

Fall 2021

## Native Seed Scoop, Fall 2021

University of Northern Iowa. Tallgrass Prairie Center.

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# Tallgrass Prairie CENTER

UNIVERSITY OF NORTHERN IOWA

[www.tallgrassprairiecenter.org](http://www.tallgrassprairiecenter.org)

## Native Seed Scoop - Fall 2021



*I hope you're getting out to appreciate the fall colors in planted and remnant prairies near you!*

## Events

Iowa REAP Assemblies

- Iowa's Resource Enhancement and Protection (REAP) assemblies will begin in two weeks, giving all Iowans an opportunity to share and discuss their visions for Iowa's outdoor recreation, soil and water enhancement, historical resources and land management and more.
- October 18-28, 2021
- [Find your regional REAP Assembly](#)

## 2021 SOIL Conference

- November 17, 2021 – 8:00-4:30 pm
- Olmstead Center, Drake University
- [Details and registration](#)

## Volunteer Opportunities - Seed Collecting

- [Golden Hills RC&D](#)
- [Iowa Natural Heritage Foundation](#)

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# Kudos

Congratulations to [2021 MacArthur Fellow, Lisa Schulte-Moore](#) (ISU), for developing creative ways, such as the STRIPS program, to integrate native prairie and its benefits into the dominant agricultural ecosystem.

Kudos to [Peoples Company for enrolling all of its managed lands in Leading Harvest certification](#), which provides third-party assurance that [farms are managed sustainably in accordance with principles including protection of soil health, water resources, and biodiversity](#).

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# What's Your Scoop?

Have something to share with other native seed stakeholders? Send your news tips to [laura.walter@uni.edu](mailto:laura.walter@uni.edu).

You can also join our native seed listserv to post news and questions directly to the group. Email [laura.walter@uni.edu](mailto:laura.walter@uni.edu) to join.

## Species Spotlight

### Whorled Milkweed, *Asclepias verticillata*

This fine-leaved little plant looks very different from other milkweeds until it blooms. The white flowers have the classic milkweed structure, with five down-curved petals and a central, cylindrical crown.



Wasps – along with bees, beetles, flies, moths and butterflies – are effective [pollinators of this and other milkweeds](#). The spines on their legs pick up and transfer the milkweeds' pollen packets (pollinia).

It may seem surprising, but [Whorled Milkweed is an important food plant for monarch caterpillars](#), especially late in the season. A large Monarch caterpillar can mow down all the leaves on a stem in short order, but a healthy plant will form multiple stems from its rhizomes.



In Iowa, you can see patches of Whorled Milkweed blooming from July into September on medium to dry roadsides and highway median strips. It has also established well from seed mixes planted at the TPC's reconstruction project, [Irvine Prairie](#).

This species reliably produces seed for about two years in TPC production plots. We store first generation seed (harvested from plots grown from remnant prairie seed) in our freezer, which we periodically grow out to regenerate our foundation seed supply.

New plots of Iowa Ecotype Zone 2 Whorled Milkweed transplanted on June 2 this year bloomed heavily and are loaded with pods. Fingers crossed that we get plenty of healthy, filled seed!

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## In the News

[Three new Iowa RCCP Projects include funding for wetland restoration and construction in 35 Iowa counties](#) – Signup by October 22.

[CRP enrollment of 2.8 million acres in 2021 includes 897,000 acres in Continuous Signup.](#)

[Grasslands CRP enrollment doubles over 2020 signup](#), bringing total CRP enrollment above the 4-million-acre goal set by USDA.

USDA-funded study through SDSU looks at soil health and income benefits of growing native wildflower seed alongside corn and soybeans.

<https://www.seedtoday.com/digital-editions>, Third Quarter 2021, page 72

Habitat planted near conventional crops provides net benefit to monarch butterflies, based on ISU laboratory and modeling studies. <https://www.seedtoday.com/digital-editions>, Third Quarter 2021, page 76

Pollinator habitat improves soybean productivity in addition to providing environmental benefits. <https://www.seedtoday.com/digital-editions>, Third Quarter 2021, page 68

[Monarchs need more than milkweed](#) – new citizen science project looks at adult monarchs' use of protective chemical compounds from other plant groups.

[Echinacea isn't itself anymore](#) – Mt. Cuba trial gardens show variation in ecological and horticultural value of Echinacea cultivars

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## Production Topic

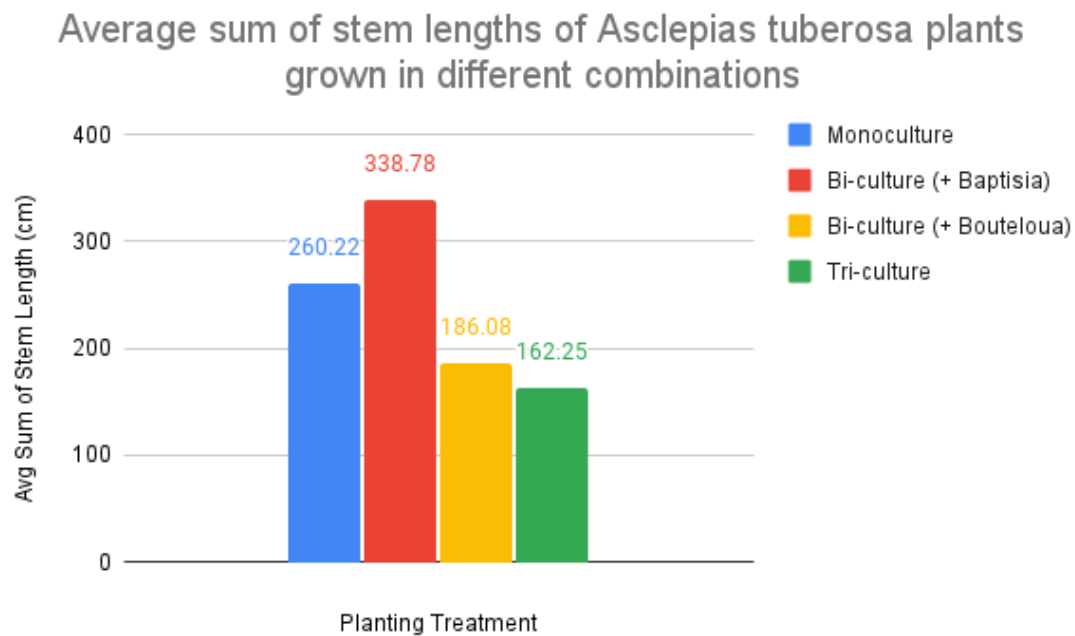
### Companion Planting

In spring 2020, we had abundant seedling plugs of two forb species that seemed like good candidates for companion planting: Butterfly Milkweed (*Asclepias tuberosa*) and Cream Wild Indigo (*Baptisia bracteata*). We hand-harvest both species, the seeds are distinctly different, and one of the species is a legume.

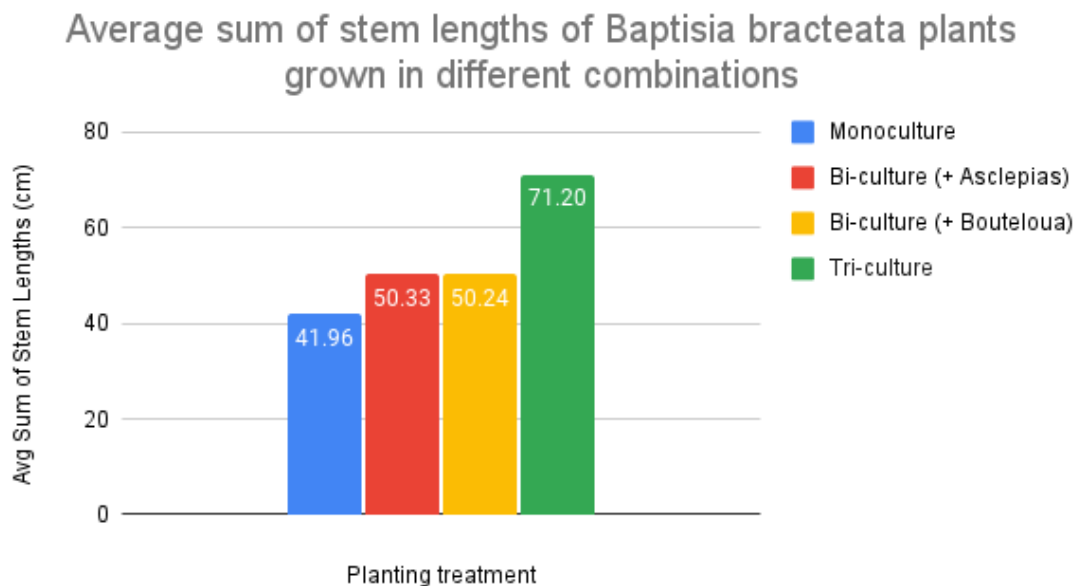
In four production rows at the TPC, we created 12 randomized, replicated plots of each of these six combinations: each forb in monoculture, the two forbs planted together (forb bi-culture), each forb planted with Sideoats Grama (forb-grass bi-culture), and all three species co-planted (tri-culture).



Summer 2021 Green Iowa AmeriCorps members Bailie Bautch-Breitung and Anna Perdue organized data collection on plant growth of both forb species (sum of stem lengths of randomly chosen plants within each plot) and reproduction of the milkweed (average number of fruits per stem in early August). The slower growing Wild Indigo did not flower this year.



While we have not checked for statistical significance, the data suggest that the two forb species perform better in different combinations. On average, Butterfly Milkweed plants were smaller (see graph) and produced fewer pods in bi-culture and tri-culture plots containing Sideoats Grama, but were slightly larger and more productive when co-planted with only Cream Wild Indigo.



Cream Wild Indigo plants were more robust in plots containing all three species. While gathering growth data, we also noted that Wild Indigo plants in monoculture patches were nearly twice as likely to show symptoms of stress (yellowing, spots on leaves, and loss of lower leaves) as those grown in combinations containing grasses.

We look forward to continuing to engage UNI students and AmeriCorps members in gathering both seeds and data from these plots in the future.

**Have you tried different combinations of native plants in seed production areas? Please let us know how it worked! Email me at [laura.walter@uni.edu](mailto:laura.walter@uni.edu).**

