5. Integrated Farming Models- Economy

Agriculture Minister Shivraj Singh Chouhan urges integrated farming models for small farmers
The agriculture minister has urged scientists to develop integrated farming systems (combining crops, livestock, and fisheries) specifically to boost income for small farmers. A key directive includes reducing the lab-to-land gestation period for new seed varieties from 4–5 years to just 2 years.

Call for Integrated Farming

The Union Agriculture and Farmers' Welfare Minister have called upon agricultural scientists to prioritize the development of Integrated Farming Models specifically tailored for small farmers to ensure economic stability and sustainability.

Key Highlights of the Minister's Address

Integration of Components- The Minister emphasized models that integrate multiple agricultural components such as poultry, fisheries, animal husbandry, and horticulture. This diversification is seen as a key strategy to help small farmers secure better and more consistent income.
Accelerating Lab-to-Land Transfer- There is a critical need to reduce the gestation period for new seed varieties and hybrids. The goal is to cut down the time it takes for lab-developed varieties to reach farmers from the current four to five years to just two years.

Understanding Integrated Farming Systems (IFS)

Definition- Integrated Farming Systems (IFS) represent a positive interaction between two or more components of farming. Components include horticulture crops, livestock, aquaculture, poultry/ducks, apiculture (beekeeping), and mushroom cultivation.
Core Principles- It operates on the principles of minimum competition and maximum complementarity between different enterprises. It utilizes advanced agronomic management tools to optimize resource use.
Goal- To sustain environmentally friendly farm income. To ensure family nutrition. To provide essential ecosystem services.

Objectives of IFS

Waste Minimization (Symbiotic Systems)- Expand symbiotic systems where the waste of one process becomes the input for another. Example- Crop residues feed livestock, while livestock manure fertilizes crops. Waste is utilized as energy, fertilizer, or feed, leading to optimum productivity at minimum cost.
Enhancing Ecological Diversity- Select appropriate cropping methodologies like intercropping and mixed crop rotation. Reduce competition for water, nutrition, and space while maximizing biological variety.
Effective Land Use- Use the entire available farm area effectively. Ensure positive interactions between biotic (living) and abiotic (non-living) components.
Livelihood and Nutrition- Improve the farm household's dietary diversity. Achieve sustainable livelihoods by diversifying the rural farm to minimize risks associated with single-crop failure.

Impact of IFS

Higher Overall Productivity- IFS increases total production per unit area compared to monocropping systems.
Enhanced Farm Income- Diversified enterprises (dairy, poultry, fisheries, horticulture) can significantly raise net returns, sometimes up to three times higher in certain regions.
Year-Round Income Stability- Multiple enterprises reduce dependency on a single seasonal crop. This ensures a continuous cash flow throughout the year.
Improved Nutritional Security- Greater crop and home garden diversity directly improves diet diversity and food self-sufficiency for the farming family.
Women's Economic Participation- Expands livelihood opportunities for women, particularly in the dairy, livestock, and poultry sectors.

Soil Health Improvement- Promotes nutrient recycling and increases soil organic carbon. Enhances microbial activity and significantly reduces soil erosion.
Biodiversity & Ecological Benefits- Increases overall crop and species diversity. Improves nutrient cycling and potentially reduces emissions through residue recycling and agroforestry integration.

Government Initiatives Supporting IFS

Initiative	Role in Promoting IFS
National Mission for Sustainable Agriculture (NMSA)	• Promotes climate-resilient agriculture. • Encourages integrated crop, livestock, horticulture, and fishery systems. • Focuses on soil health, water conservation, and resource-use efficiency.
Pradhan Mantri Krishi Sinchai Yojana (PMKSY)	• Enhances irrigation coverage. • Promotes "Per Drop More Crop" for water-use efficiency. • Supports water-efficient integrated models like horticulture and fishery-based systems.
National Livestock Mission (NLM)	• Supports development of dairy, poultry, and small ruminants. • Encourages livestock integration with crop farming.
Mission for Integrated Development of Horticulture (MIDH)	• Promotes fruits, vegetables, spices, and plantation crops. • Strengthens diversification, which is a key pillar of IFS.
ICAR & Krishi Vigyan Kendras (KVKs)	• Develops region-specific IFS models. • Provides on-field demonstrations and farmer training. • Promotes technology transfer and capacity building.

Source- https-//www.newsonair.gov.in/agriculture-minister-shivraj-singh-chouhan-urges-integrated-farming-models-for-small-farmers/#-~-text=Interacting%20with%20the%20Scientists%20of,farmers%20to%20get%20better%20income.