

Biodiversity versus Molecular Transformation

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Scientists target 'super cassava'

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Cassava, the primary source of nutrition for 800 million people worldwide, is receiving attention from a project seeking to boost its nutritional value.

The BioCassava Plus project, supported by US\$12.1 million in funding from the Bill and Melinda Gates Foundation, involves researchers from Colombia, Kenya, Nigeria and Tanzania.

The scientists have been seeking to fortify a single 500 gram adult portion of cassava with essential nutrients, including vitamins A and E, iron and zinc.

Other goals include making the crop more disease-resistant, extending its shelf-life from one day to two weeks and reducing cyanide toxicity.

The scientists now claim to have "demonstrated proof of practice for all the target objectives in three years" since their 2005 start date.

The transgenic cassava plants have undergone a stringent biosafety approval process in the United States, and field trials are currently being carried out at a US Department of Agriculture site in Puerto Rico.

Next on the agenda are field trials in Kenya and Nigeria in 2009, before researchers attempt to combine the traits into a single plant.

Comments

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Cassava hybrids with solid resistant to mosaic have been produced in the decades 1980s and planted now in the whole west and east Africa (Hahn,1980). It is estimated that these resistant to mosaic cultivars cover now more than 4 million hectares in Africa. The rich in protein and essential amino acids ,rich in lutein , Beta carotene , lycopene, high iron and zinc content are planted now in several Brazilian states (Nassar, 2007, Nassar and Souza,

2007, Nassar and Dorea, 1982, Nassar et al. 2007,. See this link too http://www.geneconserve.pro.br/cassava_df_go.pdf .

These hybrids and cultivars were obtained by a very small support of the Brazilian National council-CNPq to the equipe of the University of Brasilia did'nt ultrapass some tens of thousands of dollars. It was not needed the referred 12 millions of dollars at all because of a simple reason: The biodiversity of cassava possesses all these genes. They could be transferred by simple hybridization from the wild to the cultigen. The genetic variability offers too FITNESS and high ADAPTAION that cannot be reached by molecular transformation. An example on lack to fitness and adaptation of this modified cassava: The molecular transformed cultivar said to be resistant to mosaic which costed a multinational company more than 10 million dollars was abandoned totally by farmers of West africa. Now it is not cultivated at all anywhere or any place!!!

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