



United States Department of Agriculture

New York  
Natural  
Resources  
Conservation  
Service

**Big Flats Plant Materials Center**  
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## 2025 Report of Activities

The Big Flats Plant Materials Center (PMC) is one of the 25 Plant Materials Centers operated by the United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). It serves the Northeastern U.S., from Maine to northern West Virginia. The PMC is in the southern Finger Lakes region of New York State. The mission of the program is to select conservation plants and develop innovative plant technology to address customer needs and natural resource concerns through on site research and studies.



This report is a summary of our 2025 activities at the PMC. The primary areas of focus at the PMC are soil health, erosion control, water quality, wildlife habitat improvement, and forest riparian buffers. For additional information on any of these topics, or other questions you may have, please contact us at the center (contact information on final page of report).

### **Site Preparation, Before Pollinator Habitat Seeding, in Row Crops and Long-term Pasture Fields (2024-2027).**

The main objective of this study is to evaluate site preparation intensity (utilizing either conventional or organic practices) on wildflower species' establishment when converting long-term pasture into wildlife habitat to support a diversity of pollinator species. For conventionally prepared plots, all areas to be seeded will be treated with herbicides to control weeds before

seeding a pollinator friendly seed mix. Organically prepared plots will receive multiple shallow tillage passes to reduce weeds before planting. Buckwheat will be used as a smother crop (2x) before wildflower seeding in the fall and the subsequent spring.

Additionally, demonstration plots were established to compare site preparation and maintenance methods when converting farmland (row crops such as alfalfa, corn and rye) into wildlife habitat utilizing the same practices as mentioned above. These plots will be used in 2025 and 2026 for training NRCS staff on the importance of site preparation prior to seeding wildflower seed mixes with different site histories.

Plots will be monitored and evaluated through 2027 to determine establishment success of wildflower species that are planted in Spring 2024, Winter 2024, Spring 2025, Fall 2025, and Spring 2026. Seeding years are based on the intensity of site preparation (0-2 years) before wildflower seedings. Maintenance regimes will be implemented throughout the growing season. For each plot, only half of the plot will be mowed to reduce weed pressure while wildflowers establish; while the other half will receive no maintenance (no-mow).



**Figure 1. Top left: Conventionally prepared and maintained demonstration plots. Top right: Conventional site prep and maintenance in long-term pasture plots (seeded June 4, 2024). Bottom left: Wildflowers established in organically prepared plots. Bottom right: Spring seeded plots. Right half received no mowing and left half was mowed.**

## Effects of Seeding Rate, Date and Termination Timing on Biomass and other Attributes of Cool Season Legume and Grass Cover Crops for Production Agriculture

Planting adapted cover crop species at optimal planting dates and seeding rates can improve cover crop species performance and optimize biomass production. With fall-planted cover crops, seeding dates are constrained by the harvest date of the cash crop and can affect seeding rates. While high seeding rates have been shown to produce optimal biomass, they can reduce profit margins with the cost of the cover crop seed. On the other hand, low seeding rates may not produce enough biomass resulting in competition from weed species and reducing the many other benefits of cover crop seedings.

Fourteen PMCs from around the country, the Agricultural Research Service (ARS), and North Carolina State University are currently evaluating the effect of planting dates, seeding rates, and timing of termination on adapted varieties of cereal rye and legume species. In the fall of 2023, the PMC planted five different seeding rates of *Aroostook* cereal rye: 15, 30, 60, 90 and 120 Pure Live Seed (PLS) lb/ac at 3 different seeding dates that coincide around the currently recommended planting windows. Preliminary data analysis from the cereal rye plots shows that plant heights and biomass production had no statistical differences between seeding rates and planting dates.



Figure 2. Cereal rye was planted at different seeding dates and seeding rates in the fall of 2023. The photo on the left was taken after all fall plantings in late October 2023. The photo on the right shows the same plantings but in the spring of 2024.

## Plant and Seed Production

Each year at the PMC, most of our conservation plant releases are harvested, cleaned, and prepared for shipment to growers and nurseries. Below is a list of released conservation plants available to growers for increase and use in conservation practices. Some releases may have limited availability due to environmental factors and will be made available as soon as conditions allow and/or new fields are established.

### Seed:

- ‘Aroostook’ cereal rye
- ‘Niagara’ big bluestem
- ‘Tioga’ Deertongue
- ‘Copper chinquapin
- ‘Keystone buttonbush
- ‘Catskill’ dwarf sand cherry

### Vegetative Material:

- ‘Streamco’ purple osier willow
- ‘Spike’ hybrid poplar
- ‘Catskill’ dwarf sand cherry
- ‘Greenbank’ sandbar willow
- ‘Ruby’ red osier dogwood
- Kingston Germplasm prairie cordgrass

Any commercial grower or nursery interested in producing any of our plant releases or in need of information on our releases or sources of supply, can visit our website or contact the PMC directly. All Plant Materials Center’s plant release brochures can be found here:

<https://www.nrcs.usda.gov/plant-materials/cp/releases>

## Non-PMC Plant Release Production

The PMC continues to maintain a small outdoor plot and an indoor potted population of Northeast collected sweetgrass, since the early 2000’s. Plugs are shipped to interested tribal members through requests from field office personnel, tribal liaisons or directly to the PMC. This past year, over 1,000 plugs were grown and will be ready for shipping in Spring 2026.

## Technical Assistance, Outreach and Publications

- Grew and planted over 1,000 wildflowers and grasses in Canisteo, NY for establishing pollinator habitat and a People’s Garden.
- Assisted Albany Pine Bush and the Mid-Atlantic Regional Seed Bank (MARSB) with seed cleaning of native species.
- Assisted Pollinator Partnership with the development of 2 CRP pollinator habitat establishment documents.
- Ed Toth and staff members of MARSB toured the PMC and discussed native seed cleaning and opportunities for collaboration.
- PMC pollinator habitat training- 9.10.2025 (see photos to the right).



## Controlled Burns

Each Spring the PMC updates their prescribed burn plan and conducts controlled burns on site. The prescribed burns conducted in 2025 encompassed 11 acres of warm season grasses (WSGs) used for seed production, wildlife habitat, and plant evaluations. The burning of WSGs stimulates seed production (higher yields), improves plant vigor, and reduces disease, insect and weed pressure. Conducting these burns aids in training personnel in the management of WSGs, prescribed fire methods, and techniques for JAA. Collaboration between PMC Staff, NYDEC Forest Rangers, NYDEC Fire Warden, Big Flats Volunteer Fire Company, and other NYSDEC forestry personnel have made this a safe and well attended event, year after year.



**Figure 3. All photos were taking at the Big Flats PMC, from the past 3 years. They show the progression from ignition to complete burns (bottom left), that can take less than 30 seconds depending on the size of the field. While hard to gage the heights of the flames, some were over 50 feet.**

## Upcoming Trainings for NRCS Personnel

### Site Preparation for Pollinator Habitat (Late summer/fall 2026)

In coordination with NRCS NY and the Pollinator Partnership, the PMC will be hosting an informal training on site preparation for pollinator habitat and will be aimed at field office staff. **Note:** Exact date(s) will be forthcoming.

### Big Flats PMC Staff

Please feel free to reach out to us with any Plant Materials questions, needs, or for more information on anything contained within this report.

### PMC Staff Contact Information:

- **Manager** - Shawna Clark [shawna.clark@usda.gov](mailto:shawna.clark@usda.gov)
- **Study Leader** - Eric Antosh [eric.antosh@usda.gov](mailto:eric.antosh@usda.gov)
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- **Biological Science Technician (temp)** - Tony Denardo [anthony.denardo@usda.gov](mailto:anthony.denardo@usda.gov)

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