Concept Note
For Round Table Discussion on Sustainable Agricultural Systems

Background:

Underlying the serious symptoms of *high food price, farmer suicide, and increasing subsidies* are many factors viz., agricultural policy, price signal, nature of agricultural practice, mono cropping, high cost of agricultural inputs including cost of inorganic fertilizers, chemical pesticides, terminator seeds, cost of farm labor; climate changes, high transaction cost of market intermediation, low nutritional value of food, food safety, negative incomes to farmers, out migration of farmers from agriculture, etc. The intricate interrelationship among these factors has been driving the agricultural sector into an inescapable *chakraview of unsustainability*; especially when the above symptoms are not comprehensively dealt with by governments, research institutions and practitioners at the grass root levels.

The *reductionist approach* in agricultural research; a methodology where a problem is studied in isolation of other associated and interrelated problems usually cannot provide holistic solutions required at a smallholder farmer level. Second, agriculture policy of governments that promote *industrial approach* of agricultural production and distribution appear to have ignored the warnings from the ground that the science and culture of agriculture are indeed different from industrial culture of competition, specialization and scale economies. Further, government and bureaucracy have gradually locked into a top down decision making process bereft of the nuances of ground realities.

Contrary to these traditional approaches, the science of agriculture appears to be rather based on the principle of ***diversity***. Agriculture is visibly a highly interconnected and interdependent system and production output in this system is a result of deep and dynamics relationships among various living and non-living organisms in a micro ecosystem. As a recognition and significance of diversity for agricultural efficiency and the ability of family farmers to be able to manage such diversity in farms, the year 2014 was celebrated as the *International Year of Family Farming*. More than the external industrial inputs of inorganic fertilizers, chemicals pesticides and terminator seeds; simultaneous management of local seed, soil, and moisture, mixed

cropping and integration of agriculture with livestock, forestry and overall micro ecology can make agriculture safe, enjoyable and prosperous.

Empirical evidences in India and world-wide show that farmers adopting diverse agriculture are less vulnerable to climate changes and market forces. The cost of cultivation is very low, yield is higher and hence net incomes are very high. On the other hand traditional farmers in irrigated areas adopting mono cropping with costly industrial inputs tend to incur very high losses and are susceptible to committing suicides.

In the recent years, there have been some winds of change globally in agricultural practices from mono culture to diversified agriculture systems. Food and Agricultural Organization, UNCTAD and the European Union in the last couple of years have begun to promote sustainable agricultural practices. A large number of agricultural scientists and researchers globally are now suggesting for agro ecology as a method for long term sustainability.

In India, the central government and several state governments have initiated number of policy measures on organic farming. More than seven state governments have separate organic farming policy. The government of Andhra Pradesh has adopted community managed sustainable agriculture. Indian Council of Agricultural Research (ICAR) has several research centres and programmes on organic farming, integrated crop management, integrated farming systems for a long time. In 2014, Government of India initiated the National Mission for Sustainable Agriculture. However, the inertia of industrial approach to agricultural research and policy especially in the new industrial and market economies like India appear to stall the process of change for better and has been responsible for confusing signals to the farming community.

Interestingly, study of agricultural practices of farmers and farming communities in India show a variety of sustainable agricultural practices followed since time immemorial in different parts of the country. Some of the practices include Natural Farming, Natueco Farming, Bio-dynamic Farming, Permaculture, Zero Budget Farming, Indigenous Micro Organism based farming, Effective Micro-organism based farming, Organic Farming, Low External Input Sustainable Agriculture (LEISA), Integrated Agriculture, Sustainable Agriculture, etc. However, the exponents of these different methods and vocabulary of sustainable agricultural systems do not often share their experiences and findings with each other.

Focus of the Discussion

With the above backdrop, a round table discussion is proposed to discuss the following issues:

1. Codification of sustainable agricultural practices (*technical perspective: soil health, seed, moisture, crop mix, integration of agriculture with livestock, horticulture with the local ecology in different agro climatic and topographic conditions*)
2. Replication of sustainable agricultural practices (*socio-technical and behavioral perspectives: of smallholder farmers on agricultural practices and their organizational issues for collective action*)
3. Common vocabulary across different approaches (*organic, natural, natueco, LEISA, homa, Zero budget, sustainable agriculture, CMSA,* and *agro ecology*) for Sustainable Agricultural Systems.

Invited Delegates:

The delegates/participants shall include a few scholars/researchers/scientists working on this subject, successful farmers who have undertaken on farm experiments, agriculture policy formulators. The maximum number of participants to be invited for the round table discussion is estimated to be twenty (20).

Proposed Venue & Date:

Xavier Institute of Management, Bhubaneswar, **19th January, 2016**

Expected Outputs of Deliberations:

The discussions and deliberations are expected to provide common understanding and agreement on the following issues for better policy formulation and effective implementation to make agriculture sustainable in the long to inter-generational terms.

- Common understanding and appreciation of the different approaches to sustainable agricultural practices in India and agreement on some common terminologies for policy.
- Plan for compilation and codification of different sustainable agricultural practices.
- Draft on Transition Strategy & Policy for replication on sustainable agricultural practices.
- Plan for a national/state level Seminar/Conference/Workshop on Sustainable Agricultural Systems in 2016-17.

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