

Haryana forest dept uses drone to plant 5 lakh seeds in Aravallis

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The exercise, officials said, had commenced on July 18 and ended on Wednesday and covered as many as four districts of Faridabad, Yamunanagar, Panchkula, and Mahendergarh. (Abhinav Saha/Hindustan Times File Photo)

The forest department of Haryana on Wednesday concluded a drive using drone technology to shower seed bombs in the Aravallis . The aerial seeding has been primarily used in an attempt to green inaccessible terrain having steep slopes, fragmented or disconnected areas having no forest routes for normal tree plantation activities.

The drones are an easy and efficient way to increase green cover in the Aravallis, said forest officials.

The exercise, officials said, had commenced on July 18 and ended on Wednesday and covered as many as four districts of Faridabad, Yamunanagar, Panchkula, and Mahendergarh. The initiative was first started in 2019 with officials stating that the seed germination rate then being around only 15% due to little late dispersal. This year, however, the dispersal is very timely and 20-30% germination is expected.

Species whose seeds were disseminated included Peepal, Pilkhan, Amaltash, Bael Patra, Pahari Papri, Ronjh and Khairi.

The total drone seeding exercise was done on 100 hectare area in the four districts, with an average of 5,000 seeds per hectare. Of nearly five lakh seeds disbursed, 50,000 seeds were showered in Aravallis in Faridabad district, said a second forest department official, adding that they used two drones for this exercise.

The drone-based tree planting technology has a very high chances of success if seeding is done timely, preferably, before the onset of monsoons, said officials. The technology requires a proven artificial intelligence-based system to assess the area for plantation sites selection of the site-specific local species. Soil moisture, choice of species, seed pellets, and mechanism of drone seed planting are the main deciding factors for successful aerial tree planting, officials said.

Additional principal chief conservator of forests, Vinod Kumar, said, "The seeding drone is programmed to take a load of 2kg and is equipped with a precise delivery mechanism to drop seeds of different sizes at encoded intervals from a low height of 10 to 15 metre," he said.

Forest officials said that a single drone is capable of planting 20,000 to 30,000 tree seeds in a day.

Dr Amrinder Kaur, principal chief conservator of forest, said that geo-location of blank patches and low-density areas can be mapped using satellite imageries in Aravallis. Data generated can be directly fed into drone software for auto plantation, which is an easier method.

"The forest department is currently working on the development of mobile-based application to collect forestry intervention and monitoring data from the field for better management of forest areas," she said.

Kaur said drone-based seeding will boost vegetation enrichment in denuded and low-density areas. It will also enable plantation in inaccessible and tough terrains, which is otherwise difficult to reach. "The objective of this exercise is to ensure that all areas including difficult sites is brought under green cover. Seed dispersal using drones help in reaching difficult sites in short times. As the monsoon has come, we expect good germination this time," she said.

Environmentalists pointed out that since the Aravalli landscape is semi-arid with little rainfall, re-greening has always been a challenge. "I have been working on restoration and rewilding of Aravallis for the last 12 years. I have tried several native species of Aravallis such as Doodhi, Dhak, Dhok, Barna, Basa, Ronjh, and Khairi with seed balls and I can reasonably say that we have failed. I have tried this over several years in plots and monitored the plots.. Except for a few Doodhi germinating once in a while, I didn't see any other species doing well," said Vijay Dhasmana, curator, Aravali Biodiversity Park.

Experts said that if the forest department is doing drone seed ball propagation, they must make sure it is studied, else they would not develop any knowledge as to how and what works in the Aravallis.

"The most efficient technique for us at the Aravalli biodiversity park has been sowing seeds of diverse species on the landscape. Some of the pioneers have shown remarkable results," said Dhasmana.

Source: <https://www.hindustantimes.com/gurugram/haryana-forest-dept-uses-drone-to-plant-5l-seeds-in-aravallis/story-83j75VA5ox3bhzNgAU9OO.html>