

Breeding technique does not affect soil life

Soil life is no different when cisgenic potatoes are used compared with potatoes bred in the traditional way, shows a study by researchers in Germany, Ireland and Wageningen.

The focus of the research was on resistance to the potato disease *Phytophthora*. The researchers planted two potato varieties in trial fields in Ireland and the Netherlands. One potato variety had a cisgenic version, in which a resistance gene from a wild potato plant had been introduced using genetic modification,

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and a classically bred version without the resistance gene. The second potato variety had resistance genes obtained using cross-breeding and selection. The renowned Thünen Institute in Germany assessed the soil life. Biologists are learning more and more about the interaction between plants and soil bacteria and fungi; they have found that biological communities develop around plants. The German institute compared the DNA of the bacteria and fungi around the cisgenic potatoes with that from around

the potatoes bred using the classical approach. They found no significant differences.

The researchers did find considerable variation in the bacterial and fungal communities but this was due to environmental factors such as the soil type and weather conditions, not the breeding technique. The researchers published the results this month in *Frontiers in Bioengineering and Biotechnology*.

GMO

Agronomist Bert Lotz from WUR, who was involved in the study, says it confirms previous research that showed genetic modification with genes from the same species does not have any environmental effects. The study is timely, says Lotz, as the EU is currently considering whether new breeding techniques such as cisgenesis should remain subject to the strict GMO authorization criteria that date from 2001. 'Research from the past few years shows you should base the risk analysis on the property in the plant that you have changed, not the technique you used.' AS



Wageningen researchers in the trial field. PHOTO GUY ACKERMANS.