



Promoting Drone Use in Agriculture

For Prelims: Sub-Mission on Agricultural Mechanization (SMAM).

For Mains: Developments of technology and their Applications and effects in everyday life, Need for agricultural mechanization and its significance.

Why in News

Recently, the **Ministry of Agriculture and Farmers Welfare** has issued revised guidelines of the **“Sub-Mission on Agricultural Mechanization” (SMAM)** scheme in a move aimed at **making drones more accessible to the farmers**.

- The funding guidelines will **make this technology affordable** by assisting in **purchase, hiring and demonstrations of agriculture drones**.
- The financial aid and grants shall be applicable till 31st March 2023.
- SMAM scheme was launched in **2014-15** with the objectives of **increasing the reach of farm mechanization to small and marginal farmers** and to the regions & difficult areas where farm power availability is low.

Key Points

- **40-100% Subsidy:**
 - A grant up to 100% of the cost of agriculture drone or Rs.10 lakhs, whichever is less, as a grant for the purchase of drones will be provided.
 - But, this 100% grant will be **limited to only** Farm Machinery Training and Testing Institutes, **Indian Council of Agricultural Research (ICAR)** institutes, **Krishi Vigyan Kendras** and State Agriculture Universities.
- **Subsidy to Agriculture Graduates:**
 - Agriculture graduates establishing **Custom Hiring Centers (CHCs)** will be eligible to receive **50% of the basic cost of a drone** and its attachments or up to **Rs. 5 lakh** in grant for drone purchases.
- **Subsidy to FPOs or Cooperative Society of Farmers:**
 - Existing CHCs or new ones, already or to be set up by cooperative society of farmers, **Farmer Producers Organizations (FPOs)** and **rural entrepreneurs** are entitled to receive 4% (maximum Rs. 4 lakh) as grant on the basic cost of drone.
 - CHCs are the **main agencies at grassroots to popularize farm mechanization** and unless they are given the incentives, drone use will not gather momentum.
 - **Rural entrepreneurs** are defined as those who have passed the class tenth examination from a recognised Board and have a remote pilot license from an institute recognized by the **Director-General of Civil Aviation (DGCA)**.
- **Demonstration Purposes:**
 - The FPOs would be eligible to **receive a subsidy of 75%** of the cost of the drone if **used only for demonstration purposes**.
 - Additionally, **Rs. 6,000/hectare** would be given to these implementing agencies that **hire**

drones from CHCs, Hi-tech Hubs, drone manufacturers and [start-ups](#) for demonstrations.

- But, they would receive Rs 3,000/hectare if they purchase the drones for demonstrations.

▪ **Significance:**

- The subsidized purchase of agriculture drones for CHCs/Hi-tech Hubs will **make the technology affordable**, resulting in their widespread adoption.
- This would make **drones more accessible to the common man in India** and will also significantly encourage domestic drone production.

▪ **Other Related Initiatives:**

- [Sub-Mission on Agroforestry Scheme.](#)
- [National Mission for Sustainable Agriculture.](#)
- [National Food Security Mission.](#)
- [Rashtriya Krishi Vikas Yojana \(RKVY\).](#)
- [Mission for Integrated Development of Horticulture.](#)
- [Pradhan Mantri Krishi Sichayee Yojana \(PMKSY\).](#)
- [Pradhan Mantri Fasal Bima Yojana.](#)
- [Paramparagat Krishi Vikas Yojana.](#)

Agriculture/Farm Mechanization

▪ **About:**

- Mechanised agriculture is the process of using agricultural machinery to mechanise the work of agriculture.
- To boost up mechanization in the agriculture sector, improved agricultural implements and machinery are essential inputs.

▪ **Level of farm Mechanization:**

- India stands at about 40-45% with states such as UP, Haryana and Punjab having very high mechanization levels, but north-eastern states having negligible mechanization.
- This level of farm mechanization is still low as compared to countries such as the US (95%), Brazil (75%) and China (57%).

▪ **Significance:**

- It plays a vital role in optimizing the use of land, water energy resources, manpower and other inputs like seeds, fertilizers, pesticides etc to maximize the productivity of the available cultivable area and make agriculture a more profitable and attractive profession for rural youth.
- It is one of the key drivers for the [sustainable development](#) of the agriculture sector.

▪ **Negative Impact:**

- Reduce workforce hence decreases farm employment.
- Use of machinery increases pollution.

[Source: PIB](#)

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