

Agricultural Emergency in Rajasthan: Impact on Agronomic Budget of State

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Abstract: India is mainly an agricultural country. Two-Third of India's 1.25 billion people still depends on agriculture for their livelihood. In India, agriculture contributes about 17% of the total GDP and 10% of total export. With the growth of other sectors, the overall share of agriculture on GDP of the country has decreased. Agriculture with its allied occupation of animal husbandry and dairying forms the main basis of the economy of the Rajasthan. In the state, agriculture is the main occupation of the people. Almost 70% of its population is engaged in agriculture and allied pursuits for their livelihood. Rajasthan is predominately an agricultural state but, presently the state's agriculture is facing many crises. Dry climate, poverty among farmers, droughts, famines, hailstorms, pests and diseases hampers, indebtedness etc. are most crises facing by the State's farmer. Farmer's socio-economic life is directly affected from agrarian crisis. The land use and crop pattern indicate great influence and control by environmental factors over agriculture inputs. In this context, this research paper covers performance and challenges in the agriculture of Rajasthan and agrarian crisis facing by Rajasthan and its impact on agricultural economy of state.

Keywords: Famines, Hailstorms, Pests & Diseases Hampers, Agricultural, Farmers

I. INTRODUCTION

Agriculture is regularly backbone of Indian economy. It is not only an occupation of population but also shapes our way of life and living. The past of Indian agriculture is glorious; the present is hoary and the future is more challenging. Agriculture plays a crucial role in the life of an economy. It is not only provides food and raw material but also employment opportunities to a very large proportion of our population. Agriculture sector has received the prime attention of the Government in the overall strategy of economic development. The low productivity of the agriculture sector is due to lack of irrigation facilities, limited use of fertilizers, limited use of High Yield Variety Seeds, lack of farm mechanization, floods and soil erosion, feudal land relations, rural indebtedness, marketing difficulties etc.

Rajasthan is also an agricultural state, where seventy percent of the total population resides in rural area and largely dependent on agriculture as the source of their livelihood. The economy of state is mostly depended on agriculture. 22.5 percent of state's GDP comes from agriculture. Rajasthan has cultivated area of almost 20 million hectares but due to some unavoidable circumstances on 20% of the total cultivated area is irrigated. Large portion of terrain is dry. Droughts are common in Rajasthan and state has experienced some severe droughts in last few decades. Due to unstable weather conditions, farmers have to depend on both rained and ground water for agriculture

When God is infamous from farmers then it is government who helps them. Government makes report as much as it can regard to loss of farmers but there is nothing for farmers. Insurance companies only rob farmers and government on the base of crop insurance. In that condition, there is nothing spare food and no seeds to bow for farmers. Farmer's debt is increasing and a suicide in certain parts is a daily occurrence now. This means that there is now an agrarian crisis in India and in Rajasthan also. In this context this research paper covers various agrarian crises in Rajasthan, causes of agrarian crisis in the state and impact of agrarian crisis on economy of state etc.

Objective of the Study

The main objectives of the study are as follows:

- To evaluate the agricultural economy of Rajasthan,
- To explain the agricultural problems in Rajasthan,
- To know the causes of agrarian crisis in Rajasthan,
- To discuss the impact of agrarian crisis on agricultural economy of Rajasthan.

II. METHODOLOGY

Reviews and analysis of various studies and documents have made. The present study evaluates the agricultural economy of Rajasthan and agrarian crisis in state. This is a descriptive research paper and completely based on secondary data, which collects from reports, journals, books, magazines and internet.

Rajasthan: as an Agricultural State

Agriculture with its allied occupation of animal husbandry and dairying forms the main basis of the economy of the Rajasthan. In the state, agriculture is the main occupation of the people. Almost 70% of its population is engaged in agriculture and allied pursuits for their livelihood. It is also the sources of industrial raw material. The land use and crop pattern indicate great influence and control by environmental factors over agriculture inputs. Among these climate, relief, drainage, soil and ground- water are the main factors which influence the land use and crop pattern in State.

The agriculture sector of the state accounts for 22.5%. The arid state which receives not more than an annual income 25 cm thrives on agriculture that is done with irrigation systems and painstaking

efforts of the poor farmers of Rajasthan. As a major portion of the state is parched and infertile,

agriculture becomes very difficult. Ground water level is available only at the long depth. Rajasthan farmers have to depend on different sources of irrigation that include tube-wells, wells and tanks. The

Punjab Rivers in the north, the Narmada River in the south and the Agra Canal from Haryana and Uttar Pradesh provide water to the dry land of Rajasthan. Northwestern Rajasthan is irrigated by Indira Gandhi Canal. Rajasthan has two principal crop seasons- Rabi and Kharif. The Rabi crops are winter crops and are sown in the months of October and November and harvested in the months of March and April. The

Rabi crops include Barley, Wheat, Gram, Pulses and Oilseeds like Rape-Seeds and Mustard. The Kharif are grown in the summer season and are seeded in the month of June and July. These crops are harvested in the month of September and October and include Bajra, Jowar, Pulses, Maize and Ground Nuts. Some places of Rajasthan that has black soil nurture the growth of major cash crops like Cotton

and Tobacco. The physical environmental of the State plays critical and significant role in the almost every phase of agriculture activity. The choice of crops and methods of sowing, scheduling of irrigation etc. are directly linked and even influenced by physical environment, especially by climate factor. Adverse weather entails a risk through drought, floods, famine, rainfall, hail, indebtedness, low

productivity; lack of irrigation facilities and diseases hampers the agriculture production.

Performance and Challenges in Rajasthan's Agriculture

Agriculture and allied sector plays an important role in state's economy. Around two-third of its population is still depend on agricultural activities for their livelihood. Agriculture yet forms the backbone of the state's economy. A high priority to agriculture will achieve the goals of reducing poverty and malnutrition as well as inclusive growth. Since agriculture forms the resource base for a number of agro- based industries and agro-services. Agriculture is not only as farming alone but also as holistic value, which includes farming, wholesaling, warehousing, processing and retailing. As a form of agriculture sources of livelihood of the majority in the state, it is largely dependent on rainfall. Only 34.5% of the net sown area is irrigated. Since the rainfall amount is very scanty and highly erratic, the expansion of irrigation provisions and efficient water management are the major challenging points for the agriculture development in a state.

As highlighted in the Draft State Agriculture Policy (2013); scanty rainfall, scarcity of water and inefficient water management practices constitute the major challenges of the state in agriculture. Crops and animals both are prone to vagaries of nature. Frequently droughts lead to decline in productivity and reduced performance of agriculture. Climate change, including global warming, has further aggravated the existing problems of biotic stresses in the state.

A comprehensive technology based developmental approach to promote arid agriculture is missing. Important impeding factor is the deteriorating soil health including imbalanced use of fertilizers, micronutrient deficiency, lack of organic matter content, inadequate soil microbial flora etc. The organic matter content of the soils is also very low.

At present, agriculture has become a relatively unrewarding profession mainly due to low productivity, unfavorable prices and practically very little addition. There is no commerce in the field of agriculture. The situation is exaggerated further in the wake of globalization of agricultural trade. Besides increasing the overall system productivity, the challenge is also to appropriately reduce the cost of cultivation. In several regions, cultivation of crops alone cannot provide livelihood. It has to be supplemented by livestock raising, milk production, arid horticulture, fishery etc. In agriculture sector, the present day challenge is to ensure overall farm prosperity. The challenges also are to provide proper institutional mechanisms and undertake organizational and management reforms for overcoming the felt constraints coming in way of the farm prosperity in the state.

Agrarian Crisis Facing by Rajasthan

Rajasthan is an agrarian state, where seventy percent of the total population resides in rural area and largely dependent on agriculture as the source of their livelihood. But agriculture sector facing some crisis due to several reasons. The dry climate of the western Rajasthan is the major problem. The climate conditions here are not as severe as occurring in some of this state because the southern part of Rajasthan is about 400 km. from the Arabian Sea, the Arravalli stretching from north-east to south-west are the most conspicuous physiographic feature in the state. This is responsible for a transition between two major climatic regions- the humid east and the arid west. It is designate as semi-arid marked by extremes of temperatures and the great variability and uncertainty of rainfall. The scanty and irregular rainfall has converted large area into desert and semi-desert which have become unfit for cultivation. The climate is characterized by extreme temperatures, high wind velocity and low relative humidity to semi- arid conditions. The winter is quite cold and the temperature sometimes falls below the freezing point.

There is scorching heat during summers and in western Rajasthan at some places sometimes the temperature shoots up to 50° Celsius. The lack of irrigation facilities is also the major problem. Eighty per cent of agriculture depends on rainfall. The agriculture production of the state mainly depends upon south-east monsoon rain. The behavior of rainfall is generally abnormal, irregular, untimely, unevenly distributed in state. The average rainfall of the state is 58.64 cms. The water resource of the state are very limited merge comprising only 1.61% of the national gross water resources. Half of the area in the western part of the state receives a rainfall less than 25 cms. About one-third of the area, mostly east of the Arravalli has a rainfall of 50 cms. to 75 cms. The irrigation facilities available are neither equally distributed in the state nor fully dependable. It is due to uneven distribution of rains coupled with dependability of irrigation infrastructure. Droughts and famines are recurrent phenomenon in the State. Recurring droughts, famines and scarcity conditions are the characteristic feature of the state's economy. Monsoon is uncertain in Rajasthan. The rainfall behavior is generally abnormal, being irregular and unevenly. The problem of drought and famine has become associated with the state. Poverty among farmers prevents them from adopting developed techniques of agriculture. High percentage of illiteracy and low education among farmers also impedes faster development of scientific and technical skills necessary for agriculture development. Distribution of agriculture land is so defective that major share of it is non-cultivating owners. So these are the most crises, facing by Rajasthan agriculture.

Causes of Agricultural Crisis in Rajasthan

- Rajasthan's agriculture has been mostly dependent on monsoon and irrigation. Again uncertainty of monsoon is critical condition for farmers and losses the seasonal crop production. So the dependency on monsoon is major crisis facing by agriculture sector in Rajasthan. Fertilizer use in Rajasthan is very low due to uncertainty of monsoon, impeded drainage, lack of irrigation facilities, desert soil and lack of awareness about the fertilizer in time, non-availability of fertilizer in time.
- Soil is the most important natural resources because agricultural production is also depended on the quality of soil. The Rajasthan soil has under developed in adverse climatic condition.
- Moisture is not available in the soil in large part of state. The crop production in state is influenced by this factor also.

- The most important cause of decline in agricultural production is the unfavorable environment for agricultural growth. Most parts of Rajasthan are suffering from inadequate infrastructural facilities such as electrification, market storage, road map, and inadequate credit facilities in rural areas.
- Rajasthan has 3.42 crore hectares geographical area and 260.01 lakh hectares area is cultivable. Agriculture production of the state mainly depends on monsoon rain. The average rainfall for the state is 58.64cms. Resources of irrigation in state are very scarce and lack of irrigation is a permanent and major problem for state.
- Seventy per cent population of Rajasthan is depends on the agriculture for their livelihood and the large number of farmers doesn't have knowledge to use of fertilizer, pesticides, seeds, new technology for farming. Per hectare consumption of fertilizers is very low in state. In 2012 -13 it was 51.70 kg., while it was 128.34 kg. in India. The low level of fertilizer consumption and lack of knowledge of new farming technology is the major problem of agriculture in Rajasthan.
- All agricultural activity needs efficient finance. Farmers always require finance for improvement of land, paying debts, buying cattle, purchase costly agriculture machinery etc. But the financial needs of rural farmers cannot fulfill by finance provided by the financial institutions. Farmers are not utilizing the financial assistance provided by them. The repayment of loans from farmers is very poor.
- Chemical fertilizers, pesticides, agriculture machinery and high yield varieties seeds; all are not easy to reach the poor, small and marginal farmers. The new technology of agriculture is very expensive for farmers. The financial assistance is not sufficient for use modern technology to small and marginal farmers.
- Rajasthan is frequently visited by droughts and famines. The famine prone nature of Rajasthan becomes evident from during the period between 1984-85 to 2011-12 state of famine was witnessed here in almost all the years except for 1990-91, 1994-95. The worst year was 2002-03, when all 32 districts were affected by famine. Agricultural production is extremely affected by droughts and famines.
- The dry climate of Rajasthan is the major problem for agriculture activities. The scanty, uneven and irregular rainfall has converted large areas of state into desert and semi-desert, which have become unfit to cultivation.
- Poverty among farmers mostly prevents them to adopting new techniques of agriculture. High percentage of illiteracy and low education among farmers also impedes faster development of scientific and technical skills necessary for agricultural development.
- Distribution of agricultural land defective and major share of it is with non-cultivating owners.
- Lack of proper management of water supply to cultivated areas in state is also responsible for uneven development of agricultural economy.

Impact of Agricultural Crisis on Agricultural Budget of State

Agriculture sector regularly influenced from crisis in Rajasthan. Climate change is one of the greatest challenge in Rajasthan. It's always affecting the agriculture sector and its allied activities. Rajasthan agriculture is mostly dependent on monsoon and irrigation. Due to uneven, irregular, scanty monsoon and insufficient irrigation facilities, production from agriculture have always affected adversely. Economy of Rajasthan has faced several droughts and famines in last few decades. It's because, a large part of state is belonging to desert and it called 'Thar Desert'. A lot of money has spent on the droughts and famines relief program but outcomes are not satisfactory. In recent years has assumed the form of a triple famine, which means the acute shortage of food, fodder and water simultaneously. This makes the situation quite vulnerable, miserable and more challenging.

About 70% of the population of the state which earns its livelihood through agriculture gets adversely affected by the condition of droughts and famines and under the stress their economic structures break down completely. Due to this impact farmers again faced several crisis and that type of crisis are also affect the agricultural conditions in the state. Farmers trapped in the indebtedness. They commit suicide, because they have enabled to pay their loan at time and also suffered from permanent

diseases called poverty. Rainfall, hail, indebtedness, low productivity, lack of irrigation facilities, inadequate finance facilities are other main crisis in agriculture in Rajasthan. Major impact of these crises is that the farmers want to come out

from trapped under crisis. Farmers have gone to the insurance companies for crop assurance. But Insurance companies only rob farmers and government on the base of crop insurance. In that condition, there is nothing spare food and no seeds to bow for farmers. Farmers has given full guarantee of pay of loss on the base of crop insurance, but central and state government only fulfill documents in crop insurance plans. Records of Rajasthan tell that from 2010 to 2013, insurance company has gotten premium capital of 3017.86 cr., but farmers have only gotten 1928.18cr, as there fulfillment. Farmer's condition is very dismal in Rajasthan. They regularly faced crisis in agriculture.

Farmers have to go through lots of critical conditions and problems and due to this calamity farmers fail to earn even their livelihood because of flood, drought, crack, hailstone raining, attack of insects and diseases on crops, destruction of crops and unavailability of money. In such a serious and critical condition, the only option left to them is debt with which fulfill their needs and dreams. In some adverse circumstances, the farmers experience very depressing and miserable in state and as a result some of them even commit suicide. The small and marginal farmers' condition is very horrible and upsetting in the state.

Agriculture has adversely affected from agrarian crisis. Growth rate in agriculture has also decline due to crisis in the state. The growth rate of agriculture GSDP (Gross State Domestic Production) is a very important measure to assess the production and productivity levels of agriculture and gives a measure to compare the speed and acceleration of the agriculture sector. The Rajasthan have ranked among lowest rank holder state in India in the criterion of growth rate of agriculture GSDP in the financial year 2012-13.

States were: Karnataka, Mizoram, Goa, Rajasthan and Gujarat. Thus, the Rajasthan have 26th in this financial year. This is really a tense situation. The state has faced such a serious crisis in agriculture.

III. FINDING AND SUGGESTIONS

It's found from the depth study that, state of Rajasthan has faced some major and minor crisis in agriculture sector. Main agriculture crisis are: adverse climate, lack of irrigation facilities, inadequate financial assistance, droughts and famines, lack of knowledge of modern technology, poverty and low education among farmers. So the development of irrigation facilities, especially minor projects, should be undertaken on large scale. Efforts should be made to provide irrigation facilities to the entire arable land. Better quality and improved seeds, agricultural implements, sufficient fertilizers and necessary pesticides are made available to the farmers. Farmers of the state should be trained in scientific and technical skills of improved farming. Government has to conscious that farmers should be paid remunerative prices for their produce. High priority should be given to fulfillment of financial requirement of farmers and also given to drought prone area. So that problems of agriculture sector are effectively tackled.

IV. CONCLUSION

Agriculture is largest private sector in India and in Rajasthan also. A large portion of population of state is still dependent on agriculture for their livelihood. About 55 % of total state's income generated from agriculture and their allied sector. Agriculture in Rajasthan is control by some environmental factors such as: dry climate, Thar Desert, uncertainty of monsoon, lack of moisture soil, lack of irrigation facilities etc. Agriculture sector have facing some manmade crisis such as: lack of fertilizers and modern technology, inadequate financial assistance to farmers, poverty among farmers etc. Physical environment of the state plays critical and significant role in almost every phase of agricultural activity. The performance of agriculture sector in the state is quite satisfactory but there are several challenges in agriculture. Most of the challenges are adverse climate and implementation of agro-development plans. So it is quite essential that Government and Farmers of Rajasthan both should be conscious about the overall development of agriculture sector and tackles the challenges in agriculture.

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