

The development and release of maize fortified with provitamin A carotenoids in developing countries.

Manjeru P, Van Biljon A, Labuschagne M

Abstract

Micronutrient deficiencies have been identified as major public health problems affecting a large part of the world's population. Biofortification of staple crops like maize has been proposed as one of the most cost effective and feasible approaches to combat micronutrient deficiencies. Studies have shown that provitamin A from biofortified crops is highly bioavailable and has the capacity to improve vitamin A status of vulnerable groups. Most people in sub-Saharan Africa subsist on maize and many people may benefit from consumption of provitamin A carotenoid biofortified maize, especially women and children. With the exception of transgenic golden rice, biofortified crops have received considerable acceptance by most communities. Negative perceptions associated with yellow maize do not affect orange maize, which is, for example, well-liked in rural Zambia. With proper policy frameworks and full commercialization, provitamin A maize can address the problem of vitamin A deficiencies among poor nations with maize-based diets.