



Changing And Issues Of Agriculture In Himachal Pradesh

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Abstract:

In terms of the gross domestic product of the state, the agriculture industry in Himachal Pradesh contributes about 45% to the state's economy. The entire population of the state is mostly dependent on the agriculture of Himachal Pradesh. Cash crops grown in Himachal Pradesh agriculture provide most of the state's economic earnings. Wheat, maize, rice, barley, ginger, seed potatoes, vegetables, vegetable seeds, mushrooms, chicory seeds, hops, olives and figs are the main food crops grown in Himachal Pradesh. Himachal Pradesh's extensive fruit production has earned it the nickname "The Apple State of India". Fruit production has attracted many farmers who also greatly benefit the state economy. About 71% of the working population in Himachal Pradesh is employed in agriculture. Almost 22.5% of the gross national product comes from agriculture and related industries. Out of the total geographical area of 55,673 million hectares, 8.63 million farmers farm the agricultural community of 9.99 million hectares.

Small and marginal farmers of Himachal Pradesh own about 84.5% of the total land owned by agricultural community. Only 10.4% of the total area of the state is used for agriculture, and only 8% of this is accounted for.

Keywords: Agriculture, Economy of Himachal Pradesh, Production, Organic Farming.

Introduction

Himachal Pradesh's agricultural industry has adopted diversification, which requires emphasis on the production of off-season crops such as potato, ginger, soybean, oilseeds and pulses. Currently, vegetable cultivation is around 41,500 hectares with a production level of 7.85 thousand. pool. As money thrives in agro-climatic conditions, farmers focus more on their production to increase money. Wheat, maize, rice and barley are the main crops grown in Himachal Pradesh. Kangra, Mandi districts

and to a lesser extent the Paonta valley in Sirmur district are the main producers of wheat, maize and rice. Most barley is found in Shimla district Himachal Pradesh. In Himachal Pradesh, the main forms of irrigation are lift irrigation, well irrigation at certain locations and small water channels filled with seasonal and permanent spring water. The agriculture sector in Himachal Pradesh has seen several advances that have significantly increased crop yields. Most of the farmers in Himachal Pradesh are rain-fed, which makes them more susceptible to biotic and abiotic stressors. The state is exploring the untapped potential of stormwater catchments to sustain the future food and nutritional security of a growing population. Himachal Pradesh State Agricultural Marketing Board may coordinate market operations and develop, promote and regulate agricultural marketing. The State Government may by notification declare its intention to exercise control over the purchase, storage, processing and sale of agricultural produce in any area specified in the notification, either on its own reply to the recommendations of the Board.

It will then consider any objections or suggestions received from the general public within thirty days from the date of publication of the notification.

Organic Farming

Organic farming is considered a safer alternative. Chemicals have no place in this agricultural technique; farmers instead use only organic products such as cow dung. However, no external inputs – including bio-fertilizers – are used in natural farming (this includes zero-budget natural farming supported by the Indian government).

In India, organic and natural farming is being promoted through several programmes, including the Paramparagat Krishi Vikas Yojana, the Mission Organic Value Chain Development for the North East region under the National Mission for Sustainable Agriculture and others. According to one definition, organic food production also includes farming techniques that do not use genetically modified organisms, growth hormones and antibiotics.

In addition to public health benefits, studies show that organic farming can benefit biodiversity. According to some estimates, worldwide, organic farming increases local species richness by ~34% and abundance by ~50%. However, this depends on various factors such as the larger landscape in which the farms are located.

Organic farming is gaining ground in India. India has seen a three-fold increase in the area under organic cultivation: from 5,28,171 ha in 2014 to 1.2 million ha in 2023. India is also home to the highest number of organic producers, according to one estimate. However, this only occupies about 2.5% of the country's total cultivated land.

Review of Literature

Meteorological Centre Chandigarh (2013) estimate that during the current monsoon season 18 a western disturbance, namely an upper air system, a trough in the west, an induced cyclonic circulation progressed eastward and was also in the phase of interaction with the monsoon flow, seven low pressure areas traveled west/northwestward along the monsoon trough affected this area, 14 a cyclonic circulation embedded in the monsoon trough area was observed. A detailed analysis of observational aspects and interpretation of various model outputs suggest that the possible reason for the heavy to

very heavy rainfall in Haryana during the 2013 monsoon was the interaction of a westward moving monsoonal low pressure system with the westerly field viz cyclonic circulation, a mid-upper tropospheric trough at west and also due to the positions of the seasonal trough near its midpoint along with the cyclonic circulation built into it.

Aayog (2015) calculated that this paper focused on a select but important set of policy issues facing Indian agriculture to come up with recommendations that would help usher in a second green revolution in India and sustain strong growth in agriculture. Five such topics were selected: measures necessary to increase productivity, policies to ensure remunerative prices for farmers, necessary reforms in land tenancy and property rights, a mechanism to bring rapid relief to farmers affected by natural disasters, and initiatives necessary to spread the Green Revolution to the eastern states . In the post-reform era, India relied more on prices to expand agricultural production, with technology and other non-price factors taking a back seat. This had the unfortunate side effect of relatively high food inflation and cyclical growth. Technological factors were neglected in the process. The imbalance must be corrected. Organic farming in eastern and northeastern states could be beneficial. Appropriate support for the supply of quality inputs, quality testing and certification and processing would be a prerequisite.

Objectives of the Study

1. To study the concept of organic farming.
2. To identifying the problems of agriculture in Himachal Pradesh.

Problems Of Increasing Production In Himachal Pradesh

1. Production Problems

To increase production, it is very important to keep productivity at a level. Farmers face production problems: A. Land: For cultivation, land is the primary requirement. The size of cultivable land is small (58.12%), marginal (32.51%) and large (9.37%). The soil quality is also poor in some areas. In maximum cases, land holding is small and water management is lacking, resulting in low production and income of farmers in Himachal Pradesh. B. Skilled workforce: Skilled workforce is also a serious problem for the state. Maximum farmers could not get skilled labor in time. When the farmers get skilled labor, the problem of wages arises because the laborers charged them a high wage. In most cases, the wage rate charged by labor is high, resulting in an increase in production costs. C. Availability of seeds (High Yielding Variety Seeds): Good quality and High Yielding Variety (HYV) seeds are one of the key inputs to increase crop yield. Price, timely availability of HYV seed also play an important role in the use of these types of seeds. If the price of seed is higher, then many farmers would be tempted to use any other seed available. Many farmers could not get HYV seed on time, which reduces production. D. Irrigation: Irrigation is one of the major problems in Himachal Pradesh. About 81% of the total cultivated area in the state is rainfed. Himachal Pradesh mostly uses rain-fed agriculture, meaning farmers depend on rainwater for irrigation. This is because approximately 85% of farmers have no permanent source of irrigation. The remaining 15% of farmers have a permanent source of irrigation

(such as wells, ponds, hand pumps, etc.). Farmers' dependence on rainwater reduces crop yields. E. Fertilizers: Timely availability and price of fertilizers is also an important factor. About 75% of farmers receive fertilizers on time. About 70% of farmers said that the price of fertilizers is not reasonable. In most cases, farmers receive fertilizers on time, yet the prices of these fertilizers were quite high. In this regard, it can be suggested that the state department should ensure timely and adequate supply of fertilizers at reasonable prices to the farmers. F. Crop Protection Chemicals: Farmers need to use various chemicals to control diseases, insect pests, etc., resulting in increased crop production. To use these chemicals, farmers must have knowledge about their use, rates, timing of application, etc. Many farmers fail to identify the symptoms of diseases and insect pests due to lack of knowledge. After that, availability of chemicals at reasonable prices is a major factor. About 85% of the farmers said that the prices of these chemicals are very high. Due to the high prices of these chemicals and lack of knowledge, farmers have hesitated to use them, which reduces production and income.

2. Marketing Problems

Effective marketing is very important for farmers to get remunerative prices for their produce. Lack of markets and inappropriate marketing practices lead to complicated marketing of agricultural produce in the hills and affect farmers' incomes. The marketing problems faced by the farmers of Himachal Pradesh are as follows: A. Grading: Grading is the basic and one of the most important post-harvest marketing activities to be carried out by the farmers to get remunerative prices for their produce. . Many farmers face the problem of unavailability of sorting center. About 85% of the farmers said sorting is done manually and sorting centers are not near their place. Sorting is done manually and they also feel that manual sorting is costly and time consuming. B. Packaging: Packaging is one of the most important post-harvest marketing activities to be carried out by farmers to get remunerative prices for their produce. Suitable packaging is required especially in the case of horticultural crops such as fruits and vegetables in order to protect the product from breakage during transport. A very important factor is the price, quality and timely availability of packaging material. 1/3 of farmers said that packaging material is expensive. C. Transportation: Transportation facility is the most important factor for marketing and obtaining the required amount of money from the sale of agricultural produce. Most temperate fruit and off-season vegetable production is in hills with rugged topography and difficult means of communication, located far from markets. Development of better road system including connecting roads, cable cars, efficient and fully tested communication system and creation of modern markets are some of the important requirements for development of agricultural exports outside the state. Approx. 30% of farmers reported that they do not get transport facilities due to lack of road connectivity in some areas. Another problem in the field of transport is the higher transport charges. Approximately 80% of farmers suffer from this problem. The government should provide transportation so that the farmers can reach the market easily and on time. D. Marketing Intelligence: Effective market network information can greatly assist farmers in reading the pulse of the market. Lack of timely market information and market education is the main reason for the improper functioning of markets in the state. Some farmers also felt that the market information they received was not that reliable. To overcome this problem, the effectiveness of the market information network

can be improved by increasing the frequency of market news, magazines, newspapers and television programs, etc. E. Weighing: Weighing products is an important factor in achieving the desired prices equal to the quantity of production. About 2/3 of farmers reported that their produce is not weighed accurately, which reduces their income. Traders were using the wrong scale to weigh the produce, which is also a problem faced by farmers in the state. F. Market Prices: The minimum support price provides security against discriminatory market prices which are set by the government to benefit the farmer. About 80% of the sample respondents said that the government has not set a minimum support price for their crop and they do not get an adequate price for their crop during the peak season. Strict adherence to market regulations can help growers achieve better prices, it is also recommended that farmers try to promote their production in agricultural cooperatives to get the desired income from markets.

3. Financial Problems

Agriculture is both labor and capital intensive and the availability of capital is an important factor in cultivation. A huge amount of capital is required to purchase agricultural inputs and machinery etc. to adopt a modern farming system. Financial problems related to availability of credit from financial institutions like banks, cooperatives, RRBs etc. About 40% of the farmers said that financial institutions are not closer to the farming villages. About 60% of farmers said that they did not get loans from financial institutions easily. They have to face so many problems to get loan approval. These include high rate of interest, too many formalities, cumbersome procedure and security requirement etc. About 75% of the farmers said that the behavior of the staff was also not cooperative. So it is clear that farmers are facing many financial problems in Himachal Pradesh. To overcome the financial problems, special concession should be given to farmers to purchase required inputs and implements, more and more branches of cooperative societies should be set up in designated areas in the state. Poor farmers need financial assistance from banks and other financial institutions, but because of complex procedures and rules, they have abandoned the idea of loans, which adversely affect production and yield per hectare. Lack of short-term loans for orchard management, marketing and poor government investment in horticulture are other problems faced by growers.

4. Institutional Problems

The role of institutions like State Agricultural Universities, Krishi Vigyan Kendras (KVKs) and the Department of Agriculture is very important in disseminating technology among farmers. Knowledge of improved technologies and farming practices not only improves farm productivity and efficiency, but also the quality of produce. About 75% of the farmers did not receive any institutional assistance regarding the use of agricultural inputs. About 30% of the farmers receiving institutional assistance reported that they had not acquired any knowledge of the latest techniques. Training is one of the most important factors for imparting knowledge about new tools, HYVs, plant protection chemicals and fertilizers etc. In 50% cases the government has not provided any kind of training to the farmers in the state. 5. Technology Technology plays an important role in increasing the income of farmers and keeps time. Technology related issues faced by the farmers of the state. a) Mismatch between the technology

developed at the research station and the technology needed in the farmer's field. b) The use of agricultural machinery is very low. c) Late adoption of new agricultural technologies (market uncertainty, fear of crop failure, threat to food security, etc.). d) Lack of new varieties. e) Increasing susceptibility to insects, pests and diseases. f) Unstable weather conditions. g) Harmful effects on soil h. The mountain perspective and specifics are not well integrated into research and development policies. 6. Knowledge Gaps Indigenous knowledge related to managing limited resources to improve soil fertility, soil moisture, irrigation, crop seeds, varieties and mixed farming has not been incorporated into mainstream farming systems and practices.

Policy Measures and Suggestions for Overcoming These Problems Appropriate Government Policy:

A clear-cut public policy of the central and state government is a necessary pre-requisite for a purposeful planning and worthwhile action plan. It should lay down priorities, parameters of growth and investment, goals to be achieved, strategies and broad operational plans, etc. An integrated approach to research, production, post-harvest handling, marketing and processing is to be an essential part of the policy framework. Production Support Measures: One of the important factors responsible for poor status of the industry and low productivity is the gross inadequacy. In this plan production support, knowledge should be given to farmers. Among the important services, the determination of exact nutrient requirements of the fruit crops keeping in view their productivity, plant protection including post surveillance and post-harvest technology for post-harvest quality control. The technology advice is incomplete without the support of these services. Leaf and fruit analysis has been accepted as more precise scientific method of determining nutrient status of perennial crops as all environmental factors including soil fertility are integrated with the system. There are already such laboratories in the State Universities and Directorates of Horticulture and Agriculture. But these are not enough to meet the requirement of the agricultural industry. There is need of a competent, efficient and well-equipped plant protection laboratory, which should identify and diagnosis of the pathogen related problems, pest surveillance, pest forecast and warning service. All these should be integrated part of the horticulture production system. Marketing and Fruit Utilization Marketing is a necessary adjunct to the fruit production programme. For taking care of marketable as well as unmarketable surplus and all post-harvest handling problems, the Horticulture Produce Marketing and Processing Corporation (HPMC) was established in the state in the year 1974. This corporation implemented an IDA project with an outlay of Rs. 16.31 crores. Implementation of this project was initiated in the 55 year plan and the creation of infrastructural facilities was completed in the year 1982. In fact, this state has been pioneer in implementing such a project for the first time in the country under which modern marketing infrastructure like ten mechanical grading and packing centres in producing areas, one processing plant and a transit warehouse has been created. The total facilities for marketing of fruits so far created under the World Bank project in the state are capable of handling about 65000 tonnes of fresh fruits. In the utilization of the processing trade fruit, the state has already built-up a capacity to process about 30000 tonnes of fruit annually. However, this capacity requires proportionate strengthening corresponding to the ever-increasing fruit production in the state. Water Harvesting Technology and Hill Slope

Technology Agriculture on hilly terrain of lower Himalayas greatly suffers due to lack of irrigation facilities. The runoff from heavy storms not only causes loss of water but top layer of fertile soil gets washed off causing denudation and degradation of fertile agricultural lands. The suitable answer to water scarcity problem in the hills can be the use of collection of run-off water in ponds, depending on the source of water and their location with respect to the land surface. This technique is highly beneficial to increase per hectare productivity and quality of produce. Diversification of Agriculture Besides exploitation of the regional potential for growing special tree crops for bringing diversification, farmers diversified towards off-seasonal vegetables and horticultural produce, efforts are also made to develop ancillary horticultural activities like floriculture, sericulture, apiculture and mushroom production, etc. Himachal Pradesh has been the first state to introduce the modern technology of bulk pasteurization for production of compost, which is the media for growing mushrooms. At present Himachal Pradesh is growing about 28000 tonnes of mushroom annually. Efforts are also underway for the introduction of most advanced technology in mushroom activities from Netherlands. Olive has been identified as another promising fruit crop which is being developed in the state for providing a sound base for the oil industry. A project for the development of olive cultivation with the assistance of Italian Government is under implementation in the state since 1985. Olive has got a wide range of adaptability to climatic conditions prevailing in some areas of Chamba, Kullu, Mandi, Sirmour and Solan districts. Kiwi is yet another newly introduced fruit crop from New Zealand which is finding favour for plantations especially with the mid-hill region farmers of the state, but because lack of marketing facilities farmers are not adopting its cultivation on large scale. Similarly, the diverse agro-climatic conditions of Himachal Pradesh are most congenial for growing off-season vegetables, seed of temperate vegetables and exotic vegetables. At present, the area under vegetables in the state is 36000 hectares and 4.80 lac tonnes of vegetables are annually produced. Himachal Pradesh also offers vast potentials for the development of floriculture. Himalayas are rich source of flora but unfortunately, no concerted efforts for the identification and commercial exploitation of this resource have been made so far. The vast floral wealth in the state provides sound base for apiculture industry. Besides developing apiculture as cottage industry for providing an additional income to farm families' bee keeping has vital importance in the orchards for effective pollination essential for obtaining good fruit yields. The state Department of Horticulture runs bee-keeping stations at various places, serving as nucleus for beekeeping development in the surrounding areas. However, there are about 370 private beekeepers in the state.

Conclusion

Critical issues currently plaguing Indian agriculture are knowledge deficit and infrastructure deficit, especially in rural areas. Problems related to irrigation infrastructure, market infrastructure and transport infrastructure increase the operational costs of farmers. Another problem is the lack of delivery mechanisms. There are a number of programs aimed at agricultural development. We do not have effective delivery mechanisms that could translate into effective facilitation in terms of increasing productivity or reducing costs or increasing price realization at the grassroots level. Moreover,

insufficient government support exacerbates these problems. So corporate farming could be a solution for India's agrarian sector, but it needs deep thinking and better policy innovation so that neither corporates nor farmers are at a loss. Also the role of Central Government and State Governments must be clearly defined as it creates a lot of confusion as it is a joint entity. In this regard, research should be done by leading experts and governments must take proactive measures. Indian agrarian sector actually requires very innovative ideas to uplift the sector. Even without mechanization, agriculture is hard and rickety work. This led to most of the children of farmers leaving farming to pursue other occupations. Farmers get more money by selling their land to builders, shopping malls and factories. This has put more pressure on agricultural land, requiring technology to increase productivity so that shrinking agricultural land can feed India's billions of people in the future.

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