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# IFS - a tool for doubling farmers' income

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## Introduction

Indian agriculture is passing through difficult times due to frequent drought situations in several parts of the country, thereby resulting in widespread distress among farmers. The government needs to proactively address the situation and make more long-term farmers centric policies to socially and economically empower farmers. In this context, a National Round Table Meet was held at India International Centre, New Delhi on 30 April 2016 for doubling farmers' income by 2022. (Report on Doubling Farmer's Income by 2022-Farm Crisis and Farmers' Distress). Experts are judging the options and strategies for achieving this enviable target. Among those, one is to evaluate the potential of an age-old integrated farming system (IFS) in enhancing the income of farm families within a reasonable time period. (Ponnuswamy and kousalayadevi. 2017)

## Doubling farmers' income

Real income (It is the income of individuals or nations after adjusting for inflation) of farmers is the criteria for measuring the farmer's income than nominal income (It is the income expressed in money terms and measured in current currency (rupee, dollar etc.). According to *Niti Aayog* reports, doubling the real income of farmers till 2022-2023 over the base year of 2015-2016 requires annual growth of 10.41% in farmers' income. (Khanam *et al.* 2018)

## Why double farmers' income?

The NSSO data on Consumption Expenditure Survey for the years 2011-12 reveals that more than one-fifth of rural households with self-employment in agriculture as their principal occupation were having income less than the poverty line. The proportion of farm households suffering from poverty

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was quite high in some states (Fig.1). The highest incidence was observed in Jharkhand where 45.3 per cent of farm households were in poverty. Farmers' income also remained low in relation to the income of those working in the non- farm sector (Fig.2). During the early 1980s, farm income per cultivator was just 34 per cent of the income of a non-agriculture worker. This disparity was quite large and required a policy response to raise farmers' income at a faster rate. (NITI Policy Paper No.1/2017. Ramesh Chand)

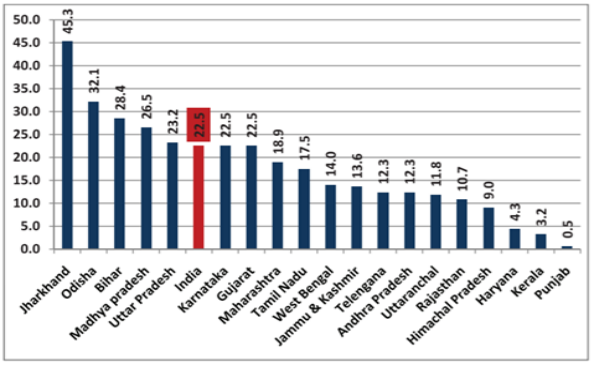



Fig.1: Farm households with income below poverty line, 2011-2012

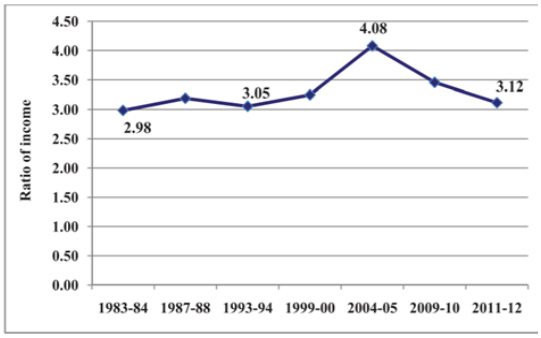
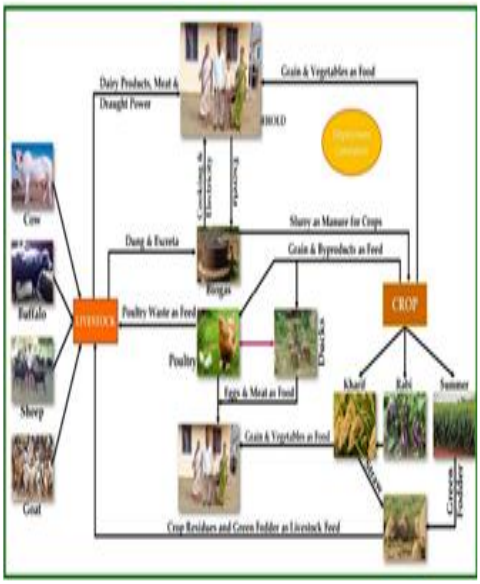



Fig.2: Ratio of income per non agriculture worker to income per cultivator

## Integrated Farming System

Different scientists have defined a farming system differently. However, many definitions, in general, convey the same meaning that it is a strategy to achieve profitable and sustained agricultural production to meet the diversified needs of the farming community through efficient use of farm resources without degrading the natural resource base and environmental quality

According to Paul Harris, " *it is a system which comprises of inter-related set of enterprises with the crop activity as base, will provide ways to recycle produces and waste from one component becomes an input for another part of the system, which reduces cost and improves soil health and production and/or income*"




Schematic presentation of an ideal IFS model

## Key principles

- Cyclic. The farming system is essentially cyclic (organic resources – livestock – land – crops). Therefore, management decisions related to one component may affect the others.
- Rational. Using crop residues more rationally is an important route out of poverty. For resource-poor farmers, the correct management of crop residues, together with an optimal allocation of scarce resources, leads to sustainable production.
- Ecologically sustainable. Combining ecological sustainability and economic viability, the integrated livestock-farming system maintains and improves agricultural productivity while also reducing negative environmental impacts.

## Objectives of IFS

- Efficient recycling of farm and animal wastes
- Minimizing the nutrient losses
- Maximizing nutrient use efficiency
- Adoption of efficient cropping systems and crop rotations
- Complementary combination of farm enterprises.

## Constraints faced by farmers in adopting IFS

- Lack of marketing for products from different enterprise
- Heavy investment in the initial stage of starting
- Lack of infrastructure facility and scattered landholdings
- Non-availability of improved varieties of seed /breeds at the farm site
- Lack of inputs availability
- Lack of skill with family labour
- Lack of know-how on effective utilization of farm produces

## Role of Integrated Farming System

- Food security
- Provide balanced food
- High productivity and enhanced farm income
- Effective recycling of resources

- Minimizing environmental pollution
- Employment generation

## IFS for doubling farmer's income

Integrated Farming System (IFS) is considered to be a powerful tool and holds the key for ensuring income, employment, livelihood and nutritional security in a sustainable mode for small and marginal farmers who constitute 84.97% of total operational holdings and operated 44.31% of the area. Although 84% of farm households in India have crops and dairy together, their recycling is very low (<25%) and depends on markets for their farm inputs. The Union government has declared to double the farm income by 2022 which is possible by adopting scientifically designed IFS. (Panwar *et al.* 2019)

## Importance of farming system

1. ***Recycling and utilization of other available resources in the farm:*** There is effective recycling of waste material in the farming system.
2. ***Maximum possible return and Profitability:*** The use of waste material of one component in the other at the least cost reduces the cost of production and net profit is increased.
3. ***Create adequate employment opportunities:*** Combining crops with livestock enterprises would increase the labour requirement and help in reducing the problems of underemployment. IFS provide enough scope to employ family labour round the year.
4. ***Increasing Productivity:*** IFS provides an opportunity to increase economic yield per unit area per unit time by virtue of intensification of crop and allied enterprises.
5. ***Increasing Input Efficiency:*** The farming system provides good scope to use inputs in different components with greater efficiency and benefit-cost ratio.

## Conclusion

The green revolution made India self-sufficient in food production. But income levels of the farmers were unsatisfactory. Doubling farmers' income is the need of the nation. Production and productivity increase in agriculture alone will not ensure a doubling of farmers' income. It can be possible only through the proper implementation of the appropriate strategies. An integrated farming system is a promising approach for achieving DFI.

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