Orange Maize Grain Open Pollinated Variety

A non-GMO, open-pollinated corn strain with extremely high carotenoid levels offers significant market opportunities in domestic organic farming and international health-focused agriculture.

Corn strains that have high amounts of carotenoids are very desirable, both in the U.S. and overseas. These carotenoids, which include beta-carotene, beta-cryptoxanthin, and alpha-carotene, are rich in antioxidants, play an important role in the creation of eye pigments, reduce the risk of infections, protect the skin from the sun, and are responsible for giving corn its pigment. Currently, there exists no adapted source of high total carotenoid corn available in the U.S.

Researchers at Purdue University have developed a strain of corn that represents one of the darkest orange colored maize varieties in the world, translating to incredibly high levels of carotenoids. In addition, this is an open pollinated variety, meaning it can be grown, seeded, saved, and grown again. This variety of corn is not a genetically modified organism (GMO), so it would be attractive to many organic producers and a growing number of consumers. In addition to having positive health effects in the U.S., this crop could be introduced to countries in Sub-Saharan Africa, where the only corn strain is white and contains minimal amounts of carotenoids. This lack of carotenoids creates a vitamin A deficiency, causing blindness in children; it may contribute to macular degeneration in the elderly. This crop could be grown overseas and help solve such critical problems.

Advantages:

-Non-GMO

-Open pollinated variety

-High in carotenoids

Potential Applications:

-Agriculture

Technology ID
2014-ROCH-66851

Category
Agriculture, Nutrition, & AgTech/Crop Genetics & Breeding

Authors
Torbert R Rocheford

View online

-U.S. corn market

-African corn farming

-Organic corn farming

TRL: 9

Intellectual Property:

N/A, N/A, N/A

Keywords: High-carotenoid corn, non-GMO maize, open-pollinated variety, beta-carotene, alpha-carotene, beta-cryptoxanthin, vitamin A deficiency, organic corn farming, African corn farming, antioxidant-rich corn, Agriculture, Carotenoids, Corn, Food and Nutrition