Are GM sweet potatoes safer, riskier, or neither? You may be surprised

By ACSH Staff — May 6, 2015

We here at ACSH have been strong supporters of biotechnology as applied to agricultural improvements since...well, since ag-biotech became known as GMOs and engendered the Great Frankenfood Controversy, c. 1996. The latter, of course, has been flogged by self-interested environmental groups and, especially, Big Organic, seeking to scare consumers away from perfectly safe genetically-engineered food ingredients. One tactic used by fear-mongers in competing industries and the sensation-seeking media is the image of science gone rogue, manipulating Nature's essence, the very genes that make plants, plants!

Now, however, an international group of plant-breeding experts [1] discovered a remarkable (their word) finding when they analyzed the genome of domesticated sweet potatoes (Ipomoea batatas, if you must know): there they were, horizontally-transferred gene sequences originating in several bacterial species, conferring some to date unknown evolutionary advantage that has kept it part of the crop's genome over the millennia. The authors, led by Drs. Jan F. Kreuze of Lima, Peru's International Potato Center and others from Ghent University in Belgium and Beijing's China Agricultural University (as well as our USDA), appeared in the recent edition of the respected journal, PNAS.

Here is how the authors themselves put it:

We communicate the rather remarkable observation that among 291 tested accessions of cultivated sweet potato, all contain one or more transfer DNA (T-DNA) sequences. These sequences, which are shown to be expressed in a cultivated sweet potato clone (Huachano) that was analyzed in detail, suggest that an Agrobacterium infection occurred in evolutionary times. One of the T-DNAs is apparently present in all cultivated sweet potato clones, but not in the crop's closely related wild relatives, suggesting the T-DNA provided a trait or traits that were selected for during domestication. This finding draws attention to the importance of plant microbe interactions, and given that this crop has been eaten for millennia, it may change the paradigm governing the unnatural status of transgenic crops. (Bolding and underlining added by ACSH eds.).
Translation: Living organisms mutate naturally, including aided and abetted by gene transfers from microbes. They always have. This effect can be quite beneficial to humans. GM technology simply makes this happen faster and with more controlled outcomes.

ACSH’s Dr. Gil Ross added this comment: I was initially quite astounded by this historic discovery, but upon reflection, I believe many more such naturally occurring GMO crops will be detected, now that the concept has been publicized. I was, however, not in agreement with the authors optimistic prediction that this discovery would perhaps change the paradigm concerning the phony GMO controversy, as there are too many wealthy and powerful forces behind the Frankenfood scares. I was, however, slightly heartened by seeing an article highlighting this finding on a media site not generally friendly to GMOs in general: NPR! [2]
So, who knows, maybe the debate will be moved a few inches, or millimeters, towards science!

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