Issues with Farm Mechanization

Why in news?

National Council of Applied Economic Research (NCAER) in its recent report have raised concerns about farm mechanization in India.

What is farm mechanization?

- Farm mechanization is the application of engineering and technology in agricultural operations to do a job in a better way to improve productivity.
- Farm mechanization is technic which refers to only those activities normally occurring inside the boundaries of the farm unit or at the farm unit level.
- Farm machinery comprises equipment used at various stages of farm operations like
    - Seed bed preparation,
    - Soil working,
    - Seeding,
    - Planting and plant protection,
    - Harvesting and threshing.

What are the benefits of farm mechanization?

- Timeliness of operation
- Precision of operation
- Enhancement of safety
- Reduction of hard working of labour
- Reduction of loss of crops and food products
- Increased productivity of land
- Increased economic return to farmers
- Improvement of work environment
- Progress and prosperity in rural areas

What are the issues with farm mechanization?

- Fragmented land-holdings
- Practice of subsistence agriculture
- Higher participation of small and marginal farmers in agriculture
- Lack of awareness in using the technology
- Lack of skilled personnel to produce farm machinery
- Diverse soil conditions and cropping patterns
- High cost of equipments' and inadequate after-sale services
- Lack of credit access to buy farm equipments
- Low penetration of farm machinery with 40-45%
- Tedious acquiring process of subsidised farm machinery

- Less focus on non-tractors farm industry
- Indian producers receive no production subsidy when compared to Chinese equipments'
- Feminisation of agriculture and the need to train them

What could be done?

- **Skill shortages** - The *Agricultural Skills Council of India* should work at the district level to address skill shortages on the demand side.
- **PPP** - Public-Private Partnerships with custom hiring centres may be useful.

  Custom Hiring Centre (CHC) are basically a unit comprising a set of farm machinery and equipment meant for hiring by farmers of small, marginal and poor farmers at subsidized rates.

- **Educational courses** - ICAR institutes can offer short courses to address skills shortages and Industrial Training Institutes (ITIs) can also be leveraged to address repair and maintenance gap.
- **Banking** - Sensitise the banking industry about the importance of farm machinery.
- **R & D** - Intensification of Research & Development to produce market oriented devices

Quick facts

National Council of Applied Economic Research (NCAER)
• NCAER was started in 1956 as a public-private partnership. • Jawaharlal Nehru laid the foundation stone. • NCAER's first Governing Body included the entire Cabinet of Economics Ministers and private players such as C.D. Deshmukh, J.R.D. Tata, John Mathai, and Asoka Mehta.
The Indian Council of Agricultural Research (ICAR)
• ICAR is an autonomous organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare. • Formerly known as Imperial Council of Agricultural Research, it was established on July 1929. • The ICAR has its headquarters at New Delhi. • ICAR is the apex body for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country.

References

1. The Hindu Business Line | Issues With Farm Mechanization
2. The Hindu|Business Line NCAER Report
3. NCAER|About NCAER
4. ICAR|About ICAR

5. ICAR | Advantages Of Farm Mechanization

