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# *How to Build Your Own Native Seed Germination Box*

**Speaker:**  
**Bill Daniels, Native Seed Coordinator, Master Gardener**

**November 20, 2021**  
**Zoom Presentation**

**Presented jointly by Indiana Native Plant Society,  
Native Seed Communities, and MCI-IRIS.**



PURDUE EXTENSION  
MASTER GARDENER PROGRAM



# Agenda

- *Need for Native Seed*
- *Native Seed Communities introduction*
- *Growing natives from seed process*
- *Build a Germination Box*
- *Information and resources about growing native plants from seed and Native Seed Communities*





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# *Need for Native Seed*



# Crises



# Crisis – Plants



BIODIVERSITY

## 40 Percent of World's Plants at Risk of Extinction, New Report Finds



By Jordan Davidson | Sep. 30, 2020 01:12PM EST

SCIENCE

### State of the World's Plants and Fungi 2020

Royal Botanic Gardens  
**Kew**



[youtu.be](#)

A grim new assessment of the world's flora and fungi has found that two-fifths of its species are at risk of extinction as humans encroach on the natural world, as [The Guardian](#) reported. That puts the number of species at risk near 140,000.

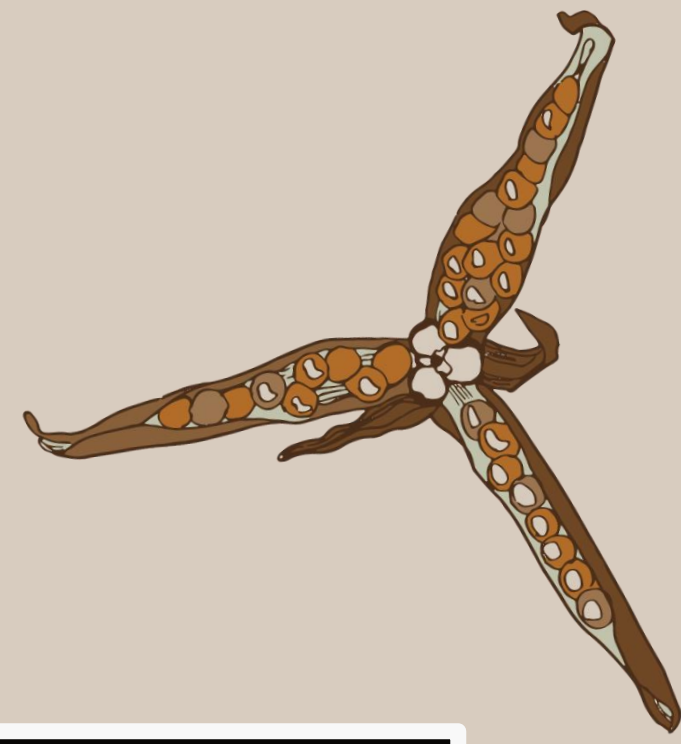


**"a very worrying picture of risk and urgent need for action,"** Alexandre Antonelli,  
director of science at Royal Botanic Gardens Kew



dovan Hajek

# Crisis– Animals



The New York Times Magazine  
FEATURE  
**The Insect Apocalypse Is Here**  
What does it mean for the rest of life on Earth?

The Washington Post  
*Democracy Dies in Darkness*

Animals  
**North America has lost 3 billion birds in 50 years**  
North American bird population dropped by nearly 30 percent in last 50 years  
By Karin Brulliard  
September 19, 2019 at 2:00 p.m. EDT  
Slowly, steadily and almost imperceptibly, North America's bird population is dwindling.

AP  
**Monarch butterfly population moves closer to extinction**  
By OLGA R. RODRIGUEZ January 19, 2021

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Environment Climate change Wildlife Energy Pollution  
**Pesticides** This article is more than 1 month old  
**Toxic impact of pesticides on bees has doubled, study shows**  
Analysis contradicts claims that the environmental impact of pesticides is falling, say scientists  
Damian Carrington  
Environment editor  
@dpcarrington  
Thu 1 Apr 2021 14:00 EDT  
1,794

***Native Plants are the ecological basis upon which all life depends.***  
**Audubon Society**

# Other Challenges

- With the marketing and selling of “pretty” or “well-behaved” **cultivars** in the retail trade, although often more ecologically supportive than non-natives, they still contribute to a **decrease in genetic diversity**.
- Access to **local provenance, native plants and seeds is extremely limited**.
- Personal knowledge regarding **how to collect and grow native seeds is limited**.





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# ***Native Seed Communities***





# Origin Story

Horticulture, a  
Lifelong Interest

A Purdue Extension  
Master Gardener project

An Indiana Native Plant Society's  
Landscaping with Natives project



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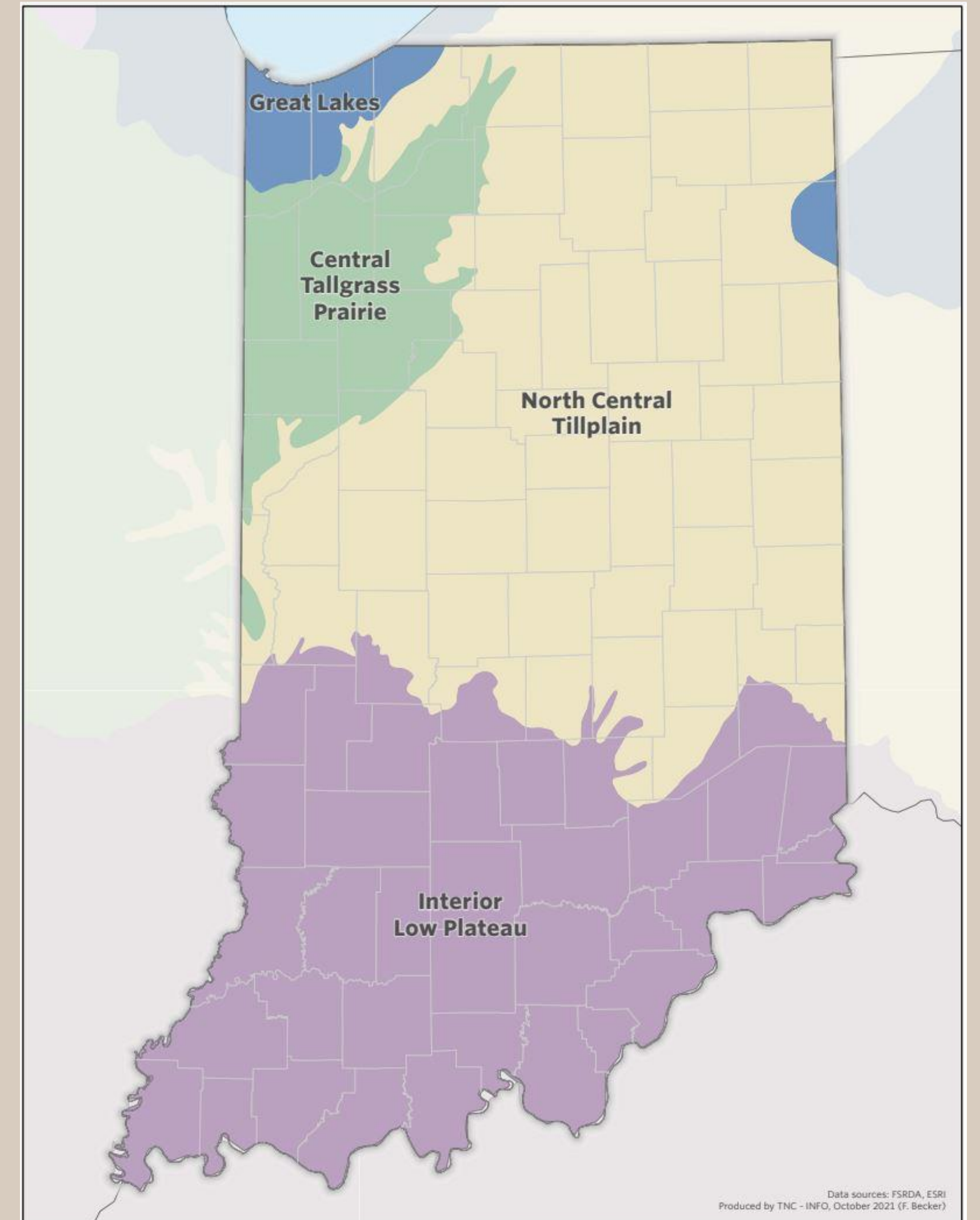


Indiana Native  
Plant Society

# Who We Are

*Indiana Native Seed Communities* is a network of native plant enthusiasts working together to acquire, prepare, and propagate Indiana provenance seeds to increase the presence of ecologically appropriate native plants in all our landscapes.

An individual *Community* within this network is a group of individuals within, at a minimum, one of the ecoregions as seen in the map developed by The Nature Conservancy.



# Key Objective

## Expand access to seed-grown Indiana native plants!

- **Demystify growing native plants from seed**, thus encouraging more people to sow Indiana native seeds.
- Develop **groups of trained volunteers working together** to acquire and prepare Indiana provenance native seeds and plants.
- **Support Pollinator Partnership's Project Wingspan and Indiana Plant Conservation Alliance's Growers & Gardens Committee.**
- **Facilitate members' collected seed and seed-grown plants to be shared** with friends, sold for fundraisers, or donated to public gardens, preservation projects, etc.
- **Assist growers** by making available responsibly sourced, wild-collected native seed.



**Doug Tallamy**

***“It is not the presence of non-native plants that destroys food webs; it is the absence of native plants!”***

*Restoring Nature's Relationships at Home*  
OSU's *The Living Landscape Speaker Series*  
February 25, 2021



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# *The Process*

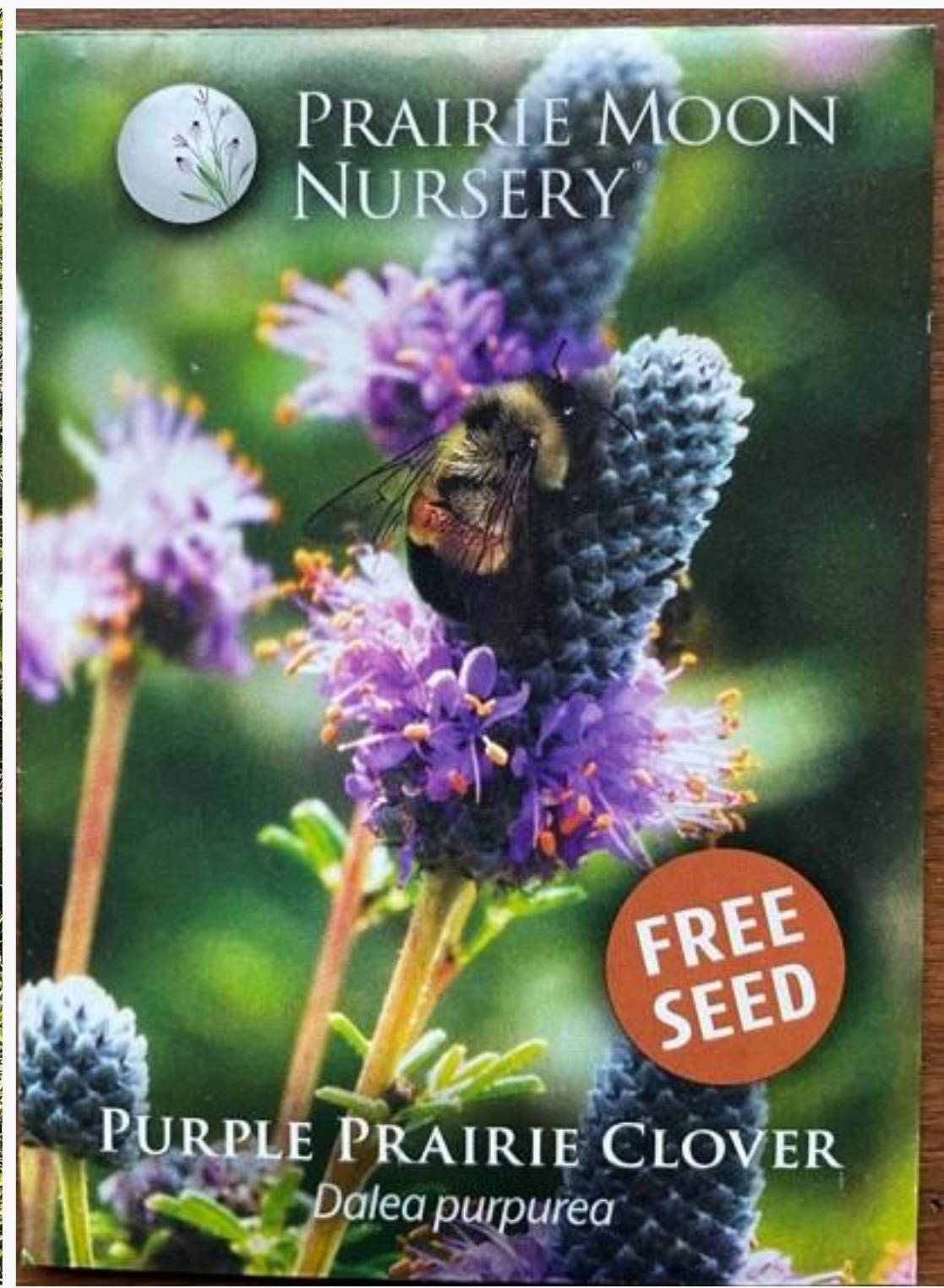


**Heather McCargo, MA**  
Founder and Seed-Program Manager

# The Process – Acquire & Prepare



Acquire Seed



Prepare Seed

# The Process – Sowing



**Materials**

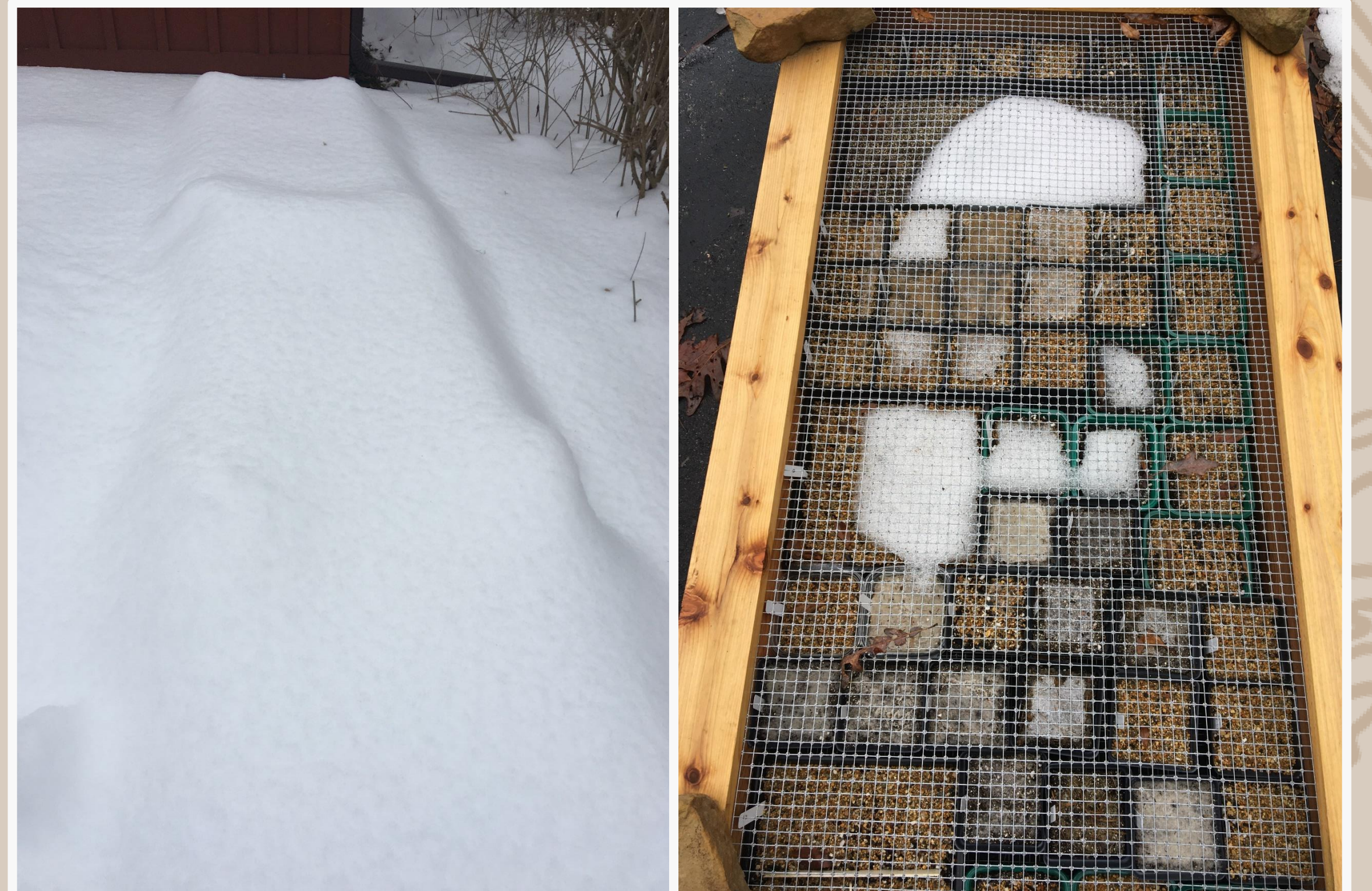


**Sow Seed**

# The Process – Outside & Protect



**Place Outside & Protect**



**Let Nature . . .**

# Process – Seedlings



April



May



Late June



Seedling Care





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# *Let's Build a box!*



# Inspiration



**North Carolina  
Botanical Garden**



**Nasami Farm Nursery**



# Why protect the pots?



# How to Build a Germination Box – Base

## Materials for Base

You'll need:

- 2 x 8" x 4' cedar lumber (2)
- 2 x 8" x 33" cedar lumber (2)
- Builder's square and pencil
- Hand or handheld circular saw
- 12 - 3" x 9 deck screws
- Drill and bit for deck screws
- 3' x 47.5" piece of ½" galvanized hardware cloth
- Wire cutters (or have hardware store do cutting)
- Staple gun or ½" fencing staples with hammer



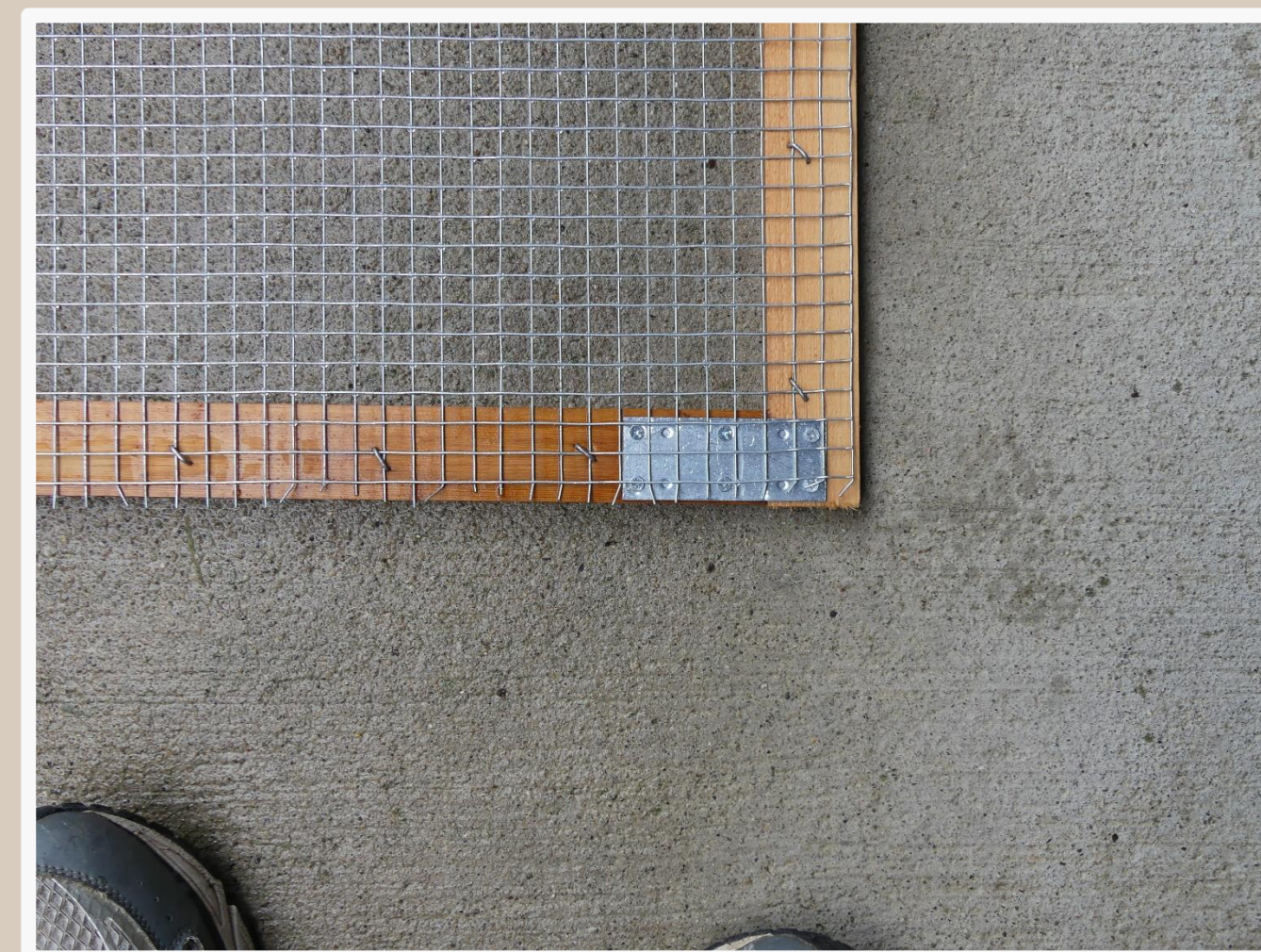
**4 x 3' Germination Box, holding ~50 - 4" containers.**

# How to Build a Germination Box - Top

## Materials for Lid

You'll need:

- 1 x 2" x 4' cedar lumber (2)
- 1 x 2" x 33" cedar lumber (2)
- Builder's square and pencil
- Hand or handheld circular saw
- Galvanized 1 ½ x 3 ½" mending plate with screws
- Drill and bits
- 3 x 4' piece of ½" galvanized hardware cloth
- Wire cutters (or have hardware store do cutting)
- Staple gun or ½" fencing staples with hammer



# Estimated Costs

Material	Cost/Unit	Total Cost	Vendor	Comments
2 - 2 x 8 x 8 Cedar	41.55	83.10	Bender Lumber	Not available at Lowes
2 - 1 x 2 x 8 cedar	4.59	9.18	Lowes	Not carried by Bender
Hardware Cloth (3 x 4')	2.49	9.96	Bear Hardware	\$2.49/ft.
12 - 3" x 9 Deck Screws	0.25	3.00	Bear Hardware	\$2 for ¼ lb.
2 - 1 ½ x 3 ½" Mending Plate with screws	4.58	9.16	Lowes	2 Packages with 4 each, including both plates and screws.
~60 - ½" Fencing Staples	.63	.63	Bear Hardware	¼ lb.
<b>Total Materials Cost</b>		<b>\$115.03 + tax</b>		

# Box Building & Learning About Invasives



# Other ways of doing it







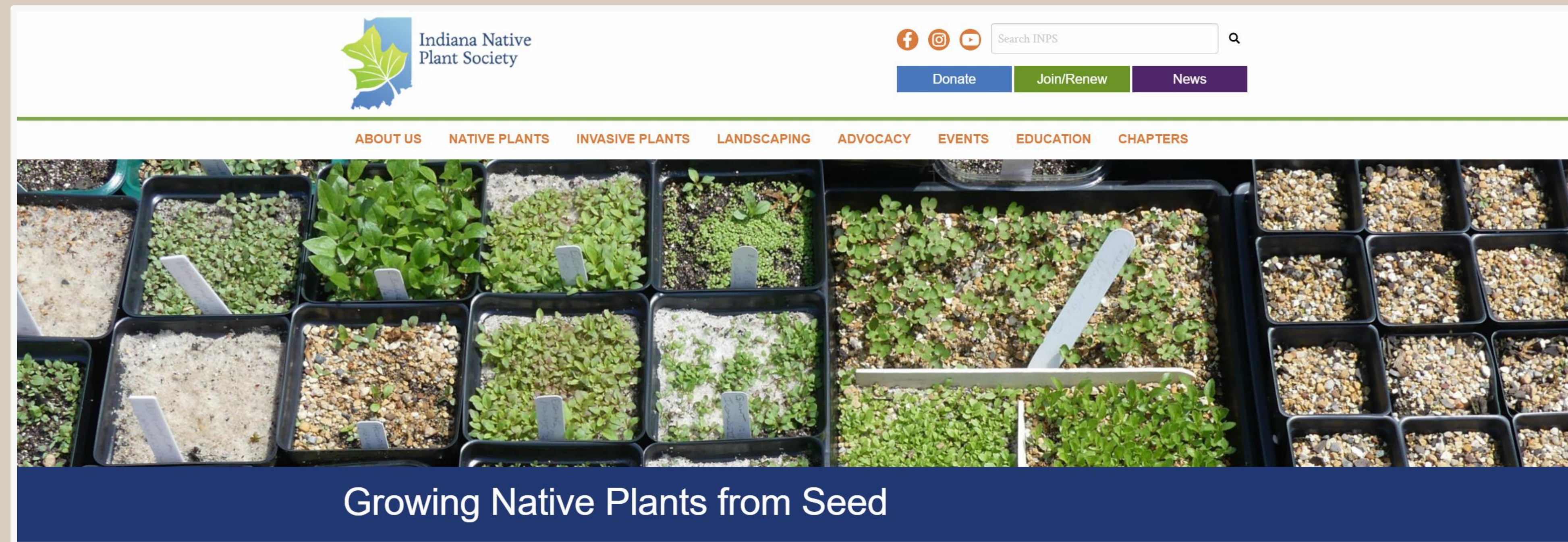
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# *Resources*



# Native Seed Resources

We have an abundance of resources covering all aspects of collecting, preparing and growing native seed.



For those who would like to learn more about [Native Seed Communities](#), check out our information on Indiana Native Plant Society's website.

# Upcoming Event



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## **Please Join Us!** ***How to Sow Native Seeds*** ***Workshop***

**Speakers: Bill Daniels, Native Seed Coordinator  
Gillian Field, MC-IRIS Community Organizer**

**Saturday, December 4, 10 AM – 11 AM  
Bryan Park, Henderson Shelter  
Bloomington, IN**

**Presented jointly by Indiana Native Plant Society, Native Seed Communities, and MCI-IRIS.  
Join us as we learn how to sow native seeds for outdoor germination.**



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**A \$10 registration fee at the door is recommended to help cover the  
set-up costs of the workshop.**

**Sign up here <https://signup.com/go/cyamJUV>**

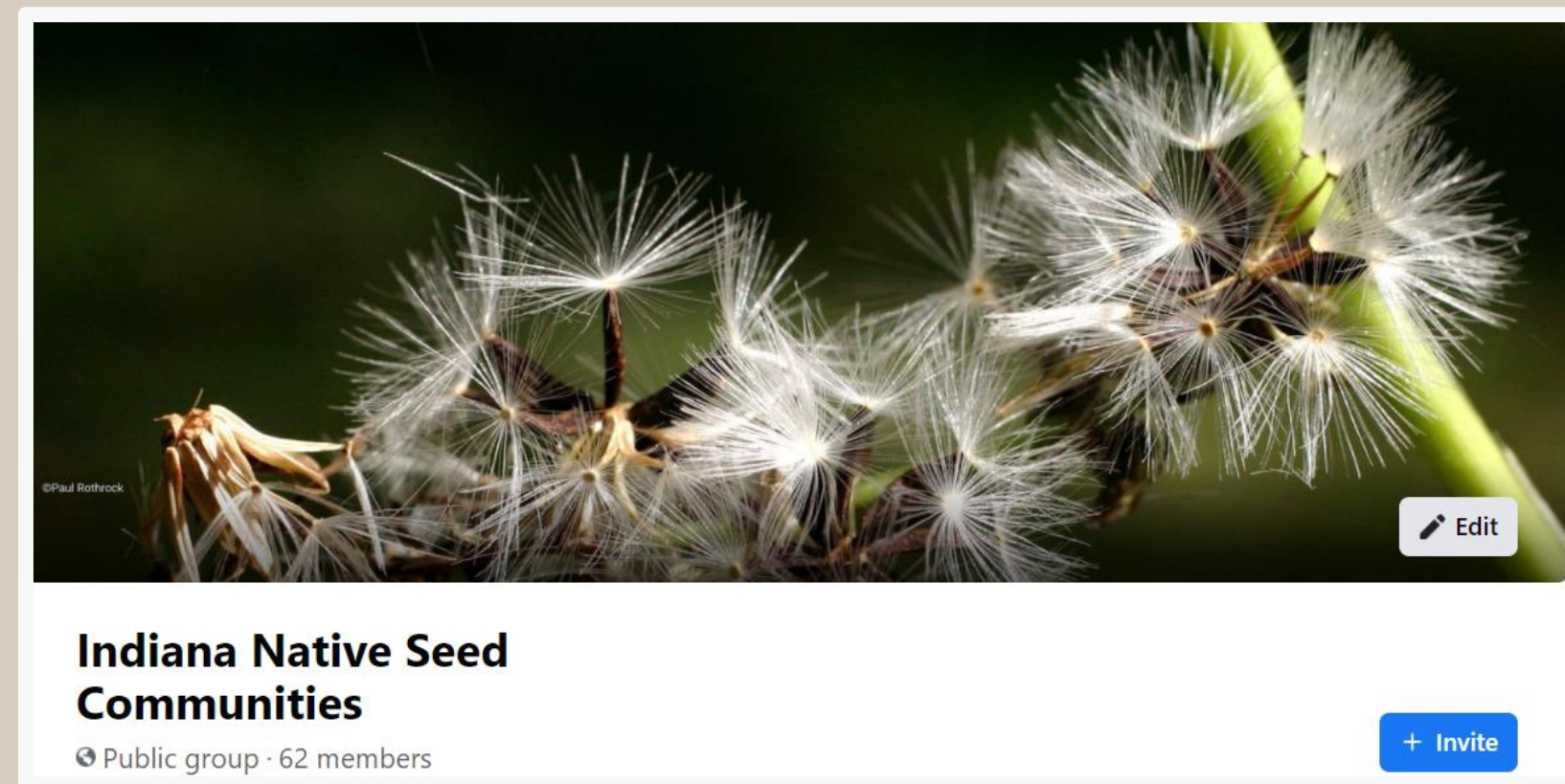
**Just a heads up – we strive to start and stop our events on time.**



# GET INVOLVED

Join in on the discussion at our new **Facebook group**,  
***Indiana Native Seed Communities***

<https://www.facebook.com/groups/525266728469540>



***No Native Seed Community in your area?***

Why not start one!

Contact Bill [seed@indiananativeplants.org](mailto:seed@indiananativeplants.org)

if you want to help “grow” the program  
In your region.





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*Questions?*

