



Aerial Seeding in Haryana

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Why in News

Recently, the Haryana government has employed **aerial seeding techniques to improve green cover in the Aravalli area** of the state.

The project is being carried out on a **pilot basis to regenerate the low vegetation density** or denuded areas on **inaccessible or difficult sites of Aravalli and Shivalik hills**.

Aerial Seeding

- **Description:**

Aerial Seeding is a plantation technique wherein **seed balls** — seeds covered with a mixture of clay, compost, char and other components — are sprayed using aerial devices, including planes, helicopters or drones.

- **Working:**

- Seeds balls/pellets are dispersed in a targeted area by **low-flying drones**, with the coating providing the required weight for seeds to airdrop on a predetermined location rather than getting deterred by the wind.
- These pellets sprout when there is enough rain, with nutrients present within them helping in initial growth.

- **Advantages:**

- Areas that are **inaccessible**, having steep slopes or no forest routes, can be targeted using this method.
- The process of the seed's germination and growth is such that it requires no attention after it is dispersed and thus seed pellets are known as the **“fire and forget” way of plantation**.
- They **eliminate** any need for **ploughing** and do not need to be planted since they are already surrounded by soil, nutrients, and microorganisms. The clay shell also protects them from birds, ants and rats.

- **Species to be Used for Aerial Seeding:**

The plant species which are native to the area and hardy, with seeds that are of an appropriate size for preparing seedballs are usually used for aerial seeding, with a higher survival percentage.

Key Points

- **Use of Seeding Drone:**

- The method involves spraying seed balls or seed pellets from the air using seeding drones.
- It is equipped with a precise delivery mechanism for **seeds of different sizes** from a **height of 25 to 50 metres**.
- A single drone can plant **20,000-30,000 seeds a day**.

- **Implementation:**

- The method is being implemented on **100 acres of land to test efficacy of the seed dispersal mechanism** and review the success rate.
- The species that will be planted through aerial seeding include **Acacia senegal (Khairi), Ziziphus mauritiana (Beri), and Holarrhena spp (Inderjo)**, all of which have a higher chance of survival in these areas.

Also, **site specific grass seeds** will also be added to the mix as they serve as good soil binders.

- **Significance:**

- It will provide **work opportunities** to the local community, especially women, who can prepare the seed balls.
- The method will be useful since there are many areas that are either **difficult to reach or inaccessible** altogether, making traditional methods of plantation difficult.

Source:IE