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Integrated Farming System one of the Novel Strategy for Doubling the Farmers Income

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In India, small holders' farms constitute 84.97 % of the operational holdings and cover 44.31% of the total operational area. Benchmark data from experimental marginal and small households indicate that individual households spend as much as 42 % and 3% of their earnings, respectively for meeting household's food requirements. Crops and livestock constitutes the predominant land-use system of these farms. Vertical expansion of the IFS system by integrating appropriate farming system components requiring less space and time is a novel feature for ensuring periodic returns to farmers. Soil fertility decline and mismanagement of plant nutrients have made the task of providing food for the world's population in 2020 and beyond more difficult. Thus our production of food grains per unit area has to almost double from what we are obtaining today. This could be made possible by putting the land, both irrigated and rainfed under intensive cultivation. Fortunately, most of our states lie in tropics and so are blessed with abundant solar energy thus making cropping possible round the year. The only way to increase agriculture production is to increase the productivity per unit area per unit time. In the scientific era of agriculture, cropping systems genotypes, geometry of planting and management practices are designed to increase" the productivity per unit area per unit time, simultaneously making efficient use of available resources and stabilizing yields .'There is no scope for increasing the farm size, because of steady increase in population with shrinkage of cultivated land as a result of industrialization and urbanization. Only vertical expansion is possible by integrating appropriate farming components requiring lesser space and time ensuing periodic income to the farmer. The integrated farming system concept actually follows the famous sayings of Lord Buddha, ' The wise live without injuring nature is as the bee drinks honey without harming the flower'. Integrated farming system is an "Agriculture that is sustainable and sufficiently productive and allows the welfare of man, anima land plant".

Integrated farming system approach is not only a reliable way of obtaining fairly high productivity with substantial fertilizer economy but also concept of ecological soundness leading to sustainable agriculture and also deriving maximum compatibility and replenishment of organic matter by way of proper recycling of organic residues / wastes obtained through integration of enterprise like fishery, poultry, goat, milch animal, mushroom and sericultural activities. Currently, component research is taking main stay and there are not many system –based programmmes.the responses of a component in isolation does not necessarily fit into a systems perspectives. The individual programmme ignores the socio-economical and bio-physical aspects of the farming community. The present endeavor, therefore, would revive the practice of bio-farming concept. The integrated farming systems, therefore assumes greater importance for sound management of farm resources management to enhance the farm productivity, reduce the environmental degradation, improve the quality of life of resource poor farmers and to maintain the sustainability. Integrated farming system approach is not only a reliable way of obtaining fairly high productivity with substantial fertilizer economy but also concept of ecological soundness leading to sustainable agriculture (Swaminathan, l987) and also deriving maximum compatibility and replenishment of organic matter by way of proper recycling of organic residues/wastes obtained through integration of enterprise like fishery poultry goat, milchy animal, mushroom and sericulture activities. Hence, the Integrated Farming System is one of the way to double the farmers income, which are economically viable and ecologically compatible, encompassed with higher productivity to meet the present and future needs without jeopardizing the potential, are to be optimized for specific agricultural domain.

***Dr. B. K. Desai** has completed his B.Sc. (Agri.), M.Sc. (Agri.), with distinction. He obtained his Ph.D. during 1998 and is specialized in the field of integrated farming system, soil fertility management and agro forestry systems. He awarded e-India-2010 for the NAIP-ICT project has CCP and handled 12 projects as Principal Investigator funded by ICAR, DST and Govt. of Karnataka and worked as Co-Principal Investigator for more than 10 projects. He has multi experience in teaching, research and extension of over 25 years of teaching experience of various agronomy courses *viz.,* Sustainable agriculture and farming systems, Advances in farming systems, Rainfed agriculture and water shed management, Experimental techniques in agriculture research to under graduate, post graduate and Ph.D. students. He has guided 16 M.Sc. (Agri.) and 05 Ph.D. students .He also made significant contribution to the development and popularization of integrated farming systems modules in six districts of different agro-climatic zones of Hyderabad Karnataka region and released many technologies for package of practices. In span of 3 years, today IFS technology practicing by more than 2000 farmers in six districts of Hyderabad Karnataka Region. Apart from he also worked on integrated crop management practices in pigeonpea, cotton etc. He has organized two National level Winter School Training Programme to the scientists of SAU's and ICAR institutes. He has over 110 research / symposia papers, 15 chapters in National and International Journals, three books have author / editor, 100 popular articles and other useful publication.