# International Journal of Statistics and Applied Mathematics

ISSN: 2456-1452 Maths 2023; SP-8(6): 92-100 © 2023 Stats & Maths <u>https://www.mathsjournal.com</u> Received: 22-08-2023 Accepted: 26-09-2023

#### Vishal Gupta

Department of Agricultural Economics, Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya, Uttar Pradesh, India

#### Supriya

Department of Agricultural Economics, Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya, Uttar Pradesh, India

#### Shweta Chaudhary

Department of Agricultural Economics, G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, India

#### Diksha Bohra

Department of Agricultural Economics, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, India

#### Sandeep Gautam

Department of Agricultural Economics, Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya, Uttar Pradesh, India

#### Prateek Kumar

Department of Agricultural Extension, Bundelkhand University Jhansi, Uttar Pradesh, India

#### Corresponding Author: Supriya

Department of Agricultural Economics, Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya, Uttar Pradesh, India

# Tobacco marketing: SWOT analysis in Etah District of Western Uttar Pradesh

# Vishal Gupta, Supriya, Shweta Chaudhary, Diksha Bohra, Sandeep Gautam and Prateek Kumar

#### Abstract

The study has been conducted in order to access the marketing of tobacco in Etah district of Uttar Pradesh, India. Purposive cum multistage random sampling technique was used to select district, blocks, villages and respondents. Primary data were collected from 100 farmers from four villages of two blocks through personal interview method with the help of pre-structured schedule for the year 2021-2022. The two type of marketing channel identified in the study area were Channel-I: Producer - Wholesaler-processor and Channel-II: Processor - Village Trader - Wholesaler- Processor. Total disposal of tobacco was 88.14 quintals out of which disposal of tobacco by Channel-I and Channel-II, came to 52.77, 35.37 quintals, respectively. The highest net price (Rs.5610.26), marketing efficiency (9.30%) and producer's share in customer rupee (90.29) were found maximum in channel I as compared to second channel. Further in SWOT analysis stable strengths, weakness opportunities and threats were estimated and ranked according to C.V. (coefficient of variation). Tobacco growers faced different types of marketing constraints which were ranked through Garrett technique.

Keywords: SWOT, marketing, analysis, constraints.

#### Introduction

The International Encyclopedia of Social Sciences claims that American Indians were the first to use tobacco. Columbus introduced it to the world. Despite several attempts made by the governments of Muslim and European nations to stop its spread in other nations. Today, tobacco use is spreading around the globe. The Portuguese brought tobacco to India in the sixteenth century. The tobacco plant is a member of the genus Nicotiana of the Solanaceae family of plants. The genus has more than 60 species, of which two are cultivated. Two varieties of tobacco, Nicotianatabacum and Nicotianarustica, are grown in India.In India, Nicotianatabacum types account for more than 80% of the total area under tobacco, while Nicotianarustica variants occupy only 5 to 6% of the total area (Yogesh & Shrivastav, 2018) <sup>[11]</sup>. In regions of the world with tropical and subtropical climates, tobacco is grown. There are about 100 countries that grow tobacco, but China, India, Brazil, the United States, Turkey, Indonesia, Argentina, Zimbabwe, and Malawi are the main producers. In 2020, 61% of the world's land surface was planted with tobacco, resulting in 6.7 million tonnes of tobacco being produced globally. More over 63 percent of the world's tobacco leaves were produced in Asian countries, with China accounting for the majority at 39.06 percent of the total global output, followed by India (12.03 percent), Indonesia (2.95 percent), Pakistan (1.56 percent), and Turkey (1.05 per cent).Due to its enormous domestic consumption, China, the world's largest producer of tobacco crops, does not engage in the global trading market. African nations including Brazil, Malawi, and Zimbabwe each contributed 1.53 percent of the overall production (3.85 per cent).

Tobacco, commonly known as "Golden Leaf," is one of India's most significant commercial crops and, as such, is crucial to the country's economy. It contributes up to 4408 crores in foreign exchange and 14000 crores in excise duty to the national exchequer, giving 45.7 million people employment opportunities both directly and indirectly (CTRI, 2019)<sup>[10]</sup>.

India is the second-largest producer of tobacco in the world, producing 0.66 million tonnes of tobacco on an area of 0.41 million hectares at a productivity of 1610 kg/hectare.

Bidi tobacco accounts for the largest portion of the many tobacco varieties grown in India (36%) followed by Virginia tobacco (16%), Natu tobacco (9.5%), and hookah tobacco (7.6%), producing more than 4408 crores in excise revenues from all tobacco transactions. (Directorate of Economics and Statistics, Government of India, 2018-19).

Tobacco is mainly grown under conserved soil moisture and monsoon conditions, solely depending on rainfall distribution. India exported 298.67 thousand tonnes of tobacco and tobacco products worth 9013 crores in 2020-21 (Tobacco Board in India, 2020-21)<sup>[8-9]</sup>.

India's prominent tobacco growing states are Andhra Pradesh, Karnataka, Gujarat, Uttar Pradesh, Tamil Nadu, West Bengal, Bihar, and Odisha. Andhra Pradesh has first place in production of tobacco in India. Uttar Pradesh has the fourthlargest production state (56 thousand tonnes) and sixth-largest area state (26 hectares), this means that Uttar Pradesh has a lot more tobacco area per hectare than other states. The state had about 3% to 4% of the total area in the country where tobacco was grown, but this changed from year to year (Agriculture statistics at a glance, 2018-2019)<sup>[1]</sup>.

Uttar Pradesh is divided into 18 divisions for administrative purposes. In 75 districts, there are 97941 villages and 64 cities. Tobacco is produced almost in all districts of Uttar Pradesh, but among all, Farrukhabad is the largest tobacco producing district. Etah district is one of the districts in the Indian state of Uttar Pradesh, and the district headquarters is located in the town of Etah located in the part of the Aligarh Division. The population density of the district is 717 inhabitants per square kilometer (1,860 inhabitants per square mile). Its population increased at a rate of 12.77 percent each decade between 2001 and 2011. Etah has a female to male ratio of 863 for every 1000 males and a literacy rate of 73.27 percent, which is higher than the national average. Agriculture is the principal source of income for the people that live in the district. The land is located between the rivers Ganga and Yamuna (Doaab), and it is quite fertile (Alluvial soil). Three crops are harvested by the farmers in a single year. Irrigation water is accessible for use throughout the year. Rice, wheat, barley, jowar, bajra, and maize are the most important agricultural products, and the land supports growth of tobacco. The entire area under cultivation for tobacco in the Etah district is 8199 hac, with a productivity of 50 kilos per hectare.

# **Materials and Methods**

**Sampling design:** The present study was conducted in Etah district of Uttar Pradesh. Purposive cum multistage random sampling technique was used for the selection of district, block, villages and respondents.

**Selection of District:** Etah district of Uttar Pradesh was selected purposively for the collection of data, because this district has higher tobacco production rate and awareness of investigators is high in this district.

**Selection of Block:** Two blocks of the selected district having highest acreage under tobacco crop cultivation was selected purposively for the study.

**Selection of respondents:** A separate list of all the tobacco crop growers of selected villages were prepared along with their size of holdings and were grouped into three categories *viz*.

1. Marginal farmer (below 1 ha).

2. Small farmer (1-2 ha).

# 3. Medium farmer (2-4 ha.)

From this list, a sample of 100 respondents are drawn through a proportionate random sampling procedure.

#### **Collection of data**

The relevant information was gathered using the personal interview approach with the aid of a prepared survey schedule in order to evaluate the study's objectives. The information referred to the agricultural years 2021–2022 During the years 2021-2022, information was gathered from farmers about their holding size, general demographics, cropping practices, area used for tobacco cultivation, resource usage patterns, and production constraints. In a similar way, information about traders, commission agents, and processors was gathered through in-person interviews.

# To identify important marketing channels and to estimate their market price, market margins, price spread and marketing efficiency

# Marketing cost

The marketing cost incurred by the various functionaries was estimated by taking account of the different expenses made by them in performing various functions *viz* transportation, storage, packaging etc. and the overhead charges (Supriya, 2009)<sup>[6]</sup>.

## Marketing margin i) Absolute margin

 $Am = P_s - P_b$ 

Where,

Am = the absolute margin of the functionary (Rs.)  $P_s$  = selling price of tobacco for the functionary  $P_b$  = buying price of tobacco for the functionary

#### ii) Net margin

Nm = Am - Mc

Where,

Nm = net margin of the functionary (Rs.)

Am = the absolute margin of the functionary (Rs.)

Mc = Marketing cost per unit of tobacco quantity incurred by the functionary (Rs.)

# iii) Per cent margin

$$Pm = \frac{Am}{Ps} \times 100$$

Where,

 $P_m$  = per cent margin of the functionary  $A_m$  = absolute margin of the functionary (Rs.)  $P_s$  = unit selling price of the functionary (Rs.)

#### iv) Percent net margin

 $P_{nm} = \frac{N_m}{P_s} \times 100$ Where,

 $P_{nm}$  = Per cent net margin of the functionary  $N_m$  = Net margin of the functionary (Rs.)  $P_s$  = Unit selling price of the functionary (Rs.)

#### **Price spread**

Channel wise price spread was worked out using the following formula.

$$PSj = \frac{RPj - PPj}{RPj} \times 100$$

Where,

$$\begin{split} PSj &= \text{per cent price spread of } j^{th} \text{ seed crop} \\ RP_j &= \text{unit retail price of } j^{th} \text{ seed crop } (Rs.) \\ PP_j &= \text{unit producer price of } j^{th} \text{ seed crop } (Rs.) \end{split}$$

# Marketing efficiency

Marketing Efficiency was calculated by using Shepherd Formula.

$$M.E. = \frac{V}{I} - 1$$

Where, M.E= Index of Marketing efficiency V= value of goods I= Total Marketing cost

# SWOT analysis Tobacco crop:

The study was conducted in four villages district of Etah. A total of 100 tobacco farmers were sampled from the villages as the respondents. A semi-structured interview schedule was utilized to elicit the response. The data were collected during Rabi season of 2021-2022.

The response on SWOT parameters was first based on participatory discussion, and the selected respondents were asked to rank the identified and acceptable response on SWOT parameters. Farmers' ranks were combined for all villages and frequency distribution was computed.

To allocate a final rank to the perceived response for each of the SWOT parameters, the following parameters were used: mean overall rank, standard deviation (SD), and coefficient of variation (CV). (Omani *et al.*, 2011, Rana *et al.*, 2017)<sup>[4]</sup>.

**Mean:** Arithmetic mean or simple mean of a set of observation is their sum divided by the number of observation, *e.g.*, the arithmetic mean x of N observation  $x_1$ ,

x<sub>2</sub>, x<sub>3</sub>...,x<sub>n</sub> is given by 
$$\overline{x} = \frac{1}{n} \sum_{i=1}^{n} x_i$$

#### **Standard deviation**

It is more accurate and detailed estimate of dispersion because an outlier can greatly exaggerate the range. It is expressed by

$$\boldsymbol{\sigma} = \sqrt{\sum_{i=1}^{n} \frac{(x_i - \bar{x})^2}{N}}$$

Where,  $x_i$  = value of the variable for the i<sup>th</sup> observation.

 $\overline{X}$  = the mean or average N = the number of values

### **Coefficient of variation**

According to Karl Pearson coefficient of variation is the percent variation in the mean, standard deviation being considered as the total variation in the mean.

Coefficient of variation =  $\frac{\text{Standard deviation}}{\text{Mean}} \times 100$ 

#### Constraints analysis in marketing of tobacco crop

In order to achieve the objective, i.e. to identify the socioeconomic constraints of tobacco production and marketing, Garrett's ranking technique was used to rank the causes responsible for the tobacco growers. (Yogesh and Srivastava, 2018; Gautam *et al.*, 2022)<sup>[11,2]</sup>

Percent position 
$$=\frac{100 (\text{Rij}-0.5)}{\text{Nj}}$$

Where,

Rij = Rank given for i<sup>th</sup> preference by j<sup>th</sup> farmer Nj = Number of preferences ranked by j<sup>th</sup> farmer

The per cent of rank, for a single variable (reason) were added up for total sample tobacco growers to give the overall per cent position of that preference. The overall per cent position thus calculated was divided by the number of respondents in order to derive the average per cent position, which was then converted to scores by referring to the transmutation table, given by Garrett.

#### **Result and Discussion**

# Nature and extent of marketable and marketed surplus of tobacco

From the Table 1 observed that marketable and marketed surplus were equal in size of sample farms. Marketable surplus was observed to be 25.01, 29.96 and 33.17 quintals on marginal small and medium size group of farms with overall average of 28.16 quintals. Marketed surplus was observed to be 25.01, 29.96 and 28.16 quintals on marginal, small and medium size of sample farms, respectively with an overall average of 28.16 quintals.

Table 1: Nature and extent of marketable and marketed surplus of Tobacco on different size group of farms (qtl.)

S. No.	Particulars	Size group of farms						
5. INO.	Farticulars	Marginal	Small	Medium	Overall average			
Α.	Total production	25.01 (100.00)	29.96 (100.00)	33.17 (100.00)	28.16 (100.00)			
1	Family consumption	0	0	0	0			
2	Marketable surplus	25.01 (100.00)	29.96 (100.00)	33.17 (100.00)	28.16 (100.00)			
3	Marketed surplus	25.01 (100.00)	29.96 (100.00)	33.17 (100.00)	28.16 (100.00)			

Figures in parenthesis show the per cent to corresponding total production

**Pattern of disposal of tobacco under different size of sample farms:** Disposal of tobacco through various channels, as producer. Wholesaler - processor, producer - village trader – wholesaler - processor are given Table-2.

This table indicated that the maximum sale of tobacco done through Channel-I (52.77qtl.) followed by Channel-II (35.37qtl.) on marginal, small and medium farms. In respect to marginal farms, the maximum sale of tobacco through Channel-I (14.43qtl.), followed by Channel-II (10.58qtl.). In

farms, maximum sale of tobacco through Channel-I (19.42qtl.) followed by channel II (13.75qtl.) respectively.

Table 2: Disposal pattern of Tobacco through different channels on different size group of farms (QT).

C No		Channel	Channel	Tatal Onentita
S. No.	Size of group of farms	Ι	II	Total Quantity   25.01 (100.00)   29.96 (100.00)   33.17 (100.00)
1	Marginal	14.43 (57.70)	10.58 (42.30)	25.01 (100.00)
2	Small	18.92 (63.15)	11.04 (36.85)	29.96 (100.00)
3	Medium	19.42 (58.55)	13.75 (41.45)	33.17 (100.00)
	Total	52.77 (59.87)	35.37 (40.13)	88.14 (100.00)

Figures in parenthesis show the per cent to corresponding total quantity

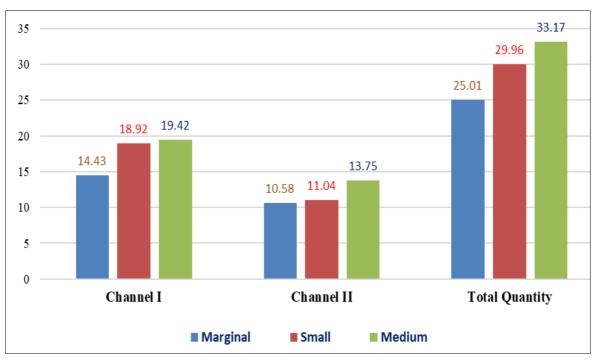


Fig 1: Disposal pattern of tobacco through different channels on different size group of farms. (QTL.)

# Marketing channels, marketing efficiency, price spreads, marketing costs and margin of tobacco

The price spread refers to the difference between the price paid by the consumer and the actual (net) price received by the producer during reference period for an equivalent quantity of farm produce. Marketing margins refers to the difference between the price paid and price received by any specific marketing agency. Marketing costs refers to the margin or profits of the middlemen, marketing charges paid by producers plus charges paid by whole sellers plus charge paid by retailers in the process of marketing of said procedure.

The following channels were identified for marketing of tobacco in the study area.

Channel I. Producer - wholesaler - processor.

Channel II. Producer - village trader - wholesaler - processor

Table 4.3.3 displayed the price spread, marketing costs and margins of tobacco in Channel-I.

# Channel-I (Producer – wholesaler- processor)

It is observed from Table 3 that the sale of tobacco was made through producer-wholesaler-processor. On an average, share in customer's rupee was worked out i.e. 90.29 per cent, which was comparatively higher than Channel-II because of one middleman i.e. wholesaler involved. Expenses incurred on marketing of tobacco and margins received by wholesaler came to 2.07 and 5.52 per cent, respectively. Per quintal price received by marginal, small and medium farmers were ₹ 5604.00, 5615.00, and 5618.00 however, producers share in customer rupee were 90.44, 90.09 and 90.29 per cent, respectively. On an average price spread was exhibited 9.71 per cent.

Table 3: Price spread for tobacco marketing in Channel-I (Producer - wholesaler - processor), (Rs./qt.)	

S. No.	Particulars	Size group of farms						
5. INO.	raruculars	Marginal Small		Medium	Average			
1	Net price received by the producer	5604 (90.44)	5615 (90.09)	5618 (90.29)	5610.26 (90.29)			
2	(	Cost incurred by the	e producer					
(i)	Transportation	11.76 (0.19)	11.9 (0.19)	10.66 (0.17)	11.61 (0.19)			
(ii)	Cost of bags	35.2 (0.57)	36.17 (0.58)	36.66 (0.59)	35.79 (0.58)			
(iii)	weighing charge	11.6 (0.19)	10.73 (0.17)	12.77 (0.21)	11.51 (0.19)			
(iv)	Loading and unloading	13.9 (0.22)	17.64 (0.28)	17.22 (0.28)	15.77 (0.25)			
(v)	Losses	34.5 (0.56)	20.29 (0.33)	18.33 (0.29)	26.76 (0.43)			
(vi)	Other charges	29.4 (0.47)	30.44 (0.49)	30.88 (0.50)	30.02 (0.48)			
(vii)	Total marketing cost incurred by producer	136.36 (2.20)	127.17 (2.04)	126.52 (2.03)	131.46 (2.12)			

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(viii)	wholesaler purchase price	5740.36 (92.64)	5742.17 (92.13)	5744.52 (92.32)	5741.72 (92.41)					
3	Cost incurred by the wholesaler									
(i)	Storage charge	10 (0.16)	11.17 (0.18)	11.43 (0.18)	10.66 (0.17)					
(ii)	Transportation Cost	12.6 (0.20)	14.85 (0.24)	12.22 (0.20)	13.30(0.21)					
(iii)	Cost Of Bag	34.7 (0.56)	34.26 (0.55)	34.65 (0.56)	34.54 (0.56)					
(iv)	Weighing Charge	10 (0.16)	11.47 (0.18)	10.21 (0.16)	10.54 (0.17)					
(v)	Loading & Unloading	14.16 (0.23)	14.5 (0.23)	16.5 (0.27)	14.70 (0.24)					
(vi)	Losses	13.5 (0.22)	30.44 (0.49)	19.44 (0.31)	20.33 (0.33)					
(vii)	Other Charges	28.6 (0.46)	20.29 (0.33)	22.22 (0.36)	24.63 (0.40)					
(viii)	Total marketing cost incurred by WS	123.56 (1.99)	136.98 (2.20)	126.67 (2.04)	128.68 (2.07)					
(viii)	WS Net margin price	332.23 (5.36)	353.52 (5.67)	351.11 (5.64)	342.87 (5.52)					
(viii)	Price spread	592.15 (9.56)	617.67 (9.91)	604.3 (9.71)	603.01 (9.71)					
4	WS sale price/ Processor Pur. Price	6196.15 (100.00)	6232.67 (100.0)	6222.3 (100.00)	6213.274 (100.00)					

Fingers in parenthesis show the percent to corresponding wholesaler's price

# II. Channel-II

#### Producer-village trader-wholesaler-processor

It is observed from Table 4.3.4 that the marketing for tobacco was done by producer -village trader- wholesaler-processor. On an average, share in customer's rupee was workout i.e. 87.24 per cent, which was comparatively lower than Channel-I because of two middlemen's i.e. village trader and wholesaler were involved. Expenses incurred on marketing costs and margins at village trader were 1.90 and 0.82 per cent. Expenses incurred on marketing costs and margins received by wholesaler were 1.87 per cent and 6.22 per cent, respectively. Per quintal price received by marginal, small and medium farmers were ₹ 5554.17, 5550.65, and 5582.22 however; producer's share in customer's rupee came to 87.51, 87.08 and 86.82 per cent, respectively. On an overall average gross price spread was exhibited 12.76 per cent.

Table 4: Price spread for tobacco marketing in Channel-II (Producer – village trader -wholesaler-processor), (₹/qtl.)

C Ma	Dentionland	Size group of farms						
S. No.	Particulars	Marginal	Small	Medium	Average			
1	Net price received by the producer	5554.17 (87.51)	5550.65 (87.08)	5582.22 (86.82)	5558.02 (87.24)			
2		irred by the produce						
(i)	Transportation	12.5 (0.20)	15.44 (0.24)	12.22 (0.19)	13.45 (0.21)			
(ii)	Cost of bags	33.64 (0.53)	28.56 (0.45)	30.61 (0.48)	31.37 (0.49)			
(iii)	weighing charge	11.67 (0.18)	12.35 (0.19)	15.55 (0.24)	12.60 (0.20)			
(iv)	Loading and unloading	15.83 (0.25)	10.64 (0.17)	11.94 (0.19)	13.37 (0.21)			
(v)	Losses	25.93 (0.41)	23.67 (0.37)	26.84 (0.42)	25.33 (0.40)			
(vi)	Other charges	30.76 (0.48)	26.17 (0.41)	25.27 (0.39)	28.21 (0.44)			
(vii)	Total marketing cost incurred by producer	130.33 (2.05)	116.83 (1.83)	122.43 (1.90)	124.32 (1.95)			
(viii)	Village trader purchase price	5684.50 (89.57)	5667.48 (88.91)	5704.65 (88.73)	5682.34 (89.19)			
3		Cost incurred by vi	llage trader					
(i)	Storage price	10.43 (0.16)	13.41 (0.21)	10.75 (0.17)	11.50 (0.18)			
(ii)	Cost of bag	28.23 (0.44)	27.62 (0.43)	28.45 (0.44)	28.06 (0.44)			
(iii)	Transportation cost	14.06 (0.22)	12.2 (0.19)	15.55 (0.24)	13.70 (0.21)			
(iv)	Weighing charge	11.35 (0.18)	14.38 (0.23)	11.94 (0.19)	12.49 (0.20)			
(v)	Loading & unloading	11.97 (0.19)	16.47 (0.26)	14.44 (0.22)	13.94 (0.22)			
(vi)	Losses	21.66 (0.34)	18.09 (0.28)	18.98 (0.30)	19.96 (0.31)			
(vii)	Other charges	20.82 (0.33)	22.35 (0.35)	20.61 (0.32)	21.30 (0.33)			
(viii)	Total marketing cost incurred by VT	118.52 (1.87)	124.52 (1.95)	120.72 (1.88)	120.96 (1.90)			
(ix)	VT net margin price	50.7 (0.80)	52.79 (0.83)	54.67 (0.85)	52.13 (0.82)			
(x)	Wholesaler purchase price	5853.72 (92.23)	5844.79 (96.69)	5880.04 (91.45)	5855.42 (91.91)			
4		Cost incurred	by WS					
(i)	Storage price	10.04 (0.16)	11.34 (0.18)	12.61 (0.20)	10.94 (0.17)			
(ii)	Transportation cost	11.34 (0.18)	11.76 (0.18)	10.32 (0.16)	11.30 (0.18)			
(iii)	Cost of bag	10.11 (0.16)	25.73 (0.40)	27.42 (0.43)	18.54 (0.29)			
(iv)	Weighing charge	12.18 (0.19)	12.5 (0.20)	12.12 (0.19)	12.28 (0.19)			
(v)	Loading & unloading	15.2 (0.24)	14.85 (0.23)	15.41 (0.24)	15.12 (0.24)			
(vi)	Losses	26.14 (0.41)	19.11 (0.30)	19.16 (0.30)	22.49 (0.35)			
(vii)	Other charges	29.89 (0.47)	27.79 (0.44)	25.8 (0.40)	28.44 (0.45)			
(viii)	Total cost incurred by WS	114.9 (1.81)	123.08 (1.93)	122.84 (1.91)	119.11 (1.87)			
	WS net margin price	378.12 (5.96)	406.47 (6.38)	426.66 (6.22)	396.50 (6.22)			
	Price spread	792.57 (12.49)	823.69 (12.92)	847.32 (13.18)	813.01 (12.76)			
5	WS sale price/ Processor Pur. Price	6346.74 (100.00)	6374.34 (100.00)	6429.54 (100.00)	6371.03 (100.00)			

Fingers in parenthesis show the percent to corresponding processor's price

#### Inter-channel comparison as a whole for tobacco

Table 4.3.5 highlights summary of inter-channel comparison in respect of average marketing costs, margins and price spread of tobacco. It is interesting to mention that marketing costs increased as increase in number of intermediaries under Channel-II. By comparing, gross marketing margins was found maximum having 12.76 per cent in Channel-II followed by 9.71 per cent Channel-I, respectively.

Table 5: Inter channe	l comparison as a	whole for tobacco	(Rs./qt.)
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S. No.	Particulars	Channel-I	Channel-II
1	Price received by the producer	5610.26 (90.29)	5558.02 (87.24)
2	Cost incurred by t	he producer	
(i)	Total cost incurred by the producer	131.46 (2.12)	124.32 (1.95)
(ii)	Producer sale price/ wholesaler Pur. Price	5741.72 (92.41)	5682.34 (89.19)
3	Cost incurred by v	village trader	
(i)	Total marketing cost incurred by VT	-	120.96 (1.90)
(ii)	VT net margin price	-	52.13 (0.80)
(iii)	wholesaler purchase price	-	5855.42 (91.91)
4	Cost incurred by t	ne wholesaler	
(i)	Total marketing cost incurred by WS	128.68 (2.07)	119.11 (1.87)
(ii)	WS net margin price	342.87 (5.52)	396.49 (6.22)
(iii)	WS sale price/ Processor pur. Price	6213.27 (100.00)	6371.03 (100.00)
	Price spread	603.01 (9.71)	813.01 (12.76)

Fingers in parenthesis show the percent to corresponding processor's price

#### Marketing efficiency of tobacco

The marketing efficiency of tobacco under different marketing channels has been presented in Table 6.

Channels	Value of tobacco sold (Rs./qt), (Consumer Price)	Gross marketing margin (Rs./qt) (Cost + Margin)	Marketing Efficiency (%)
Producer - wholesaler- processor	6213.27	603.01	9.30
Producer -commission agent-wholesaler-processor	6374.39	813.01	6.84

Table 6 indicates that Channel-I was found more efficient as compared to Channel-II because there was only one middleman existed and produces was sold directly to the wholesaler to processor which resulted less marketing cost in Channel-I as compared to second channel.



Fig 2: Marketing efficiency of different channel

# Producer's share in customer's rupee, marketing costs and middlemen margins of tobacco under different channel

Table 7 shows producer's share in customer's rupee, (in per cent), marketing costs ( $\mathbf{x}$ /qt.) and middlemen margins ( $\mathbf{x}$ /qt.) of different marketing channel in tobacco marketing. The producer's share in customer's rupee was found maximum

90.29 per cent in Channel-I followed by 87.20 per cent in Channel-II respectively.

Maximum marketing costs per quintal were found ₹ 364.39 in Channel-II followed by ₹ 260.14 under Channel-I.

Middlemen margins were estimated ₹ 342.87 and ₹ 448.63 per quintal under Channel-I and Channel-II respectively.

Table 7: Producer's share in customer's rupee, marketing costs, and middlemen margins of tobacco in different channel

Particulars	Channels		
	Ι	II	
Producer' share in customer's rupees (%)	90.29	87.20	
Marketing cost (Rs./qt.)	260.14	364.39	
Middlemen margins (Rs./QT)		448.63	

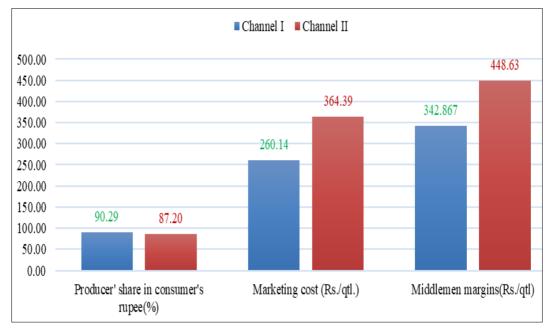


Fig 3: Producer's share in customer's rupee, marketing costs, and middlemen margins of tobacco in different channel

## SWOT analysis of tobacco marketing

Perceived SWOT analysis of tobacco marketing: The information presented in Table 8 revealed that the respondents identified perceived strength, weakness, opportunities and threats of tobacco marketing.

Tobacco is utilized to cure diseases like sore throat, wounds, insect repellent and due to these sedative and antispasmodic properties medicinal value as a major strength was ranked I with C.V. value 51.64% followed by its industrial use with the C.V. value 29.46%. It has high preservative value due to long shelf life with C.V. value 47.14% was ranked III and long and easy storage capacity is ranked IV with C.V. value of 51.64%.

Involvement of middleman in tobacco marketing reduce the income of farmers by not getting actual price of their crop is the major weakness of tobacco marketing with C.V. value 29.14%. Lack of marketing information system was rank II with the c.v. value 33.68% due to unavailability of market resources due to lack of regulated market farmers are forced to sell their produce in the domestic markets at cheaper price and was ranked III with C.V. value 41.08%. Continuous hiking in taxes in both domestic and international market affect the export marketing of tobacco was ranked IV with C.V. value 50.00% followed by illegal marketing of tobacco as it is a source of tainted wealth ranked V with C.V. 50.21%. Non availability of National and International market information was too mentioned in marketing constraint with C.V. value 63.90% and was ranked VI and lastly actual

demand is not known for tobacco due to illegal and unregulated consumption with C.V. value 64.55%.

Despite significant weakness and concerns the tobacco industry holds many marketing opportunities. Most intriguing possibility for the industry revealed by the study is Value addition potential with lowest C.V. value 17.32% which is simultaneously improve the GDP also, followed by Expanding national international market which can create cross border value chains and the trade performance of industry was ranked II with C.V. value 30.62%. The launch of smokeless tobacco initiatives like chew, snuff, SNUS and dissolvable tobacco was ranked III with the highest C.V. value 41.03%.

Fluctuation in market prices due to demand elasticity, tax policies and other factors has always been a top marketing threat for the industry and was ranked I with C.V. value 27.22%. The threat of Ban on advertising, promotion and Sponsorship of tobacco products due to increased health risks and social stigma as ranked II with C.V. value 29.46% followed by Increase in tobacco taxation in order to reduce the consumption and improve government revenue had a calculated C.V. 45.76% and ranked III last but not the least Tobacco Smuggling(low-risk high reward criminal activity) and Surveillance had converged as a transnational threat which might get complex and volatile in future which was ranked IV as a threat with C.V. value 51.64%.

From the above analysis it was revealed that the factor in SWOT table having less value of coefficient of variation is more consistent and persistently stable and vice versa.

Table 8: SWOT analysis of tobacco marketing (given as rank) in the study area as perceived by the Farmers

Strengths								
Perceived strengths	V1	V2	V3	V4	Average rank	S.D.	C.V (%)	Rank
Easy and long storage capacity	II	Ι	III	IV	2.5	1.29	51.64	IV
Industrial use	III	IV	IV	II	3.25	0.96	29.46	II
Medicinal value	III	III	III	II	2.75	0.50	18.18	Ι
High preservative value	IV	III	Ι	IV	3	1.41	47.14	III
Weakness								
Involvement of middleman in tobacco marketing reduce the income of farmers by not getting actual price of their crop.	VI	v	VII	v	3.29	0.96	29.14	Ι
Illegal marketing of tobacco.	IV	III	VI	V	2.57	1.29	50.21	V
Farmers are forced to sell their produce in the domestic markets at cheaper price.	VII	V	IV	VI	3.14	1.29	41.08	III
No market information system	V	V	VII	VII	3.43	1.15	33.68	II
Actual market demand not known	IV	V	II	III	2.00	1.29	64.55	VII

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Non availability of National and International market information	VI	VII	III	IV	2.86	1.83	63.90	VI		
Continuous hiking in taxes in both domestic and international market affect the export marketing of tobacco	IV	IV	VII	VI	3.00	1.50	50.00	IV		
Opportunities										
Expanding national international market	II	Ι	II	III	2.67	0.82	30.62	II		
Value addition potential	III	III	II	II	3.33	0.58	17.32	Ι		
The launch of smokeless tobacco initiatives.	Ι	II	III	Ι	2.33	0.96	41.03	III		
Threats										
Fluctuation in market prices	II	III	IV	III	3	0.82	27.22	Ι		
Increase in tobacco taxation	III	IV	III	Ι	2.75	1.26	45.76	III		
Ban on advertising, promotion and Sponsorship of tobacco products	IV	IV	II	III	3.25	0.96	29.46	II		
Tobacco Smuggling and Surveillance.	III	IV	II	Ι	2.5	1.29	51.64	IV		

# Marketing constraints faced by tobacco growers

Garrett ranking technique has been used to analyze the factors influencing the marketing of tobacco by the respondents. In this study, farmers were ranked on a scale of 1 to 16 to determine their preferences for the choice of constraints. The calculated percentage position for the rank 1 to 16 and their correspondent Garrett value show in Table 9. The study revealed that, the major challenges experienced by farmers marketing tobacco in study area were high market prices fluctuations (54.84), lack of regulated market (53.78),high intervention of middleman (53.04), non-contact with extension agency (52.57), lack of awareness about market news (51.93), inadequate of appropriate credit facilities (51.77), lack of suitable packaging material (51.51), unorganized marketing system (51.18), high transportation charges (50.53), poor maintenance of roads (50.36), lack of coordination with market intermediaries (50.19), lack of storage facilities (49.34), lack of transport (49.08), lack of support facilities in the market (48.55), lack of coordination with market intermediaries (46.11) and lack of support facilities in the market (39.92).

Table 9: Constraints faced by the sample f	farmers in the marketing of tobacco.
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S. No.	Particulars	Percent position	Garrett value	Total	Average Score	Rank
1	Lack of support facilities in the market	3.13	86	4855	48.55	14
2	Poor maintenance of roads	9.38	76	5036	50.36	10
3	Unorganized marketing system	15.63	70	5118	51.18	8
4	Inadequate of appropriate credit facilities	21.88	66	5177	51.77	6
5	Lack of coordination with market intermediaries	28.13	61	5019	50.19	11
6	High transportation charges	34.38	58	5053	50.53	9
7	High intervention of middleman	40.63	55	5304	53.04	3
8	Lack of suitable packaging material	46.88	52	5151	51.51	7
9	Lack of awareness about market news	53.13	49	5193	51.93	5
10	Lack of storage facilities	59.38	46	4964	49.64	12
11	High market prices fluctuations	65.63	42	5484	54.84	1
12	Non-contact with extension agency	71.88	39	5257	52.57	4
13	Lack of regulated market	78.13	35	5378	53.78	2
14	Lack of support facilities in the market	84.38	30	3992	39.92	16
15	Lack of transport	90.63	24	4908	49.08	13
16	Lack of coordination with market intermediaries	96.88	16	4611	46.11	15

#### **Summary and Conclusion**

This study has examined the marketing costs, margins and price spread in tobacco in Etah. Being a cash crop of Etah, marketable and marketed surplus of tobacco was observed to be 88.14 quintals. Most of the producer (59.87 percent) was sold through Channel-I (Producer-Wholesaler-Processor) because of higher price as compared to Channel-II. Gross marketing margins were found maximum with 12.76% in Channel-II as compared to Channel-I where gross marketing margin was reduced to 9.71%. The marketing efficiency of tobacco under Channel-II (6.84%), due to the presence of middleman found in Channel-I. The producer's share in customer's rupee was found maximum in tobacco i.e. 90.29 per cent in Channel-I followed by 87.20 per cent under Channel-II, respectively.

SWOT analysis included to identify the goal and determining the internal and external factors that are beneficial and harmful for achieving these goals. The strongest application of a SWOT analysis is probably the recommendation that, whatever decision must be taken i.e. decision-making should include each of the following components: Maximizing strengths, minimizing weaknesses, seizing opportunities, and fending off threats. Constraints faced by farmers were calculated by Garett technique and major marketing constraints were lack of regulated market, high intervention of middleman, noncontact with extension agency, lack of awareness about market news etc.

#### References

- 1. Agricultural Statistics at a Glance, Directorate of Economics & Statistics, Government of India. Last Accessed; c2019.
- Gautam S, Supriya, Srivastava AB, Bohra D. Factors constraining farmer's Adoption of the E- National Agriculture Market (eNAM) in Sultanpur District of Uttar Pradesh. Asian Journal of Agricultural Extension, Economics & Sociology. 2022;40(12):501-506
- Kumar S, Sah U, Pandey NK. SWOT Analysis of Potato Cultivation in East Khasi Hills District of Meghalaya. Potato Journal. 2012;33(3-4):144-148.
- 4. Ommani AR. Strengths, weaknesses, opportunities and threats (SWOT) analysis for farming system businesses management: Case of wheat farmers of Shadervan District, Shoushtar Township, Iran. African Journal of Business Management. 2011;5(22):48-54.

International Journal of Statistics and Applied Mathematics

- Rana KR, Arya S, Kumar S, Singh KD, Cecilia T, Mares V, *et al.* SWOT analysis of potato cultivation under arid conditions in western Rajasthan. Indian Journal of Agricultural Sciences. 2017;87(12):1687-94.
- Supriya. Competitiveness of production of improved seeds at farm level and marketing through public visà-vis private seed producing agencies in Uttarakhand. Thesis, Ph.D. GB Pant University of Agriculture & Technology, Pantnagar, Uttarakhand; c2009. p. 195.
- 7. Tilekar SN, Darshane VC, Thorat VA, Patil HK. Marketing of Quality Seeds of Wheat and Pearmillet. Indian Journal of Agri. Eco. 2002;57(3):483.
- 8. Tobacco Board of India, Ministry of Commerce & Industries, Government of India. Last Accessed; c2020.
- 9. Tobacco of India, Ministry of Commerce & Industries, Government of India. Last Accessed; c2020.
- 10. www.ctri.icar.in
- 11. Yogesh HC, Srivastava SK. Constraints faced by the flue-cured Virginia tobacco growers in Andhra Pradesh and Karnataka. Current Agriculture Research Journal. 2018;6(3):430-435.