

Israel's BetterSeeds develops first Cowpea suitable plant for mechanised harvesting

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The first Cowpea plant made suitable for mechanised harvesting is being developed by Israel-based BetterSeeds, an Agri-Tech company that genetically enhances agricultural crops by using its proprietary genome editing technology. BetterSeeds is set to plant its enhanced Cowpea seeds in the United States in the spring of 2023, in order to test its potential for mass-scale cultivation.

Cowpea, also called Lubia or black-eyed peas, is the most ancient crop known to have been farmed by man. Due to its high protein content, heat tolerance and highly efficient water and fertilizer consumption, Cowpea is an exceedingly sustainable legume with enormous nutritional and agronomic value. Soybean, the most abundantly grown legume, requires large quantities of water and fertilizers and grows well only in a temperate climate, and as such its yield is forecasted to decline by 30 per cent in the upcoming decade due to global warming.

Thus, Cowpea, as a sustainable food and plant-based protein source, is a leading legume candidate to fill the gap in Soybean yield due to climate change.

Before BetterSeed's successful gene editing achievement, Cowpea's plant architecture and fruit appearance were not fit for mechanised harvesting and therefore could not be grown at scale. The Cowpea, an indeterminate plant that sprawls on the ground with the gradual appearance of pods, could only be harvested by hand and is grown in developing regions where labour is less expensive. BetterSeeds redesigned Cowpea by targeting the gene which alters the plant's architecture into a determinate and erect plant with simultaneous pod appearance, thus fitting Cowpea for mechanised harvesting by a combine just like Soybean! With this redesigned Cowpea farmers can both increase their versatility of legume cultivation, utilise

their land all year round and also ensure the market of sustainable supply of plant-based protein.

Ido Margalit, BetterSeeds CEO said, "If I had to choose one crop to focus on, it's Cowpea, since we are facing a huge shortfall in the supply of plant-based proteins, namely Soybean, due to climate change. Cowpea has the capability to fill in this gap pending its redesign to make it fit for mass-scale cultivation which is exactly what BetterSeeds is doing. Cowpea will help to feed the world!"