilli-Cabbage cropping pattern with the first rank in all cropping pattern. The cropping pattern of Okra-Okra-Cabbage 33.34 per cent was found with second rank. The Cauli-flower-Cabbage 29.16 per cent was found with third rank. While Cotton-Wheat-Pearl millet 27.5 per cent, Bottle guard-Bottle guard-Cabbage 25.00 per cent and Brinjal-Brinjal-Brinjal 24.16 per cent cropping patterns were adopted by the Cabbage growers and fourth fifth and sixth ranked, respectively. Considering the land holding as well as available irrigation resource the respondents were also adopted Cabbage-Cabbage (22.50 per cent), Tomato-Tomato-Tomato (22.50 per cent), Cluster bean-Wheat-Sorghum (20.00 per cent), Castor-Castor-Pearl millet (16.66 per cent), Bitter guard-Bitter guard-Bitter guard (13.34 per cent), Cotton-Cotton-Cabbage (11.66 per cent), Cluster bean-Mustard-Sorghum (10.84 per cent), Cluster bean-Wheat-Fodder pearl millet (07.50 per cent) and Cotton-Wheat-Sorghum (04.16 per cent) cropping pattern on their available land.

Table 1 Distribution of the respondents according to various cropping patterns adopted by them and rank order of the cropping patterns.

(n = 120)

Sr. No.	Cropping pattern	Number of respondents	Per cent	Rank
1.	Chilli – Chilli – Cabbage	59	49.17	I
2.	Okra – Okra – Cabbage	40	33.34	II
3.	Cauli-flower – Cabbage	35	29.16	III
4.	Cotton – Wheat – Pearl millet	33	27.50	IV
5.	Bottle guard – Bottle guard – Cabbage	30	25.00	V
6.	Brinjal – Brinjal – Brinjal	29	24.16	VI
7.	Cabbage – Cabbage	27	22.50	VII
8.	Tomato – Tomato – Tomato	27	22.50	VII
9.	Cluster bean – Wheat – Sorghum	24	20.00	X
10.	Castor – Castor – Pearl millet	20	16.66	X
11.	Bitter guard – Bitter guard – Bitter guard	16	13.34	XI
12.	Cotton – Cotton – Cabbage	14	11.66	XII
13.	Cluster bean – Mustard – Sorghum	13	10.84	XIII
14.	Cluster bean – Wheat – Fodder pearl millet	09	07.50	XIV
15.	Cotton – Wheat – Sorghum	05	04.16	XV

The probable reason behind this might be the mega cities like, Ahmedabad, Gandhinagar and Himmatnagar are nearest to the study area therefore, the farmers of study area are selecting more vegetable crops for cultivation, secondly the farming community give priorities for food and fodder security for their family members and live-stock, respectively. Majority of the farmers are adopted agriculture and animal husbandry as main occupations and earned their family income. They also had given prioritization to cash crops to earn monetary requirement for maintaining social occasions and entertainment and there by overall development.

CONCLUSION

Major cropping pattern of Chilli - Chilli - Cabbage (49.17 per cent), Okra - Okra - Cabbage (33.34 per cent), Cauliflower - Cabbage (29.16 per cent), Cotton - Wheat - Pearl millet (27.5 per cent), Bottle guard - Bottle guard - Cabbage (25.00 per cent), Brinjal - Brinjal - Brinjal (24.16 per cent), Cabbage - Cabbage (22.50 per cent) and Tomato - Tomato - Tomato (22.50 per cent) were adopted by the respondents with the first

to seventh rank, respectively. From this, it can be concluded that majority of the farmers are cultivated vegetable crops during the whole year and they are preferred mono cropping system. However, some of them are emphasized to cash crops with rotation of cereal, oil seeds and fodder crops.

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