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Study on Economic Analysis of Marketing for Cucurbits Crop (Cucumber & Watermelon) in Kaushambi District Uttar Pradesh

Aman Singh[1]; Sanjay Kumar[2]
Sam Higginbottom University of Agriculture & Technology Sciences, Prayagraj, U.P.
*Corresponding author email: amansingh.agro@gmail.com

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Abstract:
The present study entitled "Study on the economic analysis of marketing of cucurbits crop (Cucumber & Watermelon) in Kaushambi District Uttar Pradesh." Was undertaken to study overview, marketing cost, margins and price spread, problems in different marketing channels and preferences of farmers in Kaushambi district of Uttar Pradesh. A multistage stratified purposive cum random sampling technique was applied for the selection of district, block, villages and respondents. The primary data were collected through survey on schedule with the help of personal interviews. The data pertained to the agricultural year 2022-23. Secondary data was collected from secondary sources like district marketing office, mandi, Centre for Monitory Indian Economy (CMIE), India agri. stat etc. From the investigation, cucurbit growers faced different types of management &technical, financial and marketing problems. In which top three most common problems in management & technical faced by the farmers were lack of technical knowledge, unavailability of quality seeds (HYV), and labor problems. The top three financial problems faced by the growers were untimely availability of loans, high-interest rates and the repayment period not sufficient. And the top three marketing problems faced by the growers were perishability problems, lack of storage facilities and grading problems, Major suggestions of cucurbit farmers to overcome these constraints are training be imparted to implement new technologies, credit facilities with low-rate interest by institutional agencies and storage facilities in mandi should be provided to the farmers for their perishable products.

Keywords: Cucurbits, Economy, Mandi, Credit, Cultivation

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Introduction

Agriculture and its allied sectors have been the backbone of the Indian economy. Its contribution to GDP has decreased from 54.19 per cent in 1950-51 to 15.4 per cent in 2022-23. This is due to globalization, natural resource depletion, climate change, rapid industrialization, population growth and changing consumer behaviors. Agriculture and allied sectors are experiencing a period of transition all around the world. Now, Indian agriculture must reorganize itself by extending its scope beyond just primary agriculture. As a result, there is a need to reform the farming sector, invest extensively in infrastructure development, enhance access to formal credit, and adopt agriculture policies that are in step with ground reality.

India is the second largest producer of fruits and vegetables in the world. In the last few decades, this sector has gained prominence by contributing a growing share in Gross Value Addition of the Agriculture and allied sectors.

Under the changing agriculture scenario, it has been realized that the horticulture sector is important to the Indian economy (contributes 30.4% to GDP and 33% to GVA of agriculture). Because it is more productive than agriculture, the horticulture sector has emerged as one of the primary drivers of growth (food grains mainly). Horticulture production in India has risen dramatically in recent years. The area under horticulture has increased by 2.6 per cent per year over the last decade, while annual production has increasedby 4.8 per cent. Apart from ensuring the nation's nutritional security, it also creates new jobs, diversification of farm activities, provides raw materials to various food processing industriesand increases farm profitability through increased productivity and foreign exchange earnings.

Cucurbits are a large and major vegetable family that is widely grown in India and other tropical and subtropical regions throughout the world. For the cultivated species of theCucurbitaceae family, the term "curbits" was coined by Liberty Hyde Bailey, although this term is now used for all species in the family. Cucurbitaceae is a remarkable plant family thatdeserves to be recognized for its economic, aesthetic, cultural, medicinal, and botanicalsignificance. Cucurbits have been associated with human health and culture for over 12,000 years in both the Old and New Worlds (Brothwell and Brothwell, 1969; Lira-Saade, 1995). There are around 825 species in the Cucurbitaceae family, classified into 118 genera (Jeffrey,1990). Nearly 23 edible major and minor cucurbits are grown and consumed throughout Asia.

Cucurbits are most commonly used as vegetables and fruits. They are highly rich in vitamins A, which helps in wound healing by promoting the body's natural inflammatory response and

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activating collagen synthesis. Cucurbitacin‟s, triterpenes, sterols, and alkaloids are common bioactive compounds present in cucurbit fruits (including seeds). Cucurbitacin‟s are a group of bitter triterpenes found mostly in Cucurbitaceae seeds.

Watermelon (Citrullus lanatus) botanically considered as the fruit is belonging to the family Cucurbitaceae (Edwards et al., 2003). Cucurbitaceae family ranks among the highest of plant families for number and percentage of species used as human food. The common name of watermelon is Tarbooz (Hindi and Urdu), Tarbuj (Manipuri), Kaduvrindavana (Marathi), Eriputccha (Telegu), Kallangadiballi (Kannada), Tormuj (Bengali), Indrak (Gujarati). Watermelon is originated from Kalahari Desert of Africa but nowadays cultivated abundantly in tropical regions of the world.

A number of cucurbits can be grown in river beds at a minimal cost. As per the survey, 60% of total area under cucurbits cultivation is under riverbed cultivation. During the summer season, about 75-80% of total cucurbits production is grown on diara land that is available in the market between February and June. The Ganga, Yamuna, Saraswathi, Narmada, Sutlej, Krishna, Kaveri, Godavari, Mahanadi, Sabarmati, Gomati and Brahmaputra are some of the major river belts suitable for cucurbit cultivation. Cucumber and bitter gourd are commonly grown by farmers in 10 km radius of Kaushambi district.

Table: 1.1 Area and production of cucumber and Watermelon in India

(Area in „000 Ha, Production in „000 MT)

Crops	2020-21 (Final)		2021-22 (2nd Adv. Est.)		2021-22 (3rd Adv. Est.)	
	Area	Production	Area	Production	Area	Production
Cucumber	116.62	1651.92	113.32	1637.79	116.82	1631.35
Watermelon	119.03	3254.21	122.56	3460.59	124.48	3504.93

(Source – Department of Agriculture, Cooperation and Farmers Welfare)

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Fig. 1.1 area (in mh) & production (in mt) of cucumber and Bitter gourd in india

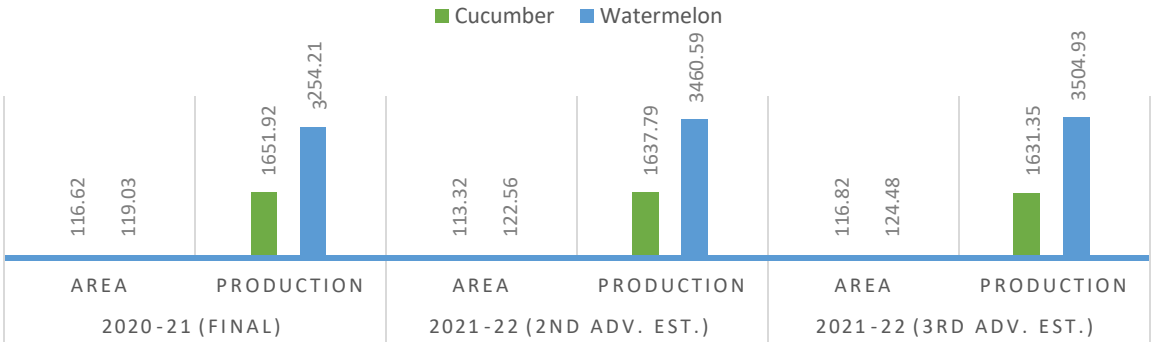

Table: 1.2 Nutritional Value of Cucumber & Watermelon (per 100 gm)

Phytochemicals	Value	
	Cucumber	Watermelon
Dietary fibers	0.7g	0.4 g
Total sugars	1.38g	6.2 g
Vitamin C	12 mg	8.1 mg
Thiamin	0.031 mg	0.033 mg
Riboflavin	0.025 mg	0.021 mg
Niacin	0.037 mg	0.178 mg
Pantothenic acid	0.240 mg	0.221 mg
Potassium	442 mg	172 mg

Source: *(United States Department of Agriculture)*

Research Methodology

There are 75 District in Uttar Pradesh out of these Kaushambi District was selected purposely for the present study on the basis of maximum area, production & quality under cucurbits cultivation. Kaushambi District is comprising of 8 Blocks, out of which Mooratganj Block was selected purposely as compared to all other blocks of Kaushambi District. Mooratganj Block Contain 110 Villages. Among these Villages, 5% of Villages was Selected randomly for the study Baliyawan, Jiwanganj, Sarwa Kaji, Naugira, Kasiya, Birahimbad. Total 10% market functionaries were selected according to the maximum number of cucurbit cultivator

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households from different selected villages with the help of Gram Pradhan and Gram Panchayat Adhikari. On the basis of their size of land holdings.

Table: 1.3 Detail Description of the cultivated holdings in different size of farmer group.

S. No.	Categories(members)	Respondent	
		Number	Percentage
1.	Marginal (< 1 hectare)	15	12.5%
2.	Small (1-2 hectare)	38	31.67%
3.	Semi Medium (2-4)	25	20.83%
4.	Medium (4-10hectare)	30	25%
5.	Large (Above 10 hectare)	12	10%
Total		120	100%

There are three most important channels which were existing in the study area viz.

Channel – I: Producer **-** Consumer (Village sale)

Channel – II: Producer - Retailer - Consumer (Local sale)

Channel – III: Producer – Wholesaler – Retailer - Consumer (Local sale)

Primary Data

Survey method is used for the collection of primary data. The selected producers were personally contacted and relevant were obtained with the help of pre – tested schedule.

Mooratganj was selected purposively for the study of primary data. It is basically a primary market where cucurbits are brought for sale from where it is dispatched to different parts of Kaushambi District.

Secondary Data

Secondary data are collected from the district marketing officer, mandi like Mundera mandi Prayagraj & Different websites of agro marketing and ministry of agriculture & Farmer Welfare.

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Identification of Channels

Marketing channel is defined as Alternative routes of product flows from producers to consumers. It is also described as the chain of intermediaries through whom the various produce pass from producer to consumer. The length of the channel varies from commodity to commodity depending on the quantity to be moved, the form of consumer demands and the degree of regional specialization in production.

Result and Discussion

The present investigation entitled "To study the economic analysis of marketing for cucurbits crop (Cucumber & Watermelon) in Kaushambi District Uttar Pradesh" in the Department in AGRIBUSINESS MANAGEMENT. The details of materials to be used and methodology adopted and observations recorded during the course of study are mentioned below.

The findings and inferences drawn with respect to the specific objectives of the study on the basis of analysis of data by using the relevant statistical techniques have been presented in this chapter. The findings of the study have been discussed under the following subheads. For the present study of Kaushambi District is Purposively selected, as it has large area under cucurbits production and its famous for the production of cucurbits on commercial level.

The data used in this study to fulfill various objectives were collected through personal interview of selected cucurbits growers and marketing intermediaries with the help of pretested scheduled designed for the purpose Besides data on quantity purchased, price paid received costs. Incurred were collected from the market functionaries. Various analytical tools were employed apart from simple averages.

The revealed that size of the farms group in numbers for marginal, small, semi medium, medium and large size farms were 15, 38, 25, 30 and 12 respondents respectively. Altogether 120 respondents were selected for study.

Information regarding age particulars was collected from sample respondents and grouped into Three Categories viz., young age group (20-35), Middle age group (36-50) and old age group (50 and above) the same is provided in table

A perusal of Table shows that the sample size of the respondents was 120. 28.33 percent of the respondents were illiterate, 16.66 percent of the respondents were educated to primary

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school, 20.83 percent of the respondents were having education qualification of junior high school, 14.16 percent of the respondents were educated to high school, 11.66 percent of the respondents were having education qualification of intermediate and 8.33 percent having the qualification of graduation and above.

Information regarding the according to the gender of sample respondents was collected and grouped into male (70.83%) and female (29.16%).

Information regarding the according to the gender of sample respondents was collected and grouped into SC/ST (20.83%), OBC (33.33%) and General (45.83%).

Information regarding the family status of sample respondents was collected and grouped into two categories viz., joint family (79.16%) and nuclear family (20.83%).

The Information regarding the according to the religion of sample respondents was collected and grouped into three categories viz., Hindu (37.5%), Muslim (41.66%) and Cristian (20.83%). With regard to the marketing study, three types of marketing channels wereobserved in cucurbits marketing *i.e.*, Channel – I (16.67%) (producer → consumer), Channel – II (29.16%) (producer → retailer → consumer) and Channel – III (54.17%) (producer → wholesaler → retailer → consumer).

We can see the marketing cost, marketing margin, price Spread and the marketing efficiency of Channel- I, Producer sales price to Consumer for watermelon and cucumber is Rs.1180, Rs 1600, We can see the marketing cost, marketing margin, price Spread and the marketing efficiency of Channel- II, Producer sales price to retailer for watermelon and cucumber is Rs.1420, Rs.2000 and consumers paid price for watermelon and cucumber is Rs1800, Rs.2333 in this Channel-III. We can see the marketing cost, marketing margin, price Spread and the marketing efficiency of Channel- II, Wholesaler sales price to retailer for watermelon and cucumber is Rs.1712, Rs.2385 and consumers paid price for watermelon and cucumber is Rs.1962, Rs.2645 in this Channel.

The main purpose of this chapter is to summarize the results of the present research work carried out and draw useful conclusions on the basis of these results and also to make suitable recommendations.

Agriculture plays a significant role in the process of economic development of any country, particularly in countries where per capita real income is low. Agriculture has helped countries to a greater extent in the process of their industrialization. Thus, agriculture development and

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industrialization are not alternatives but are complementary and mutually supporting for both inputs and output.

Vegetables act as protective food and occupy a unique place in the human diet. These are also remunerative crops in the cropping scheme of a farmer. Cucurbits are one of them for their numerous commercial and medicinal uses. From the point of view of farmers‟ economy, it would be very useful to grow cucurbit to earn a good amount of net profit. Marketing of vegetables assumes great significance from the producer's as well as consumer's point of view. We have emphasized the production and marketing of vegetables. Hence, research study entitled “Study on The Economic Analysis of Marketing of Cucurbits Crop (Cucumber & Watermelon) in Kaushambi District Uttar Pradesh”.

Conclusion

The study shows that the marketing of cucurbits in Kaushambi district: The main objective of the study is to analyze, socio economic characteristic of sample respondents. price spread and constraints in marketing of cucurbits. The results revealing that the socio-economic status of the respondents found to be moderate with primary education, well economic back ground and greater access to all the assets. Economics of cucurbits production is more profitable in large farms as compared to medium size farms and small size farms.

The study indicated that there is scope to increase the producer's share in consumer's rupee by making the market more effective so that the number of intermediaries is to be restricted and marketing costs and marketing margins to be reduced. Major constraints in marketing of different farms size group followed by a huge price fluctuation were the major marketing constraint in cucurbits.

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