

Scientists seek blight-resistant spuds

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Potatoes offering elevated levels of phytonutrients thought to promote health could add a new dimension to the consumer diet. But the journey from farm to fork can be a perilous one fraught with sundry microorganisms ready to attack the spuds, either while they're still in the ground or during storage.

In Aberdeen, Idaho, Agricultural Research Service (ARS) scientists Rich Novy and Jonathan Whitworth are taking on the late-blight [fungus](#), *Phytophthora infestans*, best known for its role in the Irish [potato](#) famine of 1845. They work at the ARS Small Grains and Potato Germplasm Research Unit in Aberdeen.

Novy, a [geneticist](#), and Whitworth, a plant pathologist, coordinate a unique program at Aberdeen to develop new potato lines that resist different biotypes of late blight. Toward that end, they send 2,500 breeding "clones" annually to Héctor Lozoya-Saldaña, a collaborator in Chapingo, Mexico, where late blight is endemic.

Based on Lozoya-Saldaña's evaluations, Novy and Whitworth conduct a duplicate planting of the clones and select the most resistant ones for further advancement based on their agronomic performance under irrigated production.

Defender, a 2006 release from the program, has helped growers save on fungicides and other expenses associated with controlling late blight, which attacks the crop's leaves and tubers, rendering the latter unmarketable.

Over the next few years, Defender may be joined by another late-blight-resistant variety, depending on how it performs in ongoing trials in Idaho, Oregon, Washington, California and Texas, reports Novy.

Potatoes such as Defender are typically released in collaboration with university colleagues and the grower-supported Potato Variety Management Institute. The tubers are primarily intended for production in the western United States, but requests for releases also originate from other regions of the country as well as outside of the United States, where some of the same problems occur.

Provided by United States Department of Agriculture

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