

Fall 2020

Native Seed Scoop, Fall 2020

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THE NATIVE SEED SCOOP

FALL 2020 EDITION



Upcoming Events

This week: New Publication and Public Briefing from the National Academies of Sciences

- An Assessment of the Need for Native Seeds and the Capacity for Their Supply: Interim Report
- Friday, November 13, 2020, 12:30-1:30 ET
- For more information and to register for the webinar go to:
<https://mailchi.mp/nas/native-seeds-publication-and-public-briefing?e=77aacd0e7f>

Save the Date: Iowa Prairie Network Winter Meeting

- Saturday January 30, 2021, 9:00 AM – 12:30 PM, via Zoom.
- Topics will include *Liatris* identification, native seed sourcing amidst climate change, urban landscaping with native plants and more! Please see the attached save the date below.
- A full agenda and registration information will be shared at a later date.

News and Information

Release of full report on the 2020 Native Seed Stakeholder Meeting

Download the report from <https://tallgrassprairiecenter.org/native-seed-stakeholders>

Participants in the panel and breakout discussions identified issues and needs in the following areas:

- Research into native seed testing and production methods and planting establishment and management
- Communication among stakeholders
- Education of staff and clients, targeted marketing, and outreach to the public
- Intersections of policy, practice, and research

NEW: Native Seed Stakeholders email group.

- This is a listserv for anyone involved with or interested in the native seed supply in Iowa and our broader region. Members will be able to send messages and pose questions to the group using the address native-seed@uni.edu.
- You should receive an invitation to join soon!

Summary of Workshop “Growing Through Change: Sourcing Climate-Resilient Seed” (Sept 15)

- The workshop, hosted by Lake County Forest Preserves, included presentations on two recent research papers investigating the scientific basis for seed sourcing in the climate change era:

- Etterson, et al, 2020: [Assisted migration across fixed seed zones detects adaptation lags in two major North American tree species](#)
- Bucharova, et al, 2019: [Mix and match: regional admixture provenancing strikes a balance among different seed-sourcing strategies for ecological restoration](#)
- Key takeaways from the presentations and discussion:
 - Fragmentation and degradation of habitat inhibits natural dispersal and not all local plant populations have the genetic diversity to adapt to predicted changes.
 - When seed producers pool wild populations from within a region and take care to avoid selection in production practices, regional adaptation and genetic diversity can be conserved in production populations over several generations.
 - Results of research into assisted migration of plant populations or species is mixed. There does not appear to be one approach that is generalizable to all systems.
 - Some organizations are already restricting seed sourcing from northern parts of their former source range.
- A video recording of the workshop is available: <https://youtu.be/mYO1E-UtGXM>

Seed theft from remnant prairies?

A recent topic of discussion on the Native Nursery listserv was the sudden disappearance of all the royal catchfly seed from Huffman Prairie (Dayton, OH) for the second year in a row. It has been determined that this year's collection was carried out by the US Fish and Wildlife Service, but they did not give prior notification of their plans to anyone who works closely with Huffman Prairie.

This story underscores the fact that remnant prairies in the Corn Belt cannot support the need for restoration seed. We need a native seed market with local ecotypes that are responsibly produced, genetically diverse, and affordable. Collectors should follow best practices to avoid unsustainable stress on remnant populations. Without communication among collectors and site managers, remnant prairies could fall prey to the “tragedy of the commons.”

Production Topic - Japanese Beetle Control



*We were determined to keep Japanese beetles from decimating showy tick trefoil (*Desmodium canadense*) production this summer. Before the beetles emerged, we researched non-toxic control methods and found a design for inexpensive DIY traps and new guidelines for trap placement and density.*

We constructed traps from 5-gallon buckets, automotive funnels, and commercially available scent lures (attached to the funnels with zip-ties). The total cost of 14 traps was around \$150, and the only part we'll need to replace next year is the pheromone lure (\$4/each). We placed a gallon of soapy water in each bucket and spaced the traps about 15 feet from both sides of the tick trefoil row, with approximately 20 feet between traps.

We chose red funnels instead of yellow or blue to reduce our traps' attractiveness to bees. One research study found that eliminating geraniol from the scent lures greatly reduces bee bycatch, but we couldn't find commercially available lures with a geraniol-free formula. Thankfully, we did not observe bees among the hundreds of beetles in the traps.

In 2019, we harvested 1.3 pounds of cleaned seed from a 640 sq ft plot, which works out to 86.7 pounds/acre. That's in line with a typical second-year yield reported in the [TPC Native Seed Production Manual](#).

In 2020, after installing the beetle traps, we harvested 11.6 pounds of cleaned seed from the same plot, which is 773.3 pounds/acre. That is 5 times the maximum estimated pounds per acre in the Native Seed Production Manual. About half of the increased yield we observed is due to capturing seed (loment) that clumped up on the "straw walker" in the combine and passed out the rear of the machine.

For more information:

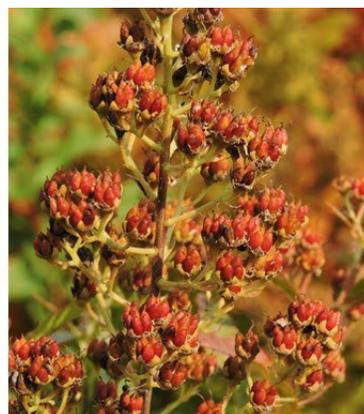
- https://ipm.missouri.edu/MEG/2018/1/organic_management_japanese_be

[etle/](#)

- https://ipm.missouri.edu/MEG/2018/1/mass_trapping_japanese_beetles/
- <https://entomologytoday.org/2019/09/23/less-bee-bycatch-leave-geraniol-out-japanese-beetle-traps/>
- <https://www.instructables.com/Japanese-Beetle-Trap/>

Plant Profile

White meadowsweet, *Spiraea alba*



One of the last species we harvest each fall is this delicate shrub with long-lasting flowers and bright fall foliage. The TPC offers Zone 1 and Zone 2 Iowa Ecotypes of *Spiraea alba* to native seed producers.

Range – Reported from most counties in eastern Iowa and scattered counties in the rest of the state.

Applications – Slender shrub suitable for wet to medium-wet soils including ditches and the edges of wetlands. Attracts wide diversity of bee species while flowering for 1-2 months in mid-summer.

Production – Forms a dense patch with few weed issues. Plot with irrigation produced first crop one year after planting; plot without irrigation took two years. Production steady to increasing during first three years, varying from 30-70 pounds per acre.

Harvest – One of the last species to mature; wait for dry fruits to open and begin releasing seed before combining. Seed is small (300,000/oz), elongated, light, and difficult to separate from similar-sized inert matter.

- Range map: <http://bonap.net/MapGallery/County/Spiraea%20alba.png>
- Description and ecology: <https://www.illinoiswildflowers.info/wetland/plants/meadowsweet.htm>

In other news

- Prevegetated blankets with native species help stabilize steep slopes: <https://www.stormh2o.com/home/article/21144745/steep-slope-no-problem>
- Environmental consultant works with non-profits, agencies, and underserved communities to promote native plantings in urban settings: https://www.columbiamissourian.com/special_section/business_spotlight/growing-native-plants-improves-quality-of-life-in-a-community/article_59d12afe-cdd3-11ea-bc03-efa256f0d3ce.html
- Demand for native seed is gradually increasing again for conservation plantings due to passage of the Farm Bill and for urban gardens due to public interest in pollinator conservation: <https://seedworld.com/hitting-close-to-home/>

Contact us!

Plant Materials Program Manager

Laura Fischer Walter

laura.walter@uni.edu

(319) 273-3005



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