Genetic Stability in Vegetatively Propagated Biotech Crops

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Abstract

Genetic stability of introduced traits is a standard assessment for sexually propagated biotech crops. The sexual propagation of seed results in progeny with 50% genes from each parent. This can result in significant genetic variation. As such, most regulatory approvals for new varieties require a standard assessment for genetically stable progeny, and some require proof of trait stability across generations.

In commercial propagation of vegetatively propagated crops, there is no sexual reproduction and so no mechanism for large changes in the genetics of progeny. Experience with approved biotech potato events across the globe supports this claim. Data will be presented and discussed to provide motivation for removing the requirement for genetic and trait stability data as part of the safety review of vegetatively propagated biotech plants.

Key words: genetic stability, vegetative propagation