

Potatoes USA National Chip Program 2023 Overview

Thank You to Our Processor and Trial Partners



Additional Partner Appreciation

We want to thank the Michigan Potato Industry Commission (MPIC) and the Wisconsin Potato & Vegetable Growers Association (WPVGA) for the National Chip Program's use of their research storage facilities. By varying storage temperatures, key insights are gained on optimal storage protocols for later-stage candidates. Insights are gained on whether a candidate is a short-term, mid-term, or long-term storage candidate.

These research facilities have been a vital addition to the program. Thank you to these organizations, their staff, and their continued support!

Breeding Programs in the NCP

The map below includes the 13 leading breeders and institutions in the NCP.



Breeder Involvement

The National Chip Program thrives on active breeder engagement. The program shines when receiving candidate recommendations from breeders across diverse growing regions. In the recent Chicago meeting, 12 breeders presented proposals for candidates to either enter the program or progress to the next level. Additionally, 11 breeders submitted candidates for EGSS examination, explicitly focusing on assessing candidate tolerance in hot-humid environments. Notably, seven breeders actively contributed over 10 candidates for NCPT1, while another six are submitting five or more candidates to NCPT2. This significant breeder involvement underscores the program's commitment to comprehensive and regionally diverse research and development.

Grower Involvement

Beyond the participation of breeders, the engagement of growers in the NCP highlights the strength of grower-processor relationships. In 2024, proposals for establishing NexGen grower/processor partnerships were approved for nine growers and five processors. Attendance from growers at all NCP meetings was notable.

Trial Management

In addressing land requirements, labor efforts, and cost considerations, the NCP supplied breeders with "plot goals." For the NCPT1 and NCPT2 trials, the breeders provided additional scrutiny to their nominations. As a result, trial sizes were kept relatively consistent.

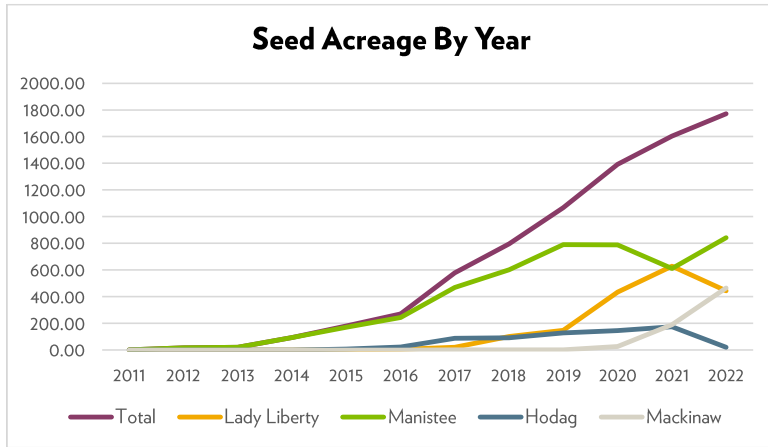
Breeding Programs in the NCP

- Colorado State University
- Cornell University
- University of Maine
- Michigan State University
- University of Minnesota
- North Carolina State University
- North Dakota State University
- Oregon State University
- Texas A&M University
- USDA-ARS (2 - Idaho & Maryland/Maine)
- University of Florida
- University of Wisconsin



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The Potatoes USA National Chip Program continues to vet candidates with the objective of identifying new, optimal chipping varieties.



**After some debate about the candidates originating in the NCP system, Potatoes USA reached out to the breeders of each variety to ascertain the candidates that should be officially attributed to the NCP system. Lamoka and Waneta completed their testing in the NCP trial system, so the full credit for their development as commercial varieties cannot be solely attributed to NCP. In 2022, the seed acreage allocated to Lamoka and Waneta amounted to 5,020+.*

2023 Expo Meeting Summary

28 members of the National Chip Program met at the 2023 NCP Potato Expo in Denver, CO. The forum's primary purpose was to provide growers with an opportunity to assess the results of late-stage candidates. Additionally, the meeting centered around outlining trial plans and the involvement of NCP participants. During this gathering, NCP managers dedicated time to fine-tuning trial plans following the Chicago event and discussed seed grow-out plans.

Pathology & Physiology Meeting Summary

The NCP conducted its virtual Pathology and Physiology Meeting on March 7th 2023, focusing on disease resistance testing, stem-end scores, and glycoalkaloid scores. During this meeting, pathology and physiology specialists presented NCP members with an overview of the initial screenings. A total of 33 attendees gathered to gain insights into the disease susceptibility of later-stage trial candidates.

Summer Meeting Summary

A virtual gathering of 44 participants centered around examining late-stage candidates during the NCP Summer Meeting on August 17th. In addition, the meeting strongly emphasized presenting recently concluded storage trial results. This event offered stakeholders in the program a valuable opportunity to preview candidates with promising potential for commercialization, with an eye toward decisions on candidate advancement for the year 2024.

In 2022, 1,770+ acres of NCP commercial varieties (Lady Liberty, Manistee, Hodag, and Mackinaw) were planted.

The seed acreage for potato seed planted in 2023 has yet to be reported through the Potato Association of America.

National Chip Program Objectives

In 2008, two variety development goals were identified: Snowden replacement for storage and Atlantic replacement for out-of-the-field producers. The Snowden replacement would have better color later in storage, while the Atlantic replacement would be less susceptible to heat necrosis.

December Meeting in Chicago Summary

The meeting in Chicago on December 5th, 2023, focused on breeder recommendations for early trial candidates. With a total of 42 in-person attendees and 31 online participants, the event had representation from 32 industry organizations. In response to grower feedback, the meeting shifted to a one-day format. Participants could convey their preferences through a post-meeting survey, signaling a positive reception to the change in meeting pace. The gathering included in-depth discussions on the progress of later-stage trial candidates.

Thank You to Greg Porter

Gregory Porter is making the transition to retirement from the University of Maine. We thank Greg for his enduring involvement and commitment to the National Chip Program. Since joining the University of Maine in 1985, Greg has held various roles, including overseeing the University of Maine Potato Breeding program, which he assumed control of in 2007. His dedication to the NCP has been unwavering since its inception. Greg takes pride in his collaboration with the NCP, particularly in developing commercialized NCP varieties.

Welcome, Mario Murad

Mario Murad Leite Andrade has been welcomed as the latest breeder for the National Chip Program, succeeding Greg Porter at the University of Maine. The NCP eagerly anticipates collaborating with Mario in his new role.