

Gene breakthrough boosts hopes for sorghum

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A photo released on December 12, 2011 by Oxfam shows a man standing in a sorgho field in the region of Sanmatenga, Burkina Faso. Agricultural researchers on Tuesday said they had found a gene that boosts the digestibility of sorghum, transforming a humble grain into a potential famine-beater.

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Sorghum (Latin name *Sorghum bicolor*) is a tough tropical cereal grown in dry regions of Africa, India and the southern United States.

The plant is drought-tolerant but ranks far lower than corn, wheat and rice as a food because the human digestive system cannot absorb many of its calories.

It is often grown as animal feed, and interest in it as a [biofuel](#) has also surged recently.

But, according to a study published in the [journal Nature Communications](#), sorghum's future may change.

Scientists in Australia said they had pinpointed a tiny variant in a gene which controls an enzyme called pullulanase that helps to break down starch in sorghum, making the grain more digestible.

The gene does not affect the grain's other helpful characteristics, they reported.

The next step should be to cross-breed commonly grown strains of sorghum with the variety that has the genetic variant in order to boost the crop's value as a food source for humans, the study said.

"Ultimately, increasing the calorific value of this crop without reducing yield can help to ensure global food security in drought-prone areas of Africa, Asia and elsewhere, while minimising negative effects of [agricultural expansion](#)," the paper said.

The work marks the latest advance in agricultural genomics, in which the DNA of key [crop plants](#) is sequenced to look for genes that influence

yields or resistance to drought, flood and salinity.

The genome of sorghum was sequenced in January 2009.

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