

Mixed Green Manure Cropping

Prelims: Economic and Social Development – Sustainable Development | Current events of national and international importance

Why in news?

Recently The National Seeds Corporation (NSC) has introduced two mixed green manure kits to promote mixed green manure cropping.

National Seeds Corporation (NSC) is established in 1963, is engaged in the production and distribution of certified seeds to enhance agricultural productivity and ensure food security.

- **Green Manure** It refers to crops specifically grown to be *incorporated back into the soil* rather than harvested.
- These crops *decompose in the field*, enriching the soil with organic matter and essential nutrients.
- **Mixed green manure cropping** It involves cultivation of multiple green manure crop species with complementary characteristics together and incorporated back into soil to enrich the soil.
- It is a dynamic, multifaceted approach that significantly *improves soil fertility and long-term farm sustainability.*
- It aligns with *National Mission on Sustainable Agriculture (NMSA)*.
- The most important green manure crops are,
 - $\circ \ Sunnhemp$
 - \circ Dhaincha
 - Pillipesara
 - \circ Clusterbeans
 - Sesbania rostrata

Key Benefits



- Nutrient supply It <u>enhances soil nitrogen</u> through <u>legumes</u> and improves <u>organic</u> <u>matter and micronutrient</u> availability.
- Soil fertility Deep roots species such as *Dhaincha and Sunhamp* loosen compact layers.
- Fibrous roots species such as *cowpea and sorghum* improve *aeration and moisture retention*.
- **Weed control** Allelopathic crops inhibit weed seed germination and dense canopy suppresses weed growth naturally.

Allelopathy is a phenomenon where one plant releases chemicals that affect the growth of other plants nearby. These chemicals, called allelochemicals, can inhibit germination, suppress growth.

- **Supports Biodiversity** It encourages beneficial insects and pollinators.
- It also enhances *microbial diversity and soil food web stability.*
- **Eco-Friendly** It reduces dependency on chemical fertilizers and herbicides and supports agroecological sustainability.

Reference

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