

## DIVERSIFICATION IN FARMING SYSTEM

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### Meaning of diversified agriculture:

Adoption of farming system, involving shift in cropping pattern towards crops more in demand like oilseeds, pulses, horticulture, floriculture, medicinal and aromatic plants etc. Synergy through land-based enterprises like livestock and fishery, poultry, etc and capturing the new market opportunities through enterprise: including post harvest /value addition technology.

### Present scenario:

- Soil degradation, salinity and alkalinity
- Depletion of water table in greenbelt
- Untapped rainwater resources in dry land
- Rising cost of input hence, high cost of production
- Reduction in productivity
- Regional imbalance in production and productivity



### Strength:

- Food grain production rose from 51 to 212 Metric Tonnes
- Close to one fourth GDP contributed by agriculture
- Largest producer of milk and tea
- Second largest producer of rice, wheat vegetables, tobacco
- International market through World Trade Organization
- 7.36 % share in total biota against 2.46 % of the global land mass
- 356 major and minor crop plant species and 326 wild relatives

**Need for diversification:** Indian agriculture is fraught with risk and uncertainty as more than two-third of cultivable land is dependent on monsoon. The farmers are often not sure about outcome from agriculture due to weather and market induced risk. Diversification become necessary for developing countries only growing of basic staples such as cereals can not alone support economic development not with standing the need to ensure the food security to the people. Diversification to commercial crop

and commodities becomes an essential strategy that can increase income in agriculture, minimize risk due to crop failures and above all earn foreign exchange. Diversification can be designed to help poverty alleviation, employment planning and environmental conservation. The small and marginal farmers can not adopt capital intensive technology.

### Importance of diversification:

- The imperative to increase the income of small holdings
- The need for full time employment to farmer family
- Stabilization of farm income over the year
- Conservation and enhancement of natural resources
- To combat risk associated with mono-cropping
- To endanger food and nutritional security through diverse of area away from food grains

### Steps for diversification:

- Select the highly location specific system and technology of the area
- Priority input/credit supply for alternative system
- Share the risk of new system
- Market support and rural up linking
- End to End approach

### Constraints in diversified farming:

- Over 117 m.ha (63 %) of the cropped area in the country is completely dependent on rainfall.
- Sub-optimal and over-use of resources like land and water
- Fragmentation of land holding less favoring modernization and mechanization of agriculture.
- Poor basic infrastructure like roads, power, transport, communications etc.
- Very weak agro-based industry.
- Weak research - extension - farmer linkages.
- Large scale illiteracy amongst farmers.
- Decreased investments in the agricultural sector over the years.

**Diversified farming sub-system:**

Sub-System	Component involved
Silviculture	Trees and shrubs with or without animals
Agri-silviculture	Growing trees with annual or perennial agricultural crops
Silvi-pastrols	Growing trees with grasses for rearing cattle
Silvi-horti	Trees and fruit crops
Silvi-horti-pasture	Trees, fruits and grasses
Agri-horti	Agricultural crops with fruit trees
Silvi-horti-floriculture	Growing trees, fruit trees and flowers together
Alley cropping	Shrubs or trees alternated with crops with fixed width
Multistory	Trees, shrubs and agricultural crops are combined to exploit height advantages of the associated species
Aqua forestry	Combined cultivation of trees and fish
Silvi-sericulture	Practicing sericulture on trees
Integrated animal based	Agricultural crop with Dairy, Poultry, Fisheries, Piggery, Apiary

**Sub-system of integrated aquaculture:**

- Livestock-agriculture--fish farming
- Poultry- cum- fish farming
- Duck- cum- fish farming
- Pig- cum- fish farming
- Vegetable- cum- fish farming
- Horticulture- cum- fish farming
- Agri-horti-apiculture-duckery-poultry-mushroom- fish farming

expansion of cold storages and storages for horticultural produce.

- Creation of Watershed Development Fund.
- Infrastructure Support for Horticultural Development with emphasis on Post-harvest Management.
- Strengthening Agricultural Marketing.
- Seed Crop Insurance.
- Seed Bank Scheme.

**Government policies and strategies for diversified farming:**

- Launching a Technology Mission for the Integrated Development of Horticulture in the Northeastern Region.
- Implementing National Agriculture Insurance Scheme.
- Adopting Technology Mission on Cotton.
- Provision of Capital Subsidiy of 25 per cent for construction / modernization /



component.

- Cooperative Sector Reforms.
- Gobar bank at village level.
- The Bio-Diverse Farming system model
- Self-sufficiency of food grains.
- Soil fertility.
- Water harvesting.
- Live fencing.
- Dryland horticulture.
- Livestock -an integrated

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