

INTEGRATED FARMING SYSTEM FOR SUSTAINABLE RURAL LIVELIHOOD SECURITY

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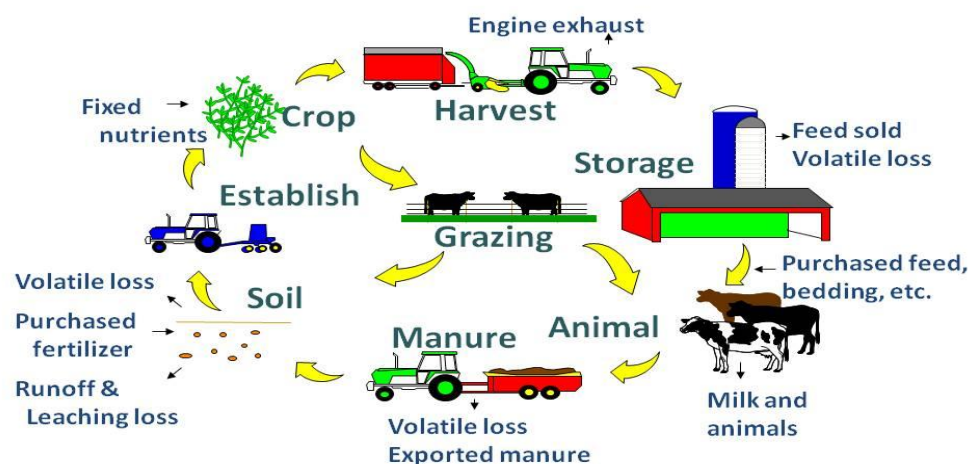
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INTEGRATED FARMING SYSTEM

Based on experiences from Tamil Nadu, India, described these systems as a mixed animal crop system where the animal component is often raised on agricultural waste products while the animal is used to cultivate the soil and provide manure to be used as fertilizer and fuel according to Jayanthi *et al.* (2000). There are synergies and complementarily among enterprise that comprise a crop and animal component that form the basis of the concept of IFS. Henceforth, integration usually happens when outputs (usually by-products) of one enterprise are used as inputs by another within the context of the farming system.

SUSTAINABLE RURAL LIVELIHOOD

The concept Sustainable Rural Livelihood (SRL) is unusual attempt to go beyond the conventional definitions and approaches to vanish poverty. These was found to be too narrow that they focused only on certain points or manifestations of poverty, such as low income, or not considering other vital aspects of poverty such as vulnerability and social inclusion. This concept offers a more coherent and integrated approach to poverty destruction. To achieve goal of sustainable rural livelihoods different livelihood capitals such as human capital, social capital, natural capital, physical capital and financial capital would play a greater role to cope up with the shocks and stresses and maintain or enhance the individual's capabilities and assets both in present and in the future without degrading the natural resource base while exploiting.



WHY IFS?

A) Deteriorating resource Base

Available data revealed that nearly 120.72 million ha of land in the country is degraded. Intensified agriculture, along with indiscriminate exploitation of irrigation water and non-judicious fertilizer application, especially in irrigated areas of the country has led to many kinds of physical and chemical degradation of the soil.

B) Climate Change

The increase in amount of green-house gases is resulting in global warming. Recent studies done at the Indian Agricultural Research Institute concluded that the possibility of loss of 4-5 million tonnes in wheat production will occur in future with every 1°C rise in temperature throughout the growing period.

C) Narrowed Biodiversity

The narrowing of genetic biodiversity takes place as traditional crop varieties and local animal breeds are being replaced by modern ones. For example, extensive adoption of rice-wheat monoculture in the Indo Gangetic Plains has replaced the other traditional crops nowadays successfully. Soil micro-flora is also adversely influenced as per the large-scale use of agro-chemicals and lack of recycling of crop residues in the particular region.

D) Multiplicity of Integrated Farming Systems



Due to unavailability of scientifically designed, economically profitable and socially acceptable appropriate integrated farming systems models, they are unable to harness the benefits of integration. An important consequence of this is that their farming activities remain large, subsistent in nature rather than commercial and many of the times uneconomical.

E) Low Rate of Farm Resource Recycling

In the absence of adequate knowledge and data that is proven among farmers about techniques and benefits of recycling of farm, industrial and municipal organic wastes in agriculture, these remain unutilized and unused. A vast, useful and untapped potential exists to recycle these solid and liquid organic wastes of farm origin respectively.

F) Technology Adoption Gaps

Due to poor extension mechanisms at national as well as state levels, many farmers, especially those at lower levels of social structure, remain uninformed and unknown about many development schemes and the wanted impact of such schemes is never obtained. One of the reasons for poor rate of transfer of agricultural technologies is poor linkages between the different groups of agriculture.

BENEFITS OF INTEGRATED FARMING SYSTEMS

- a. Productivity
- b. Profitability
- c. Sustainability
- d. Balanced food
- e. Environmental safety
- f. Income round the year
- g. Adoption of new technology
- h. Saving energy
- i. Meeting fodder crisis
- j. Solving fuel and timber crisis
- k. Employment generation
- l. Agro-industries
- m. Increasing input efficiency

CONCLUSION



The profitability of Integrated Farming Systems is well known to the world and can be considered for its wide spread adoption by small and marginal farmers. A large number of smallholders have to shift themselves to non-farm activities to augment their income (NCAER, 2009). Research efforts so far have paid dividends, but paid only and mainly through medium and large farm holders. Potential and better improvements and increased productivity from the various enterprises can only come from a better understanding of the nature and extent of the interactions between the various enterprises and natural resources, economic benefits, as well as the impact on the livelihoods of small farmers and the environment respectively. Research on these data and aspects provides major challenges for sustainable agricultural development through integrated farming systems (IFS) in the future.

