



Learning Farming Practices from World

Why in News

According to the recently appeared paper titled: **“Integrated farming with intercropping increases food production while reducing environmental footprint”**, small farm holders in India can grow more food and have reduced environmental footprint.

Key Points

▪ Findings of the Work:

◦ “Relay Planting” Enhances Yield:

- Relay planting means the **planting of different crops in the same plot**, one right after another, in the same season.
- **Example:** Small farmers in **Telangana, Karnataka and Maharashtra** are earning money out of relay farming. They plant onions, turmeric, chillies, ginger, garlic and even some native fruits, thus making profit, during these relay times.
- It also means **better distribution of labour, insects spread less, and any legumes actually add nitrogen** to the soil.
- However, there are **difficulties** involved in relay cropping, namely **mechanisation and the management requirements are somewhat higher.**

◦ Strip Cropping was More Fruitful:

- Strip cropping has been used in the US (where the fields are larger than those in India), where they grow wheat, along with corn and soyabean, in the same farm in an alternative manner. However, this needs large lands.
- In India, where there are **large fields (such as the ones owned by cities and state governments)**, the land is divided into strips, and strips of grass are left to grow between the crops.
- Planting of trees to create shelters has helped in stabilising the desert in Western India.

◦ Soil Munching and No Till:

- **“Soil munching,”** that is, available means such as crop straw, in addition to the major crop such as wheat or rice.
- **“No-till” or a reduced tillage** increases the annual crop yield up by 15.6% to 49.9%, and decreases the environmental footprint by 17.3%, compared with traditional monoculture cropping.
- While these **methods are not easy for small farmers in India**, they could be **practised at least in larger farms** such as the ones owned by industry and governments.
- **Soil mulching requires keeping** all bare soil covered with straw, leaves, and the like, even when the land is in use.
- Erosion is curtailed, moisture retained, and beneficial organisms, such as earthworms, kept in place. The same set of benefits are also offered by not tilling the soil.

▪ **Importance for India:**

- **Current statistics reveal** that our country has a significant population of small farmers, many owning less than 2 hectares of land.
 - **About 70% of its rural households** still depend primarily on agriculture for their livelihood, with 82% of farmers being small and marginal.
 - The **total production of food-grains in 2017-18** was estimated to be 275 million tons.
 - Some others have pointed out that **only 30% of all farmers borrow from formal sources.**
- The **farm loan waivers from the state governments** have been helpful in this regard.

[Source: TH](#)

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