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BACKGROUND

LIVELIHOOD FORUM 2020

INTEGRATED FARMING SYSTEM FOR DOUBLING FARMERS INCOME BY 2022

January 28, 2020 | Chandigarh

Livelihood Forum 2020

Integrated Farming System (IFS) for Doubling Farmers' Income by 2022

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CONTEXT

Farming in India is characterized of small, marginal and fragmented land holdings, so much so that about 86% (close to 126 million) of Indian farmers are dependent upon less than two hectares of land each for earning their livelihoods. Such land sizes are though efficient for cultivating labour-intensive crop or tending livestock, these are too small to be compatible with modern techniques/methods of crop production and more often, do not generate sufficient household income for farmers.

Though the situation in North India is comparatively better, with Punjab and Haryana having average operational land holding larger than the national average (1.08 hectares) at 3.62 hectares (3rd largest) and 2.22 hectares (5th largest) respectively, the issue of livelihood security still remains. For once, the land sizes here are still not adequate to offset increasing cost of inputs, climate-induced uncertainties in agriculture output and risks related to market inefficiencies. Then also, given that not much land is available for farm expansion purposes, farmers adopted the strategy wherein they increase application of inputs, especially chemicals in form of fertilizers and pesticides, to the same piece of land to ensure highest possible produce. Rather than increasing the output, this injudicious chemical application has adversely affected soil health, only reducing its productivity, if not causing soil poisoning.

If the target of doubling farmers' income by 2022 is to be achieved, there is need of undertaking rigorous corrective measures to realign agriculture on growth path.

INTEGRATED FARMING MODELS: ONE SOLUTION TO VARIED CONCERNS

Solution to these varied but inter-related concerns lies in Integrated Farming Systems (IFS). Referring to integrating crop production with allied enterprises, such as dairy, poultry, fisheries, agro-forestry, goat-rearing, vermi-compositing etc, IFS is an effective way of managing natural resources in a manner that income security is realized.

- In this system, waste of one activity becomes an input of another enterprise; thus reducing cost.
- Crop residue may be used for livestock feed, while at the same time, because by-product of livestock/other allied enterprise activity is recycled as input for crop production, soil health enhances and productivity improves. This especially holds true in case where artificial fertilizers are replaced with livestock waste.
- With additional source of income in form of the allied enterprise, not only is the farmer's livelihood uplifted but the overall socio-economic status too improves.

IMPACT OF IFS IN OTHER STATES: SOME RESULTS

Integrated Farming System has proved be a success in most of the States where it was adopted.

1. In an experiment by Annamalai University, integrated rice-fish-poultry farming system was adopted in about 430 farm holdings in 12 villages of Cuddalore, Villupuram, Nagapattinam and Thiruvannamalai districts of Tamil Nadu.[1]
   Outcome: An annual increase of INR 33,000 to INR 50,500 per hectare per year in net return per household was realized for two to three crops.

2. In Bidar district of Karnataka, integrated farming system model of Redgram (BSMR-736) and Bengalgram (JG-11) crop with vermicomposting, *Azolla* cultivation and poultry was adopted.[2]

   Outcome: Average income of 240 households increased from INR 63,700 per hectare per year to INR 1,53,200 per hectare per year.

3. In Kanker district of Chhattisgarh, with support of Rashtriya Krishi Vikas Yojana (RVY), a tribal farmer incorporated fishery, poultry, goat rearing and piggery with his usual paddy cultivation.[3]
   Outcome: An increase in annual income from INR 89,800 to INR 2,00,140 was achieved within the time span of first three years.

4. Promoted by All India Coordinated Research Project for Dryland Agriculture (AICRPDA), 3 farmers in Phubani block of Kandhamal District of Odisha adopted different Integrated Farming Models under supervision of Odisha University of Agriculture & Technology (OUAT) for three consecutive years (2015-16 to 2017-18). [4]
   Outcome: In case of IFS model 1, 124% increase in net returns was achieved in comparison to the traditional farming system. Similarly, 120% and 89% increase in net returns was experienced in IFS model 2 and 3.

[1] Srivastava, A. P. (2018, January). Selected integrated farming system models (Integrated Rice-Fish-Poultry Farming System). *ICAR-Indian Farming*.

[2] Srivastava, A. P. (2018, January). Selected integrated farming system models (Redgram Based Integrated Farming System for Bidar, Karnataka). *ICAR-Indian Farming*.

[3] Kaur, C. (2016, January). *Times of India*. Retrieved from https://timesofindia.indiatimes.com/city/raipur/Tribal-farmer-takes-to-integrated-farming-doubles-his-income/articleshow/50557651.cms

[4] S.K. Behera, D. B. (2019). Integrated Farming System (IFS) Approach for Rural Livelihood Security in Kandhamal District of Odisha. *Indian Journal of Dryland Agriculture Research and Development*, 66-69.

FICCI LIVELIHOOD FORUM

Livelihood Forum, as an initiative under FICCI Chandigarh, focuses at identifying key detriments to livelihood security across sectoral and demographic boundaries, as well as finding adoptable solutions for addressing such concerns. The coverage of this program is North India, with special focus on States of Punjab, Haryana and Himachal Pradesh.

As the first edition, Livelihood Forum 2020 adopts the case of doubling farmers' income by 2022 and ensuring livelihood security in agriculture. Being organized in collaboration with **NABARD Punjab**, the program is expected to witness a gathering of 100+ progressive farmers, agri-allied industry (livestock, crop processing etc), agri-equipment and technology providers and subject matter experts from academia and research institutes to understand the benefits of Integrated Farming System (IFS), map the best suited model for various districts of the State of Punjab and support the farmers in adopting it. The program will also disseminate knowledge on judicious use of inputs on farm and methods of ensuring overall farm health.

KEY TAKEAWAYs

- Connect with agri-stakeholders including farmers, agri-industry, policy makers and agriculture scientists/experts to learn best practices in management of farm and allied enterprises.
- Build your knowledge base on agri-business with theme-based presentations and case studies
- Expand your network by meeting industry leads

PARTICIPANTS PROFILE

- Farmers & FPOs
- Agri-Allied Industry—including representatives from dairy, poultry, fisheries, goat-rearing, piggery etc
- Agri-Business Industry – including HYV seed providers, farm technology and machinery manufacturers
- Policy Makers from State Government and Central Bodies
- Researchers/Experts from Academic Institutes & Agri Think-Tanks