

## Synthetic seeds, gene editing could aid agroforestry, conservation

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.**

Conservation and renewable plantation efforts are trailing behind the rate of . . . species disappearance. The problem is worsened by the vast number of endangered plant species. . . .[T]hey can't easily be reintroduced. This is because many of them do not readily produce seeds, or their seeds cannot be stored . . . .

. . . .

One method that holds promise for preserving valuable genes is somatic embryogenesis. This is the ability to produce viable embryos from virtually any plant organ, while avoiding sexual crossing. Such embryos, when encased in alginate gel, constitute a synthetic seed. . . .

. . . .

. . . [S]omatic embryos could be very useful for gene editing. As embryos they contain both root and shoot meristems . . . If genes are edited at this embryonic stage, then as the embryo divides to form the complete plant all cells of the entire plant will carry the edited genome.

. . . .

In time, we should . . . see greater use of enhanced. . . plant genotypes through specific gene editing of somatic embryos and synthetic seeds. . . . using a greater number of plant species for more . . . sustainable agroforestry plantations, and . . . conservation programmes.

**Read full, original post:** [How science can genetically strengthen endangered plants and agriculture](#)