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## RESEARCH ARTICLE

### SWOT ANALYSIS OF PUNJAB AGRICULTURE.

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#### **Abstract**

Agriculture in Punjab today is on the crossroads. It is constrained by various factors. We have created history by being the front runner state in agricultural production and gaining the title of food bowl of India. But this has been accompanied by land degradation, declining size of land holding, depleting water table and may other related problems. The present paper analysis the strengths, weaknesses, opportunities and threats to Punjab Agriculture. While the strength lies having the largest cultivable land with record food grain production and hardworking peasantry, our weaknesses lies in having low yields, less value addition and food processing and large amount of post harvest losses. The paper also envisages where the opportunities exist and how these opportunities can be further encashed to augment the yield and income of the farming community and bringing back the lost glory.

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#### **Introduction:-**

Punjab Agricultural sector played an important role in the success of Green Revolution in 1960's with just 1.54% of the total geographical area it earned the status of food basket of the country owing to its outstanding achievements in Agricultural development. The Green Revolution brought significant changes to traditional Punjab agriculture. The farming system promoted by the green revolution was resource-intensive. Agriculture had high growth rate for a long time up to early 1990's. Soon it slowed down owing to exhaustion of available resources up to the possible limits. This downward trend was induced by wheat –paddy monoculture, over mechanization and intensive use of inputs and thus increased costs, this paper deals with SWOT analysis of Punjab Agriculture. I will give the detailed view of agriculture sector in Punjab.

#### **Meaning of SWOT:-**

SWOT analysis is a strategic planning method used to evaluate the strengths, weaknesses, opportunities and threats involved in any venture.

#### **Strengths:-**

These are the features of any organization that give it an edge over the others. These show the strong points of an enterprise that can lead it to be a front runner ahead of its competition.

#### **Weaknesses:-**

These are the features that place any enterprise at a disadvantage over the others. These are the low points that put barriers on the free run of an organization.

#### **Opportunities:-**

These are the rays of hope i.e. some external factors that can be exploited to get maximum advantage for the enterprises. The organization that has the capacity to take care of each and every small opportunity to use in their favour can excel.

**Threats:-**

These are the external factors in the environment that could cause trouble for the enterprise.

**Strengths of Punjab Agriculture:-**

Punjab is dominantly an agricultural state. At constant prices (2004-05) the contribution of primary sector consisting of State domestic product has increased from Rs. 34107 crore in 2007-08 to Rs. 35740 crore in 2010-11. This sector had shown growth of 2.05 and 3.01 percent during 2008-09 and 2010-11 respectively (AERC 30). It is a major contributor in national pool as far as wheat and rice are concerned. Following are the various factors that have great bearing on the Punjab Agriculture.

**i) Favorable Natural factors :-**

The progress made by agriculture in Punjab state is unparalleled in the history of world agriculture. From a food deficient state at the time of independence it turned out to be the food basket of the country. Punjab has great soils with potential for agricultural production in view of their high reserves of minerals. The state has excellent surface and ground water irrigation infrastructure. About 98% of the net sown area is irrigated. Climatic conditions of the state are favorable for production. The climate of Punjab is mainly influenced by the Himalayas in the North and the Thar Desert of Rajasthan in the south and south west. Punjab does not have harsh weather conditions, thus helpful for vegetation.

**ii) Hard Working People :-**

In Punjab two-third of its population is indirectly dependent on agriculture. Hard working peasantry is an important pillar of strength of the Agriculture in Punjab. Punjab's robust growth in agriculture sector is mainly due to the adoption and proper execution of various strategies by its farmers, who are always open to new ideas. Dominating rural based political power with agricultural background provide favorable environment.

**iii) Technological Advances :-**

Punjab has made various technological advances in the field of Agriculture. Technological adoptions need that a farmer should be aware of the benefits of the technology, finances, price incentives and farm sizes etc. All these requirements have been fulfilled by the Punjab farmers adequately.

**iv) Results of Green Revolution :-**

Punjab is reaping the benefits of green revolution. The strategy initiated in 1960's is paying off well to the Punjab economy. Earlier developed as a model state for green revolution with HYV seeds, Chemical fertilizers, irrigation and various institutional and technological factors, Punjab Agriculture has shown outstanding achievements. Extension of irrigation network, rural link roads, rural electrification, efficient delivery system of credit and other agricultural inputs and effective implementation of agricultural price policy are the few factors that are strengths of Punjab Agriculture.

**Weaknesses of Punjab Agriculture:-**

The decades of 1970's and 1980's showed the phenomenal increase in agriculture productivity which led to the slow growth despite of increased doses of inputs.

**i) Low yields:-**

Agriculture in Punjab had high growth for a long time upto early 1990's. It slowed down thereafter due to the available potential of resources and technology getting exploited closer to the possible limits, which led to increasing cost, shrinking resource base, declining productivity, profitability and income.

**ii) Low value addition and food processing :-**

Food processing and value addition are the upcoming sectors which have the potential to generate lot of employment opportunities in the rural areas. Unfortunately in Punjab this potential has not been properly exploited Although Punjab is a leading agrarian state of the country, the food processing industry is not that well developed and is limited to grain processing like rice mills, flour mills, oil mills and cotton ginning.

**iii) Post Harvest losses :-**

Due to low processing levels in the state there is a considerable amount of wastage of agricultural and horticultural produce. Due to lack of adequate facilities for post harvest handling of high value crops, line grading and packing houses, cold storage etc. lead to serious post harvest losses to the producers. Both quantitative and qualitative losses of extremely variable magnitude occur at all stages in the post harvest system from harvesting through handling storage, processing, transportation and marketing etc.

**iv) Limited access to Modern technology :-**

No doubt adoption of green revolution strategy led to the technological up-gradation in Punjab use of machines, tube-wells, tractors, chemical fertilizers HYV seeds and modern irrigation methods have changed the

agriculture scenario in Punjab. Still a big chunk of the farming community has no access to modern technology. They still rely on the traditional methods of agriculture. Because of high costs involved the small and marginal farmers are unable to make use of these technologies and all the benefits allude them.

### **Opportunities for Punjab Agriculture:-**

#### **i) Diversification :-**

As the growth in market demand for wheat and rice has considerably slowed down, the time has come when Punjab farmers should be discreetly helped to shift land and other productive resources from under wheat paddy rotation to other crops. The overdependence on the wheat paddy rotation must give way to more sustainable crops and other farm enterprises. No doubt according to resource endowments and weather condition these two are the least risky crops compared to other crops. Farmers should be provided with economically more paying and less risky alternatives to get out of this cycle of wheat and paddy. Diversification from existing wheat/rice monoculture to alternative crops has been suggested by several economists in the wake of aggravating crisis. For that the State government can widen its price policy to cover other crops as well. Good prices and easy procurement policy can definitely help in shifting farmers towards the production of other crops rather than wheat and rice. Research efforts have to be focused on fruits, flowers and vegetables for developing viable alternatives. The system of incentives and disincentives should be adopted to mentally prepare the farmers to other alternatives. The Government can introduce special subsidy package to achieve the objective of diversification.

#### **ii) Value-addition in farm products :-**

Globalization has ushered dynamism to all the sectors and agriculture is no exception to this with the increasing globalization, increasing trade opportunities, cost competitiveness, urbanization and growing income, there is increase in demand for processed and semi processed foods. Such an increase is a positive indicator for the growth of high value commodities, thus there is an ample scope for agro processing industry to develop in Punjab and open new avenues of development. This agro industry will not only develop the industrial sector of the economy but at the same time it will also boost the growth of the agriculture sector by creating demand for agriculture output as its raw material (Singh et al, 2013) Linking agriculture production with agri-business activities has been suggested by several economist to over-come mounting agrarian crises. Emphasis needs to be laid on setting up of multi-commodity small agro-processing centre's in rural areas for primary processing and value addition.

#### **iii) Encouragement to Organic farming :-**

Non judicious use of fertilizers poses a serious challenge to soil health. In order to address this problem, there is a need for whole hearted efforts to improve nutrient use efficiency and to improve soil health. The one very valuable measure is encouragement to organic farming by application of farmyard manures, compost, green manuring to supplement inorganic fertilizers. The fertility of the soils which has diminished because of deficiency of vital micro and macro nutrients can be regained with the introduction of Organic farming. The farmers should be educated about the inclusion of legume green manuring crops in the cropping sequence, so as to improve the potential of the soil to sustain high yields in addition to saving Nitrogen and taking care of micro nutrient deficiencies.

### **Threats to Punjab Agriculture:-**

#### **i) Uncertain Weather conditions:**

Irrigation coverage which was about 76% of net sown area in 1972-73 has increased to the level of about 97% in the year 2006-2007, but the extensive use of canal irrigation and reckless use of ground water through tube wells have caused water logging in some areas and lowering of the ground water table in other areas. Rainfall has ever remained unpredictable adding to the woes of the farmers and thus putting extra pressure on ground water sources. The effects of weather on agriculture are far reaching, affecting the crop plants right from germination till maturity. Owing to various environmental changes Punjab is facing drought like conditions. In the current year (2015) rainfall is 31% below normal in Punjab (Chandigarh Metrological Centre, 2015).

#### **ii) Crop Losses due to Pest Attacks:-**

The Pest problem accentuated with the introduction of high yielding varieties of crops, intensive use of inputs and developing of new cropping pattern. Crops like cotton, sugarcane, paddy, oilseeds and vegetables have

shown greater reliance on pesticides. Excessive and indiscriminate use of pesticides and weedicides has led to several new problems, such as development of pest resistance, pest resurgence and outbreaks.

**iii) Deteriorating Soil Health:-**

Deteriorating soil health conditions are one of the reasons for the stagnant productivity of various crops thus reducing the farmer's income. The soils have great potential for agricultural production in view of their high reserves of minerals. With present state of intensive agriculture, surface crust, sub-soil compaction, soil erosion, water logging, development of fine textured sodic soils, salinity and pollution from agro chemicals, sewerage and industrial effluents, depletion of organic matter and multi nutrient deficiencies are the major problems faced by the Punjab Soils. As per expert views, the high nutritional requirements of paddy and wheat had exhausted the Punjab soils of vital nutrients. Low fertility status implies that the amount of plant nutrient that the soil itself is capable of making available to the growing crop is far less than that needed for getting high yield. Micro nutrient deficiencies in large areas have also been noticed adversely effecting crop yield.

**iv) Indebtedness:-**

Commercialization of agriculture needs more money to invest and in the agricultural setup borrowing is a necessity. Farming demands regular outflow of cash to acquire various agricultural inputs but the inflow is not continuous due to seasonal nature of agriculture. The gap so created is plugged in by borrowed funds from either institutional or non-institutional sources (Sukhpal Singh et.al 2014). Increased cost of production, low price of the produce and thus low profit margins due to stagnant crop productivity or crop failure are the main reasons for indebtedness of farmers.

**v) Low Interest in Agriculture:-**

Farming as a profession is not attractive enough for young people in Punjab where unemployment is becoming a problem (Sidhu, 2002). Like many farming communities, Punjab is characterized by an ageing farmer population, with fewer young entrants. This phenomenon may limit the scope of innovations and adoption of modern methods of sustainable agriculture. Aged farmers although experienced, are often less educated and are often resistant to changes. Most of the time big zamindars leave the farming in the hands of the tenants. With the exit of the dominant cast peasantry from farming, the vacuum thus created is seen as an opportunity and sought to be occupied by the small peasantry, agricultural labor and service class people through tenancy, share cropping and purchase of lands.

**vi) Problem of Drug Abuse:-**

The success story of Punjab's economy has seemingly come to an end. Once, the torch bearer of green revolution and known for its hard working people Punjab is in news for drug epidemic that has swept across the state, accompanying the decline in economic growth. The extent to which the problem is specific to the state can be seen from the fact that roughly sixty percent of all illicit drugs confiscated in India are seized in Punjab (Yardley, 2012). Drug abuse has increased at an alarming rate. Youth from the affluent families, especially of rich farmers have easy access to highly priced narcotics, thus giving less attention to their farming and leaving it to their tenants. The youth from lower income class take up drugs to get some relief from the tensions caused by slower growth of income and increasing unemployment. To get their quota of drugs they do not shy away to sell their belongings and taking up of loans.

**vii) High Cost of Production:-**

The progress made by agriculture in Punjab State is unparalleled in the history of world agriculture. The state which was deficit in food at the time of independence has made rapid strides in agricultural development. The remarkable progress of Punjab agriculture is credited to the use of inputs like fertilizers, improved seeds, irrigation, plant protection chemicals, machinery and technology backup. Thus what has happened in the post-green revolution and post-liberalization phase is the integration of the farming sector into the market network and its increasing assumption of capital intensive character. The liberal use of these modern inputs has increased the cost of production.

**Conclusion:-**

Agriculture in Punjab today is constrained by many factors. Punjab created history by becoming the large contributor in the central pool of grains and gained the title of food Bowl of India. This paper is an effort to analyses the strengths, weaknesses, opportunities and threats of Punjab agriculture. While the strengths lie in having the cultivable land with record food grains production, the weaknesses lie in stagnant yield and post harvest wastages. Efforts need to be made to face the threats and exploit the available opportunities. Punjab has seen the brighter days of robust agriculture growth. Though, today the Punjab agriculture is on the crossroads, efforts need to be done to regain the lost glory.

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