* Centre announces hike in MSP

- **MSP (Minimum Support Price)**
  - ↳ rate at which Govt purchases crops from farmers
  - ↳ at least 1.5 times the Cost of Production incurred by farmers
  - Eg: Bajra → 85% above CoP
    Urad & Tur → 60% "
    Rest → 50% "
- **Decision by CCEA**
  - hikes in pulses, oilseeds & coarse cereals
    - ↳ To encourage diversification of crops
    - ↳ Correct demand-supply imbalances
    - ↳ Excessive rice-wheat cultivation leads to degraded soil & low groundwater levels
    - ↳ Focus on nutri-rich nutri-cereals.
  - hikes in Tur & Urad dal, sesamum, Groundnut, nigerseed, maize.
- **Protesting farmers**
  - ↳ hikes not in face with inflation.
  - ↳ CoP as calculated Govt does not takes into account the full cost of production
  - ↳ No mechanism that guarantees that every farmer gets at least the MSP.

* Indian farming practices: Learning from elsewhere

- Relay Cropping
  - Planting of different crops in the same plot, one right after another, in the same season
  - Eg: Planting rice (or wheat), cauliflower, onion with Summer gourd (or maize, lady's fingers)
  - Less risk as not dependent on one crop.
  - Better distribution of labour.
  - Less insect spread
  - Legumes add Nitrogen to soil
  - Difficulties –
    - ↳ Mechanisation can be difficult
    - ↳ Higher management requirements
- Strip Cropping
  - Eg: Growing wheat along with corn & soyabean in the same farm in alternative manner.
  - Needs large lands as in US.
- Soil mulching & No-till
  - Not easy for small farmers

- But can be practised in large farms of govts & industry.
- Soil mulching
  - ↳ requires keeping all bare soil covered with straw, leaves etc even when the land is in use.
  - ↳ Erosion is curtailed, moisture retained & beneficial organisms, like earthworms kept in place.
  - ↳ Same benefits in No till farming.

- All above practices -
  - ↑ the annual crop yield
  - & ↓ environmental footprint
- Some of these can be done by small farmers in India.
  - ↳ Small farmers ⇒ Those with land < 2 hectares

Himachal's women farmers expand their horizons, without hurting the nature

Women farmers in the hill State of Himachal Pradesh are gradually turning to non-chemical, low cost "natural farming", under the Prakritik Kheti Khushhal Yojana (PK3Y).

Prakritik Kheti Khushhal Yojana

- Launched in 2018, the State's PK3Y is promoting the climate resilient Subhash Palekar Natural Farming (SPNF), also called 'Zero Budget Natural Farming'.
- Over 1.5 lakh farmers have been trained in natural farming in the State so far, with substantial numbers of women participants.

Zero Budget Natural Farming (ZBNF)

- ZBNF is a set of farming methods, and also a grassroots peasant movement, which has spread to various states in India.

- Subhash Palekar perfected it during the 1990s at his farm in Amravati district in Maharashtra's drought-prone Vidarbha region.
- According to the "zero budget" concept, farmers won't have to spend any money on fertilisers and other agricultural inputs.
- Over 98% of the nutrients that crops require – carbon dioxide, nitrogen, water, solar energy – are already present in nature.
- The remaining 1.5-2% are taken from the soil, after microorganisms convert them from "non-

Four Wheels of ZBNF

The "four wheels" of ZBNF are 'Jiwamrita', 'Bijamrita', 'Mulching' and 'Waaphasa'.

- Jiwamrita is a fermented mixture of cow dung and urine (of desi breeds), jaggery,

pulses flour, water and soil from the farm bund.

- This isn't a fertiliser, but just a source of some 500 crore micro-organisms that can convert all the necessary "non-available" nutrients into "available" form.
- Bijamrita is a mix of desi cow dung and urine, water, bund soil and lime that is used as a seed treatment solution prior to sowing.
- Mulching, or covering the plants with a layer of dried straw or fallen leaves, is meant to conserve soil moisture and keep the temperature around the roots at 25-32° C, which allows the microorganisms to do their job.
- Waaphasa, or providing water to maintain the required moisture-air balance, also achieves the same objective.

Astra's of ZBNF against pest attacks

- ZBNF advocates the use of special 'Agniastra', 'Bramhastra' and 'Neemastra' concoctions.
- They are based on cow urine and dung, plus pulp from leaves of neem, white datura, papaya, guava and pomegranates – for controlling pest and disease attacks.

Is it organic farming?

- ZBNF uses farmyard manure or vermicompost.

Not all farmers are convinced about ZBNF–

- **Cost of labour**: The cost of labour for collection of dung and urine, apart from the other inputs used is quite higher.
- **Bovine cost**: Keeping cows is also a cost.
- **Vulnerability to pest attacks**: ZBNF is scarcely practiced. The crop grown would be vulnerable to attacks by insects and pests have already become pest-immune.

Water Conservation by crop diversification

The Haryana state government has announced an incentive of Rs. 7000 per acre to farmers for promoting crop diversification from paddy to alternate crops such as maize, cotton, millet, pulses, vegetable, gram etc.

- This initiative would incentivize farmers to shift from the water intensive paddy cultivation towards lesser water intensive crops and would provide an impetus to water conservation attempts.
- The shift to other crops would also be an effective intervention to curtail the decreasing productivity of the fields owing to mono cropping.