

Seed Ball Technique

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In News: Odisha's Athagarh Forest Division has started casting seed balls (or bombs) inside different reserve forest areas to enrich food stock for wild elephants.

This has been done to prevent man-elephant conflict

- On the eve of World Elephant Day 2020, the Ministry for Environment, Forest and Climate Change has launched a portal on Human Elephant Conflict 'Surakshya'.
- Further, the Government has taken initiative for fodder and water augmentation in forest areas so that animals get food and water in forest areas and not come outside. LiDAR technology is being used for the same.

What happens in a seed ball?

- A seed ball (or plant seed bomb) is a plant seed which has been pre-planted in a small round lump of soil materials, mainly a mixture of clay and compost along with other necessary nutrients, and the entire ball containing the seed is then dried.
- The seed-ball is a mini soil pocket which contains the seed and all other necessary ingredients for the seed's survival in the same pocket. This enables the seed to germinate for a few days initially and then be produced when the conditions are right.
- In effect, each seed is pre-planted and is generally sown by depositing the seed ball anywhere where it is suitable for the plant species.
- This keeps the seed safe from birds etc till the right moment for germination comes.
- They are an easy and sustainable method to achieve plant cultivation as it provides a large window of time when during the time period of the sowing.
- A seed ball is easy to transport and easy to plant.

Historical use of the Seed Balls

- Historically, the Seed balls were used by the Ancient Egyptians to plant crops when the swollen banks of the river Nile receded after a flood.
- They are also used in Asia and North America, especially in regions of high aridity.

Advantages of This Technique

- Areas that are inaccessible, have steep slopes, are fragmented or disconnected with no forest routes, making conventional plantation difficult, can be targeted with aerial seeding.
- The process of the seed's germination and growth is such that it requires no attention after it is dispersed – the reason why seed pellets are known as the “fire and forget” way of plantation.
- They eliminate the need for ploughing and digging holes in the soil and the seeds do not need to be planted, since they are already surrounded by soil, nutrients, and microorganisms.
- The clay shell of these pellets along with the other items in the mixture also protects them from birds, ants and rats.

Seed Bomb

- A seed bomb is a little ball generally made up of a combination of compost, clay and seeds.
 - The compost and clay act as a carrier for the seeds so they can be launched over walls or fences and into inaccessible areas such as wasteland or railways.
 - The compost offers nutrients for the seeds to germinate and grow strong during their infancy and the clay binds the seed bomb, making it hard enough not to break when it hits the ground.

- It is used in re-vegetation and reforestation of the fragile ecosystems.
- The plantation technique wherein seed balls are sprayed using aerial devices, including planes, helicopters or drones, is known as aerial seeding.
- Recent Initiatives:
 - Udaipur has been chosen for experimenting the seed bombing technique to increase forest cover in Rajasthan.
 - The Haryana government has employed aerial seeding techniques to improve green cover in the Aravalli area of the State.