

Developing Potato Varieties for Farmers in the Eastern US

Potatoes are a staple food for many people because they are tasty, versatile, filling, nutrient-dense, and affordable and are processed into popular foods like fries and chips.

In the eastern U.S., potatoes are among the top vegetable crops, supporting a multi-billion-dollar supply chain that serves over half the U.S. population, but producers face challenges, such as evolving pests and diseases, rising production costs, shifting consumer preferences, and increasing development pressure on farmland.

Scientists at land-grant universities are working together to develop potato varieties with improved productivity and quality for growers and markets in the eastern U.S.

This project's research and Extension:

- Strengthens potato **supply** and **value chains**.
- Improves **profitability** and **resiliency** for potato producers.
- Supports **rural economies**.
- Enhances **food security**.

Potato varieties developed by this project have become integral to potato production.

- In the U.S., **30% of acres** planted with potato varieties introduced in the last 20 years are planted with varieties this project developed.
- The Lamoka and Caribou Russet varieties rank among the **top 10 most planted** in the U.S.
- Seed potato varieties developed by this project accounted for about **10% of seed potatoes** produced in the U.S. in 2025. These seed potatoes are projected to be planted across **90,000 acres**, yielding potato crops with a retail value of **\$295.5 million**.
- The Lamoka and Waneta varieties account for about **25% of US potato chip production**, generating over **\$2 billion** annually.



THE MULTISTATE APPROACH

Developing potato varieties for growers and markets across the eastern U.S. exceeds the capacity of any single institution or state.

With federal capacity funding, this Hatch Multistate project brings together multiple land-grant universities. Project members:

- **Share expertise** across disciplines, including breeding, genomics, plant pathology, agronomy, bioinformatics, and Extension, integrating all phases of variety development so advances can be made more *efficiently*.
- **Generate improved germplasm** (genetic material used to create new varieties).
- **Exchange germplasm** so it can be rigorously tested for adaptation to various growing conditions and resistance to diseases common in the eastern U.S.
- **Coordinate multistate variety trials**, representing growing conditions from Florida's heat to Maine's short seasons and various markets, including large commercial chip and fry processors and specialty sectors.
- **Maintain a database** that generates data summaries and side-by-side comparisons of varieties, informing researchers, Extension agents, growers, and other stakeholders.
- **Integrate Extension**, making sure producer concerns are heard and research findings and tools are shared directly with producers. Extension relationships accelerate adoption of new varieties.
- **Leverage** external grants and industry partnerships by demonstrating established teams and track records of productivity.



Photo by Aaron Buzza , UMaine

PROJECT FUNDING & PARTICIPATION

NE2231: Collaborative Potato Breeding and Variety Development Activities to Enhance Farm Sustainability in the Eastern US is supported in part by USDA NIFA through Hatch Multistate Research Fund capacity grant allocations to State Agricultural Experiment Stations at participating land-grant institutions, including: Cornell University, University of Florida, University of Maine, North Carolina State University, The Ohio State University, Pennsylvania State University, Virginia Tech. Collaborators include: USDA ARS, Agriculture and Agri-Food Canada, Maine Potato Board, Medius Ag, McCain Produce, New Brunswick Dept. Agriculture, and Fisheries, North Carolina Potato Association, Pennsylvania Cooperative Growers, Potatoes USA. Industry partners include: AIS, Black Gold Farms, Cape Cod, Cavendish Farms, Herrs, Johnny's Selected Seeds, McCain Foods, La Patate, Lamb Weston, Masser Farms, Utz. Past and ongoing iterations of this project include other participants and partners. **Learn more: nimss.org/projects/18899**

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