

## **Production Method, Process and Marketing Efficiency of Apple Farming- of Himachal Pradesh**

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### **Abstract:**

Our research paper “Production Method, Process and Marketing Efficiency of Apple Farming- of Himachal Pradesh” is a Cultivation is the pillar of the Indian agrarian economy. Green creation adds to 34 percent of our agrarian GDP from 15% of absolute farming region; and 11 percent of all out horticultural fare income during the year 2017-18. The current review makes an endeavor to inspect the creation and showcasing productivity of apple cultivating. The review was led in Shimla and Kullu areas of Himachal Pradesh. The essential information was gathered from 200 apple cultivators of Kullu and Shimla region. The creation proficiency of apple was dissected by utilizing stochastic boondocks creation work. The review uncovered that the information sources, viz., thickness of plants per hectare, composts, natural excrement and work were the four critical factors emphatically affecting apple yield. Among the five promoting diverts winning in the review region, channel II (Grower – Retailer – Consumer) was the most productive channel as shown by the adjusted advertising effectiveness. The significant creation imperative looked by apple producers was insufficient water system and money issues while the significant showcasing requirement looked by them were absence of storage space and mis behaviors in market.

**Key Words;** Apple, Distribution channels, Horticulture, Marketing, Production, utilizing stochastic.

### **Introduction**

Cultivation possesses an exceptionally critical situation in the agrarian area of Indian economy. The different natural products fill in India are sent out to various nations on the planet. Notwithstanding, apple creation is most unmistakable one in India. In India apples are developed as a business crop in the sloping regions. The apple organic product fills particularly in the province of Himachal Pradesh. Apple creation is one of the significant wellsprings of economy in Himachal Pradesh. Apple development in Himachal Pradesh is quick extending on the grounds that apple enjoys a similar upper hand over different harvests that can be filled in uneven districts. (Weinberger, Katinka, and Thmas A, 2007), Horticulture has arisen as the likely gas pedal in the development of economy, country's wholesome security, destitution mitigation and business age programs is profoundly adulated.

The region under natural products, which was 792 hectares in 1950-51 with the complete creation of 1200 tons expanded to 2,24,352 hectares during 2014-15. The all out natural product creation in 2014-15 was 7.52 lakh tons, which during 2015-16 has been accounted for as 8.19 lakh tons. In 2015-16, it was conceived to bring 3,000 hectares of extra region under natural product plants against which 3,244.06 hectares of region was brought under ranch and 8.48 lakh natural product plants of various flavors were dispersed (Economic Survey, 2015-16).

Agriculture is the central player of monetary development in Himachal Pradesh and the state has likewise longed for and a specialty as a cultivation state and is otherwise called Fruit Bowl Of Nation (APEDA). Himachal Pradesh has arisen as the Horticulture province of India it has been

perceived as the apple territory of India for being decreed as the best maker nature of apples. In the province of Himachal Pradesh, ranchers are urged to develop the universes best and choicest assortment of apple. The state division of Horticulture helps them in the financial upliftment of rustic populace and has additionally created work. The absolute region under natural products in Himachal Pradesh is around 226799 hectares with a creation of 928829 MT of a wide range of organic products. Apple is the significant natural product bookkeeping 46% of all out Area under foods grown from the ground percent of the absolute creation (Anonymous, 2006) and (Kaur, 2002). Apple is a dominating organic product yield of Himachal Pradesh and lately it has arisen as the main money crop among organic product crops.

Apple is the fourth significant organic product yield of the country as far as creation after Mango, Citrus Fruit and banana. Apple is filled for the most part in the territory of Jammu and Kashmir, Himachal Pradesh, Utrakhhand and Arunachal Pradesh. Himachal Pradesh is the second biggest maker of apple in India, After the Jammu and Kashmir. Himachal Pradesh is known for the creation of value apples. The state has agro-climatic and topographical conditions ideal for apple development (Singh, Kalia, and Lal, 2007), (Panwar, 2011). Creation of a few natural products was near advantage than vegetables in Himachal Pradesh. The pay from Apple orchids was more contrasted with other field crops and the efficiency of apples in Himachal Pradesh can be multiplied in case orchid the board is improved (Sharda and Raman, 1996).

### **Examination Methodology**

Shimla and Kullu areas were purposively chosen for the review since apple is prevalently developed in these locale. The investigations were led in Shimla and Kullu regions in the State of Himachal Pradesh during 2017-18. Jubbal-Kothai block from Shimla region and Naggur Block from Kullu regions were purposively chosen, as the apple crop is prevailing in these squares. Two towns, Nagar and Katran of Naggur block from Kullu and two additional towns, in particular, Khaneti and Kiara of Jubbal-Kothai block from Shimla District were purposively chosen for the review. From every town 50 apple ranchers were arbitrarily chosen as a subsequent of absolute example size of 200 apple cultivators (100 from each area).

The information for the review included both essential and auxiliary. The essential information for the review was gotten from the example apple cultivators through close to home meeting technique with the assistance of a pre-trying timetable. The assistance of Assistant Horticulture Officers of the Department of Horticulture, Shimla, HAREC (Hill Agricultural Research and Extension Center, Bajaura) and neighbourhood merchants were profited in reaching the ranchers as this imparted trust in the personalities of the ranchers to give solid information. The scientific instruments made use in the review are SPSS and MS Excel for the productivity of apple crop and altered advertising proficiency examination.

### **Results and Discussion**

#### **Estimated stochastic frontier production function for apple production**

Monetary effectiveness contains specialized proficiency and allocative productivity. To concentrate on the specialized productivity of apple cultivating, the stochastic wilderness creation approach was utilized and the assessment was finished by utilizing Maximum Likelihood Estimation (MLE) strategy. The consequences of the equivalent are introduced in Table1.

**Table1. Estimated stochastic frontier production function for apple production**

S no.	Variables	Elasticity co-efficient	Standard error	t-value
1	Frontier production function constant	-0.42	0.88	-0.56
2	Density of Plants	0.39*	0.18	3.21
3	Plant protection chemicals	-0.56	0.42	1.21
4	Organic manure	0.46*	0.12	3.12
5	Labour	0.46*	0.85	2.34
6	Fertilizer	0.95	0.56	2.82

*Dependent Variable (yields in qtls/ha) R2 = 0. 61 and Adjusted R2 = 0.83 at 5 % significant level*

The outskirts creation work investigation was done to discover the asset usefulness by taking apple yield in actual units (qtrs./ha) as the reliant variable. The autonomous factors, viz., thickness of plants, natural fertilizer and work were in actual terms. It is apparent from the table1 that the thickness of plants per hectare, composts, natural excrement and work were the four huge factors emphatically affecting apple yield. The versatility co-efficients (critical at 5 % level) of compost and natural fertilizer were 0.95 and 0.46, separately while the flexibility co-efficients (huge at 1 % level) of number of plants per hectare and work were 0.39 and 0.46, individually. Every one of the factors with the exception of plant security synthetic substances (- 0.56) remembered for the model were huge.

#### **Advertising Channels and promoting productivity of apple showcasing**

In the current review, an endeavor was made to follow the advertising channels of apple as long as it was conceivable and in like manner, the outcomes uncovered that there are 5 (Five) showcasing channels for apple natural products found in the State of Himachal Pradesh are as per the following:

*Channel I- Grower- Consumer*

*Channel II- Grower- Retailer-Consumer*

*Channel III - Grower- Forwarding Agent- Commission Agent- Retailer-Consumer*

*Channel IV - Grower-Pre-Harvest Contractor-Commission Agent- Wholesaler-Retailer-Consumer*

*Channel V - Grower- Commission Agent-Wholesaler-Retailer-Consumer*

In the study area, majority (35 %) of the sample apple growers marketed their produce through channel

II. This channel was preferred as the growers realized relatively higher produce's share in consumer rupee.

However, 25 per cent of them preferred to market their produce through channel IV pre-harvest contractors and 20 per cent through channel III forwarding agents, 15 and 5 were followed Channel I and Channel V. The reasons for preferring pre-harvest contractors were to save time, money as well as labour required for harvest and post-harvest operations.

#### **Production and Marketing Constraints of Apple growers**

The farmers were interviewed to elicit the problems faced by them relating to various aspects of production and marketing of apple crop in the study area.

## Production Constraints faced by the Apple Growers in Shimla and Kullu districts of Himachal Pradesh

Limited scope apple ranchers need routineness as far as creation for the business sectors because of deficient admittance to creation assets. With the increment in the creation of apple in the two locale of Himachal Pradesh dealt with numerous issues in the field of showcasing of apple and its creation are required emerging between ranchers. In this segment, a work has been made to investigate the issues looked by the apple cultivators in environmental factors of promoting and creation. The creation issues looked by the ranchers in the locale of Shimla and Kullu were recorded during the example study and the equivalent is introduced and classified beneath as table astute example homesteads of the review region.

**Table 2. Constraints in Production of Apple Crop**

S.No	Constraints	Shimla	Kullu	Overall Avg. (%)
1	Shortage of Labour	97	98	195 (97.5)
2	Chemical fertilizers	95	97	192 (96)
3	Plant Protection Chemical	97	93	190 (95)
4	Financial Problems	95	99	194 (97)
5	Lack of irrigation facility	100	98	198 (99)

Source: Survey 2017-2018

Note: figures in brackets show rate to the quantities of apple producers in particular locale and to the complete number of test cultivators on account of in general normal ranchers. Complete Number of chosen ranchers were: 200 (100 from each locale)

Deficiency of both talented and untalented work for leading the different tasks, use of barnyard compost and manures, preparing and pruning of trees and plant assurance measures were accounted for by 195 respondents of generally speaking review space of both Shimla and Kullu. The apple ranchers additionally sent that their viewpoint identified with the dealt with issues relating to cost and accessibility of synthetic composts. A speedy reference of table 1 uncovers that insufficient nature of synthetic composts and non-accessibility of wanted brand in the two areas. At in general level in Shimla and Kullu are more exorbitant costs of synthetic manures, non-accessibility of synthetics at time, not accessibility of deceptive quality and absence of specialized works for splashing synthetic substances were accounted for by 95% in the two areas. For smooth activities and extension of any industry availability to back on sensible conditions is significant and this is well in perceived in financial turn of events.

The business needs to obtain the apple natural products during the reaping and handling period that has been put away for an impressive timeframe and this necessities huge interest in working capital. The business banks are apathetic to loan to colossal assets for need for creation and advertising of apple crops. Absence of credit office from banks, unseemly sponsorship arrangements and plans given by government, contract issue and higher financing cost of banks were principle issues looked by the respondents of Shimla and Kullu area. Quality assumes a significant part in the creation and showcasing of apple items specifically. Quality items can be delivered provided that legitimate quality examination can be made at various stages, for example, at the hour of obtainment of apple natural product, manure yield the board, handling and activity and pressing stages, water system and present day innovation. Ranchers don't approach the homestead foundation, for example, store rooms and cold rooms to keep their items in great conditions in the wake of reaping.

Promoting Constraints looked by the Apple Growers in Shimla and Kullu regions of Himachal Pradesh, Organic product creation and advertising has a huge spot in India and particularly in the State of Himachal Pradesh because of competent environment and normal conditions. Nonetheless, there are number of significant issues about the promoting of apple organic product. Showcasing of apple is just about as basic as creation of apple. Because of absence of showcasing and further developed advertising rehearses add to the muddled idea of promoting of apple in the occupant. Without even a trace of arranged showcasing program and without mindfulness among the ranchers about the apple advertising, cultivators frequently stay oppressed costs for their apple organic product. The different promoting issues and limitations looked by the apple producers should be handled to support up the development of region under apple crop. The target of this review is to uncover the issues of apple organic product creation and advertising by utilizing information which was acquired from the Apple Growers overview. This review covers apple natural product, which comprises 85 % of the complete natural product Production and 49 % of the all-out region in the State of Himachal Pradesh.

**Table 3. Constraints in marketing of apple fruit**

S. No	Constraints	Shimla	Kullu	Overall Avg. (%)
1	Lack of grading and packing labour	91	85	176 (88)
2	Transport problem	89	98	187 (93.5)
3	Lack of packing material	95	93	188 (94)
4	Lack of communication intelligence	93	98	191 (95.5)
5	Lack of Storage facility	100	100	200 (100)
6	Malpractice in market	100	100	200 (100)
7	Market intervention scheme	89	94	193 (96.5)

*Source:* Survey 2017-2018 Note: figures in brackets show rate to the quantities of apple cultivators in particular locale and to the all out number of test producers on account of by and large normal ranchers.

**Absolute Number of chosen ranchers were: 200 (100 from each locale)**

The bundling of an item is essential to shield the item from harm other than data about the item that draws in clients. Its requirements is more underscored on account of handling apple showcasing, since low standard bundling might cause wellbeing perils. It has been observed that serious issues looked by the ranchers as far as bundling and reviewing framework are deficiency of all around prepared works, higher wages of works, inaccessibility of works and severe trade guild rules. Deficiencies of very much prepared works were accounted for by 88% in the two regions of Shimla and Kullu. Generally, ranchers have no method for transport to convey their produce to business sectors. Transportation issues result in free of value and late conveyance, which thus to bring down costs and this sees as the best issue looked by arising apple ranchers.

An examination of apple cultivators issue uncovered that main pressing issue is high transportation charges by 93.5 percent of orchardist's discernment in the both locale of Shimla and Kullu with the proportion of (1.43:1.53) percent separately. The deficiency of pressing material and more exorbitant costs of pressing material were the primary issue looked in the both area of Shimla and Kullu. Computerization and automation of creation movement on one side and worldwide way to deal with business on different has required capacity and stock administration. Capacity is fundamental for holding the apple organic product in appropriate condition for quite a while and changed market interest through the making of time living.

Little holder ranchers don't approach the extra spaces and cold rooms to keep their apple crop in great condition after post-gather. Absence of these offices establishes the hindrances to section into apple markets. Admittance to storerooms increment rancher's adaptability in selling their apple. Ranchers in the two locales didn't have sufficient logical storage spaces for apple crops.

## Conclusion

India is honoured with different sorts of soils and fluctuated agro-climatic conditions because of which the nation enjoys the benefit of growing an assortment of plant crops specifically and different yields overall. The development of apple is chiefly developed in northern Himalayan regions, while the apples are the syndication of sloping locales of India like Himachal Pradesh, Jammu and Kashmir, Uttrakhand and Arunachal Pradesh. The best two apple natural product creating Indian states are Jammu and Kashmir and Himachal Pradesh.

Apple is pre prevailing natural product harvests of Himachal Pradesh and J&K. As of late, apple has arisen as the main money crop among natural product crops in the country. It comprises 96% of region and 97 percent of creation in the best two Indian states, and once known for its best nature of apple in the nation, however apple development currently has become efficient, significant, work creation and beneficial since ongoing years. It delivers in excess of 10 need occupations straightforwardly or by implication. An investigation of creation and advertising parts of apple exhaustively is one of the more noteworthy significances to Himachal Pradesh. The current review is an unassuming endeavor to examine the creation productivity and showcasing proficiency of apple and the limitations underway and advertising of apple in Shimla and Kullu area of Himachal Pradesh.

## Reference

- [1] Anonymous. (2006). Economy survey of Himachal Pradesh, Department of Economic & Statistics. Himachal Pradesh.
- [2] APEDA. Agriculture and processed food products export development authority. Ministry of Commerce and industry, Government of India.
- [3] Economic Survey. (2015-16). Economic and Statistic Department, Government of Himachal Pradesh.
- [4] Kaur, N. (2002). Spatial diffusion of Orchids in Himachal Pradesh. Phd thesis, Department of Geography, Punjab University, Chandigarh.
- [5] Panwar, T. (2011). Apple Production in Himachal Pradesh: An Impending Crises. Economic and Poltical Weekly, XLVI (25), 11-13.
- [6] Sharda, N., & Raman, T. (1996). Diversification of Agriculture in Himachal Pradesh. Indian Journal of Agricultural Economics, 51 (4), 705-711.
- [7] Singh, R. R., Kalia, V., & Lal, H. (2007). Impact of Climate changeon Shift of Apple belt in Himachal Pradesh. ISPRS Archives XXXVIII-8/W3 Working Proceedings: Impact of Climate Change on Agriculture, (pp. 131-137).
- [8] Weinberger, Katinka, & Thmas A, L. (2007). Diversification into Horticulture and Poverty Reduction: A Research Agenda. World Development, 35 (8), 1464-1480