

SESSION 3.1 (INNOVATIONS FOR SUSTAINABLE AGRICULTURE)

Constraints to the Diffusion of Natural – Resource –Conserving Agricultural Technology in India: The Case of SRI (System of Rice Intensification) in Tamil Nadu

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Abstract: Agriculture sector has been acknowledged as engine of economic growth and critical to poverty reduction in developing countries like India. India has witnessed, initial periods, problems of low per capita food grains along with food insecurity. This problem was addressed by Green Revolution technology in early 1960s, restricted with wheat and rice in irrigated regions of the country. Initially it was criticised for its large farmer bias and bias towards farmers with assured irrigation, of late there is a growing recognition of its negative environmental impacts due to high use of chemical fertilizer/pesticide. The country has not witnessed any big technological breakthrough in agriculture that can challenge high input driven post green revolution agricultural technologies. Policy makers and different stakeholders involved in agriculture plan to develop and spread System of Rice Intensification (SRI), is a natural resource conserving and sustainable technology. Sectoral System of Innovation (SSI) has been used as conceptual/theoretical framework to explore constraints to diffusion of SRI technology. It was observed from analysis that the SRI prevalence among small and marginal farmers is very low. Finally, it is evident from this micro level study that the condition for synchronization of these three blocks of SSI is not conducive in this process. This Paper is divided into four sections. The introduction and background, statement of the problem and objectives of the study are given in section I. Sources of the data, methodology and theoretical framework of the paper is presented in section II. Discussions on the distribution and constraints of SRI technology are carried out in Section III and the summary and findings are presented in section IV.

Agricultural diversification and inclusive development: A case of Jammu and Kashmir

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Abstract: Development in itself means equal resource allocation, but it has not yet proven in major cases as the socially excluded persons deprived of such opportunities. Inclusive development follows UNDP's human development approach and integrates the standards and principles of human rights: participation, non-discrimination and accountability. The significance of agriculture as a driver towards inclusive development in various countries acknowledged in many policy circles, especially in terms of employment and competitive industrial sector. The agricultural diversification towards high valuable and profitable crops enhances the income and employment opportunities for the rural marginal people. In the research study inclusive development taken into account based on horticultural diversification in Jammu and Kashmir (J&K) state in India. The objective of the research study is to analyse the role of diversification on the inclusive development of the rural people of J&K, within the framework of innovation system. The research methodology is qualitative in nature based on the data collected via both primary and secondary measures. The increase in area towards the horticultural commodities shows its impact on the income and employment enhancement of the people. Hence a positive sign of inclusive development driven by horticulture is observed involving children, females and other marginal rural people.

CROP DIVERSIFICATION AND SUSTAINABLE AGRICULTURE IN INDIA

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Abstract: The basic challenge for sustainable agriculture is to make best use of available biophysical and human resources. But growth being at the centre- stage of the policy agenda of almost all countries in the world has led to fast depletion of natural resources. Land and water constitute two important renewable resources extensively used in

agricultural sector. The diversification of agriculture is an alternate way for the regeneration and conservation of land and water.

The present paper attempts to study if diversification can ensure sustainability in agriculture. For the purpose secondary data at two points of time 2007-08 and 2013-14 are used. Herfindahl Index is used to measure agricultural diversification with respect to 7 major crops i.e. Coarse Cereals, Pulses, Oilseeds, Sugarcanes, Vegetables, fruits and spices. It is observed that area under Coarse Cereals has declined from 2.10 to 1.76 percent. For rest of crops it has increased and in case of sugarcane it is constant. The index values for the country as a whole reveals the fact that there is crop concentration in favour of fruits and vegetables. At the state level, crop diversification is found to be highest in Andhra Pradesh followed by West Bengal, Bihar, Maharashtra and Karnataka. Rest of the states have concentration of crops with highest in Odisha followed by Madhya Pradesh. Using linear Regression it is found that the significant factors influencing crop diversification are fertiliser consumption, pesticides, seeds, credit and irrigation. The shifting of cultivation from cereal production to fruits and vegetables at all India level gives positive indication for sustainability in agricultural sector.

Farmer Suicides in Maharashtra-Exploratory Study

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Abstract: The problem of farm distress has enveloped the Indian economy since long. The instances of farm distress are prominent in some states like Maharashtra, where the distress is only deepening by every passing day. The farmer suicide count recorded in past one year was 3228 according to the National Crime Records Bureau Report 2016 .This is the highest figure since 2001. In fact, it is 52.5% higher than 1,207 cases recorded by the Maharashtra government in 2014. Studies attribute these deaths to credit crunches in the agrarian sector of India and increased debt burden among farmers. Most of the farmer suicides have taken place in Maharashtra and Andhra Pradesh of India's 29 states, suggesting that adverse financial circumstances affected farmers only in some states. Why did accumulating debt and credit crunches affect farmers only in some states? This paper talks about how increased competition in the banking sector diverted lending from agriculture to create economic conditions that led to farmer suicides in few of the Indian states.