

Agriculture Education for Rural Development in Jharkhand

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Abstract- Rural development is a strategy for reducing poverty and to uplift socio-economic infrastructures in rural areas especially through agriculture development which is almost impossible without proper management of agriculture graduates and trained farmers. An attempt is made in this paper to examine the transformative role of responsible public and private mechanism, skilled farmers and agriculture graduates for achieving ultimate goals and objectives of agricultural policies and rural development efforts during various plan periods. Most of agriculture graduates have to be encouraged to work with farmers and need to be devoted in agricultural based occupations. This situation suggests that the state is still potential destination form the perspectives commercial farming and agricultural transformation. The government need to give excessive emphasize to providing accessible and affordable agriculture education opportunities to socio-economically backward students whose family members are still working in agriculture sectors. The government needs to expand agricultural service delivery mechanism and mobilize agriculture graduates and post graduates in remote areas. The private sectors also need to invest in agriculture sectors for the people struggling against food insecurity.

Keywords: Agriculture education, agriculture development, strategy of agriculture, rural development.

I. INTRODUCTION

Jharkhand was formed as the 28th state of India on 15th November 2000 through the Bihar Reorganisation Act. It is spread over 7.97 million ha with a population of 32.97 million. Nearly 70% of the population of the State is dependent on agriculture. The state receives annual rainfall of 1200-1600 mm and the climate ranges from dry semi humid to humid semi-arid types. Out of the average annual precipitation of 10 Billion Cubic Meters (BCM) that the state receives, about 15% is lost in the atmosphere and 50% flows out as surface runoff. Thus, 35% of the total precipitations recharge the ground water [1]. In general, the soils of Jharkhand are low to very low in available phosphorus and sulphur, medium in available nitrogen and potassium status and deficient in available boron. About 1.6 million ha (19% of total geographical area) is acidic. The region has a major problem of slight to moderate soil erosion as 74% of the areas are located on very gentle to gentle slopes.

Despite good rainfall, the cropped area and cropping intensity are low. The level of technology adaptation is also poor leading to lower productivity.

The net sown area is 2.56 million ha and only 12% of cropped area is under irrigation. The total cultivable land in

the State is 52% as compared with 55% of the country, but only 43% area of this is under net sown area compared to national average of 76%.

Jharkhand is known for mono-cropped rice cultivation under rainfed condition. Occurrence of frequent drought at intervals, low rainfall, long dry spell during crop season leads the farmers to shift towards low water requiring crops like Pulses, oilseed, Vegetables and cereals like Ragi and Jowar. With the increase in irrigation potential farmers used to grow 2-3 crop depending upon the situation [2].

The state of Jharkhand is rich in natural resources but agriculture lacks technological intervention. One of the main reasons is it lacks quality educationists and Research and Development.

II. RURAL DEVELOPMENT PERSPECTIVES

(a) Theoretical Perspectives - Agriculture education and rural development in state of Jharkhand can be the best foot forwarded from agriculture transformation and modernization. In this theory, Nobel laureate economist (1979) Theodore William Schultz emphasized that key to agricultural transformation lies in introducing new plantation technology, better species, more effective power sources and cheaper fertilizer that is, emphasizing technological change in agriculture. According to the conception of this theory, Schultz has given more focus of following: -

- i. More resources should be given to agriculture.
- ii. The manufacturing and other urban sectors should not be subsidized at the cost of rural areas.
- iii. As a tool employment- based strategy should have following three elements: -
 - Accelerated output growth to raise the productivity of small farmers.
 - Raising domestic demand for agriculture products.
 - Diversified and non-agriculture labour -intensive rural development activities supported by the farming community be encouraged.

This modernization theory provided a conceptual structure for the analysis and explanation of modern farming system in fifties and six tees. The main problem and modifying agricultural practices relate to dissemination process, which faces social and cultural obstacles in adoption of new techniques and products. The traditional attitudes and conservative value come on the way. Communication, transportation, education, media (print and electronic media), local leaders, development agent's, geographical factors etc., may help transferring new technology in rural society.

(b) Policy Perspectives Policy reforms and economic growth have been changing demand and supply fundamentals making agriculture. Market – driven sector. In India, agricultural development is now being seen as an important part of agriculture education. The agricultural sector is now a key area for the achievement of development goals. Agricultural education in tune with fast changing national and international scenario has become important. Future agriculture is dominated by dangers of food insecurity, stagnating/declining productivity and profitability; degradation and depletion of natural resources; increased risks due to changing climate; unsafe livelihoods for millions of small and marginal farmers; regional imbalances in agricultural productivity; rising input costs, unsound profits and vulnerable markets; changing food habits and quality concerns; high post- harvest losses and fragmented processing industry; globalization of trade and commerce; weakened technology transfer system; fossil fuel crisis and growing emphasis on bio-fuels encroaching upon good agricultural lands; poorly coordinated natural disaster management system, and the looming prospects of bioterrorism etc [3].

The State of Jharkhand has a fairly high potential for development of agriculture in general and in particular for cultivation of certain high value agricultural crops including fruits, flowers and vegetables in view of the favourable climatic conditions. Despite these advantages, development of agriculture and adoption of modern technologies has not really taken off in the State. Consequently, production and productivity are below the national averages in case of most annual crops. The focused areas as per the policy document the Govt. of Jharkhand are: -

- (i) Development of strategies for agriculture to provide sustainable livelihood opportunities to the people for overall economic, social and human development.
- (ii) Ensuring food, nutrition and economic security through development of agriculture in terms of food grain, oilseed, horticulture, cash crop, livestock, fishery and agro-forestry.
- (iii) Efficient and sustainable use of soil, water and biodiversity.
- (iv) Provide sustainable income generation activities to the farm families.
- (v) Linking food production with agro-based industries like.

- (vi) Agricultural education to produce graduates and skill development through training.

III. RURAL DEVELOPMENT NEEDS

Rural development in Jharkhand involves interaction of economic, social, political and various cultural factors. Due to reasons like unstable political situation, absence of people participation and poor mobilization of youth in agriculture and rural development sectors development has not been satisfactory.

Effective agriculture education and rural development providing skill and training with placement can empower young people of Jharkhand. Awareness as regard to following can be helpful: -

- (a) Inadequate availability of seed and planting material, in general.
- (b) The fertilizer consumption is very low, i.e., 33.52, 17.39 and 4.82kg/ha, respectively, of nitrogen, phosphorus and potassium. Low availability of boronated SSP and slow-release fertilizers.
- (c) Large dryland area and lack of high yielding crop varieties
- (d) Poor crop management, low input use and inadequate crop planning.
- (e) Poor watershed management systems. Excessive use of insecticides and fungicides, especially in vegetable cultivation and other crops resulting is health hazards.
- (f) Non adoption of modern technology and lack of awareness among the farmers.
- (g) Lack of organized marketing facilities, and absence of effective value chain management.
- (h) Infrastructure, roads, communication, power supply, storage, processing and marketing facilities for agricultural produce is poor state. Organic farming not taken up.

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