

Winter Sowing

Growing native flower seeds
outdoors in containers

UNIVERSITY OF
MARYLAND
EXTENSION

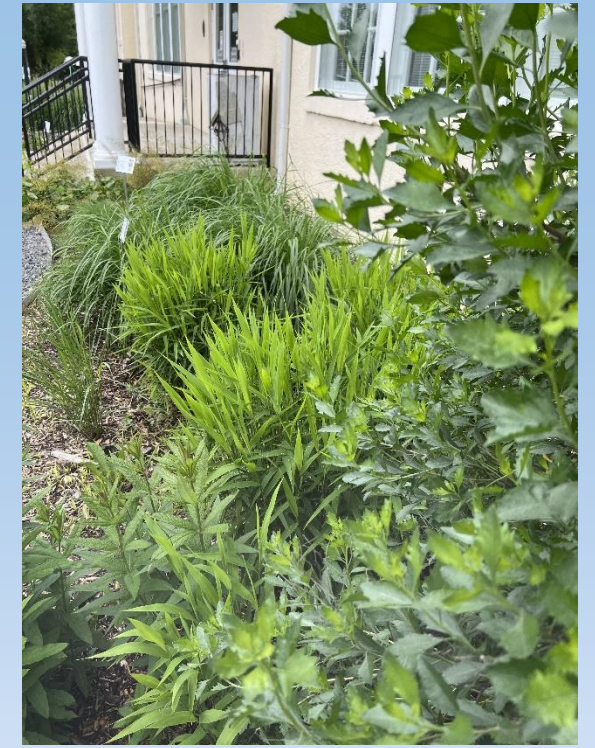
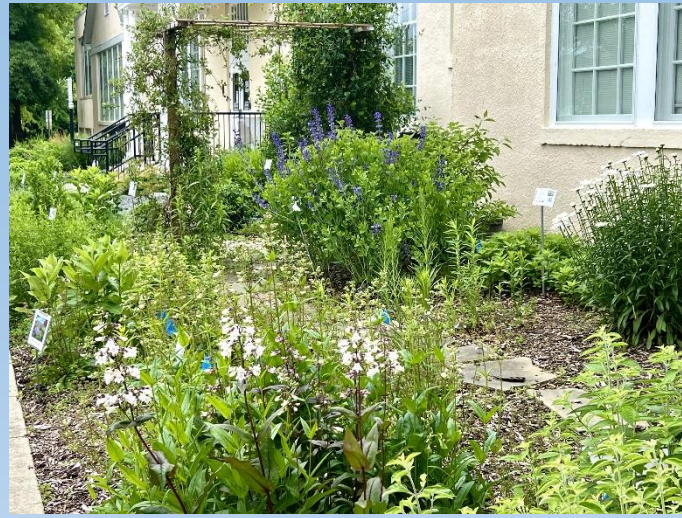


NATIVE PLANTS

A MASTER GARDENER PROGRAM



Photo credit: CCMG



Presented by

Kathy Jenkins & Terry Thir, Co-Chairs, Charles County
Master Gardeners

Extension Demonstration Gardens Project
and

Julia Rycyna, D.P.M, Home Horticultural Educator,
UME

Welcome

- The mission of the University of Maryland is to connect Maryland residents to trusted, science-based resources to grow healthy gardens, landscapes, and communities.
- Master Gardeners teach classes and workshops, develop demonstration gardens, and educate about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes and communities.



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Office of the Assistant Secretary for Civil Rights
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Questions to cover

- What is germination?
- What is seed dormancy?
- What is Winter Sowing?
- How to setup winter sowing?
- What native plants might you winter sow?
- What are the challenges of Winter Sowing?

Seed Germination

- Seed to seedling
- May require specific
 - Water
 - Light
 - Temperature
- If viable but not germinating may be dormant



Photo: Adobe Stock



Seed Dormancy

- Viable seed not germinating because conditions are not right
- If conditions are correct, but not germinating there may be another factor inhibiting germination
- Break seed dormancy
 - Seed scarification
 - Seed stratification

Cold Stratification

- Some seeds need prolonged cold conditions to trigger germination
 - Mimic required conditions indoors with refrigerator (~40°F)
1. Put seeds in a container with a moist paper towel
 2. Check regularly for moisture
 3. Leave in for 1-3 months depends on seed
 4. Sow in pots or direct seed outside



What Is and Why Winter Sowing?

- An incredibly easy way to grow seedlings in the middle of winter.
- Budget and eco-friendly way to grow carefree plants.
- No need for indoor starting equipment such as heat mats, grow lights or plant trays.
- Plant seeds in a container with a opening in the top, holes in the bottom for drainage, creating a mini-greenhouse.
- Put outside in a sunny spot and wait for them to sprout.



Photo: Marlene Smith

Getting Ready

- Containers
- Potting mix
- Tape for sealing/labeling
- Popsicle stick/label
- Permanent marker for Labeling (grease/paint pen)
- Scissors, sharp knife or drill
- Coffee filters
- Seeds
- Water



Growing Medium

SEED STARTING MIX VERSUS POTTING SOIL

Seed Starting Mix

- usually composed of vermiculite and peat, without any true soil
- sterile, lightweight and free from weed seeds, with a texture and porosity especially suited to germinating seeds

Potting Soil

- can contain organic material -compost, sticks, sometimes soil. Read the label

Proper Moisture

- of growing medium is important
- too wet and seeds can rot; too dry and they won't germinate

Like a wrung-out sponge



Photo: Adobe Stock

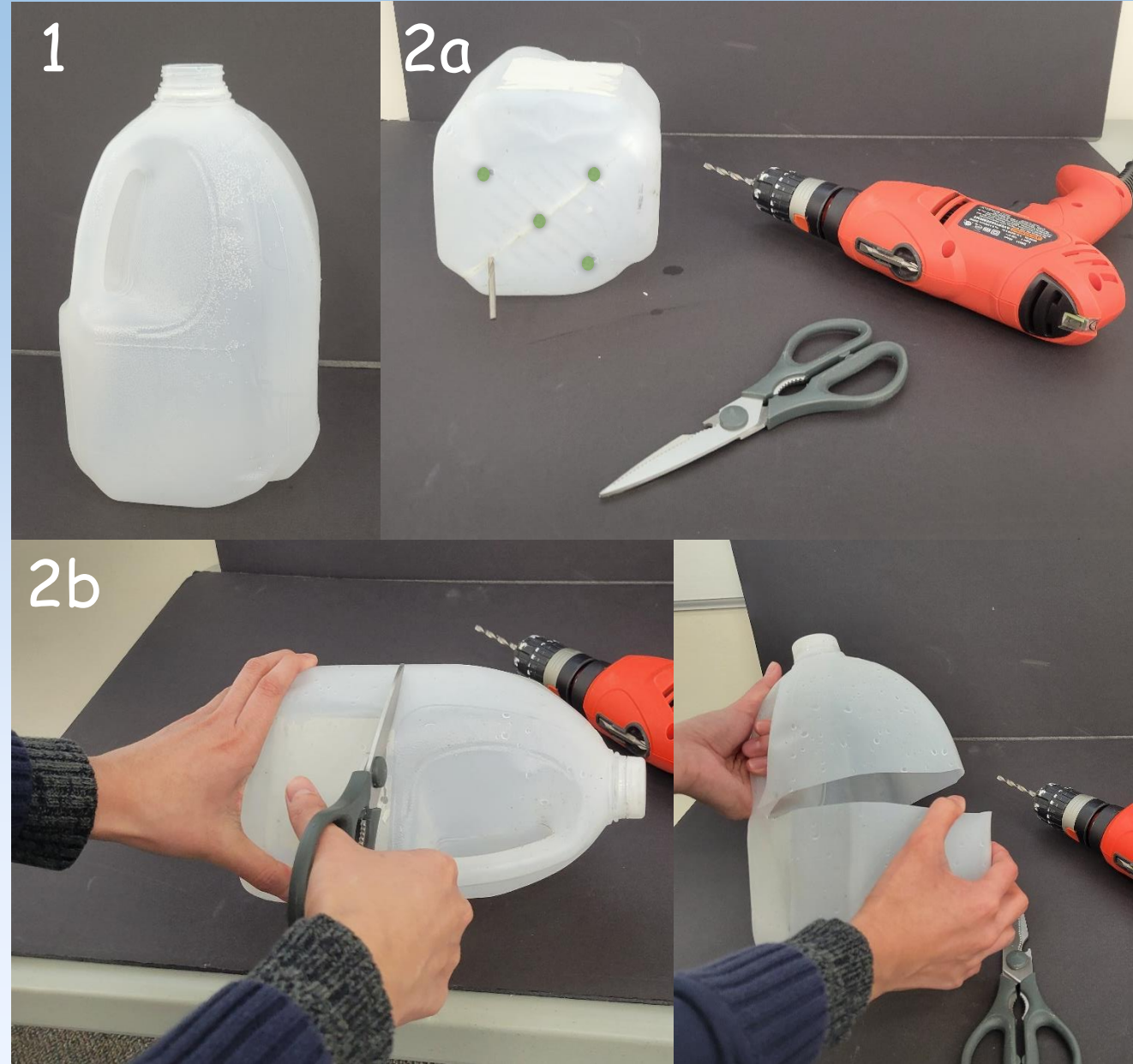
Containers

- Variety to choose
- Translucent - not opaque
- Deep enough for 3 inches of soil



Winter Sowing - 10 Easy Steps

1. Collect and wash containers
2. Cutting
 - a) Make drain holes in bottom of jug
 - b) Cut hinge
3. Add coffee filter/newspaper
4. Add water to potting soil & mix
5. Prepare labels
6. Plant seeds
7. Seal container
8. Care of jugs and containers
9. Open in spring on warm days
10. Transplant seedlings



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6. Planting Your Seeds

- Plant only one type of seed per container
- Mark your containers—inside and out
- Mix tiny seeds with coarse sand or vermiculite and sprinkle on top of mixture
- Larger seeds— use a pinch per container
- Lightly press seed in and cover with thin layer of growing medium
- Spritz with water lightly and seal



Photo credit: CCMG

Methods of Planting



Photo: Molly Moore

Placing seeds versus hunk of seeds

7. Seal Container



Photo credit: CCMG

8. Care of Jug and Containers

- Do not put caps on jugs
- Place in protected area safe from pets, wild animals, strong winds, but be sure they are exposed to the elements.
- Place in direct sun.
- Monitor dampness. Look for condensation. Add water only if soil dries out.
- Resist the urge to meddle with Mother Nature.



Spring

Seeds Have Germinated - Now What?

- Open container during the day after 1-2 sets of true leaves appear.
- Make sure young seedlings are getting enough water and air flow.
- Unexpected warm spell after germination
 - Open container and move into the shade.
 - Direct sun and/or heat can harm tiny seedlings.
- Unexpected cold spell after germination if temperature drops below freezing.
 - You may temporarily need to reseal container, or add sheet, blanket, or row cover.



9. Transplanting Seedlings - After Frost

- Open containers to acclimate 2-3 days before transplanting.
- Transplant after seeds sprout at least two true leaves.
- Pull individual plants apart gently. Roots are very fragile!
- Use sharp knife to cut hunk 'o seeds brownie-style.
- You can pot up or direct plant.
- Water thoroughly as any other transplants.



Photo credit: CCMG

Popular Ecotype Native Flowers

Sunny, Medium-Dry Garden: Perennials for Spring Blooms, Apr-Jun



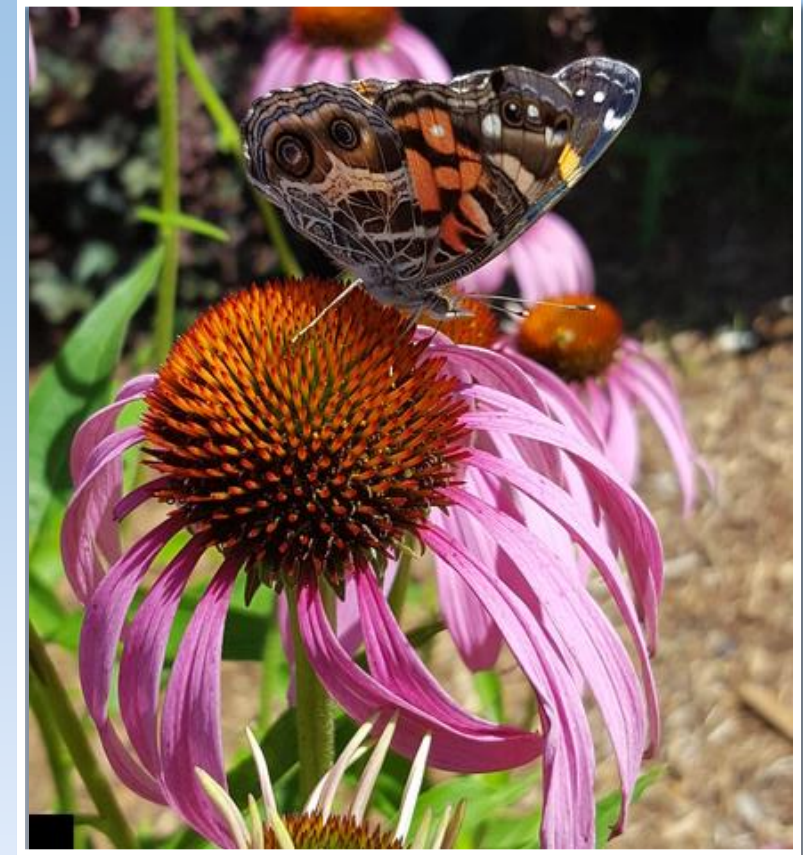
False Blue Indigo, *Baptisia australis*: 3-4 ft tall, zones 3-9, deep taproot, needs space, nitrogen fixer, cultivars available

Photo: Ansel Oommen, Bugwood.org



Huskers Red, *Penstemon digitalis*: 3 ft tall, zones 3-8, attractive foliage, may reseed, host plant for Checkerspot

Photo: John Ruter, University of Georgia, Bugwood.org



Coneflowers, *Echinacea purpurea*: 2-5 ft tall, zones 3-8, cultivars available but straight species is best for pollinators & birds

Danesha Carley, NC State University, Bugwood.org

Sunny, Medium-Dry Garden: Perennials for Spring Blooms, Apr-Jun



Wild Columbine, *Aquilegia canadensis*: 2 ft tall, zones 3-8, will reseed, attractive groundcover foliage effect

Photo: Chris Evans, University of Illinois, Bugwood.org



Pussytoes, *Antennaria plantaginifolia*: 1 ft tall, zones 3-8, ground cover, nectar & host plant for American Lady butterfly

Photo: Vern Wilkins, Indiana University, Bugwood.org

Sunny, Medium-Wet Garden: Perennials for Summer Blooms, Jun-Aug



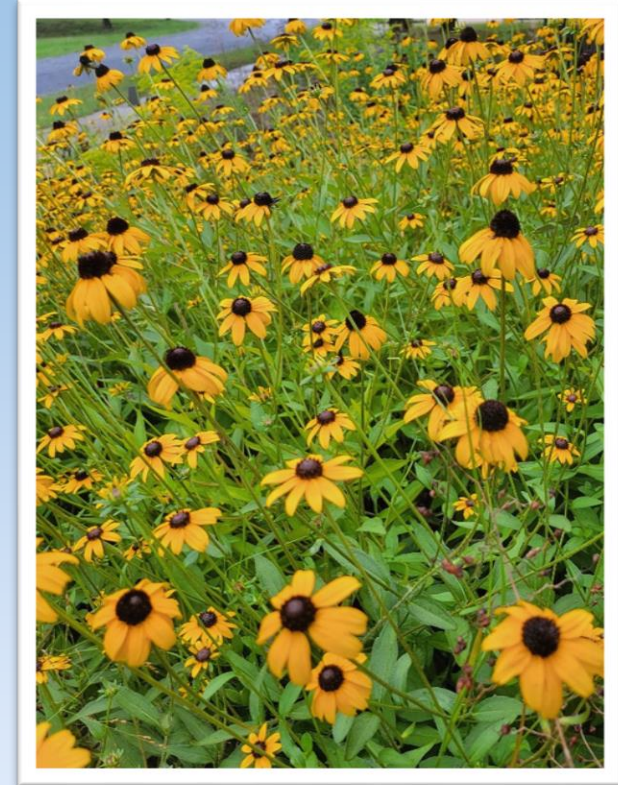
Bee Balm, *Monarda didyma*:
2-5 ft tall, zones 4-9, DR & RR,
hardy, will spread by rhizomes,
host & nectar plant, deadhead
for reblooming

Photo: John Ruter, University of Georgia,
Bugwood.org



Blazing Star, *Liatris spicata*:
2-4 ft tall, zones 3-8, DR

Photo: CCMG



Black-eyed Susan,
Rudbeckia spp: 1-3 ft tall,
zones 3-7, DR, will reseed
and spread, host & nectar
plant

Photo: Julia Rycyna

Sunny, Medium-Wet Garden: Perennials for Summer Blooms, Jun-Aug



New York Aster,
Symphyotrichum novi-belgii:
1-4 ft tall, zone 4-8, DR

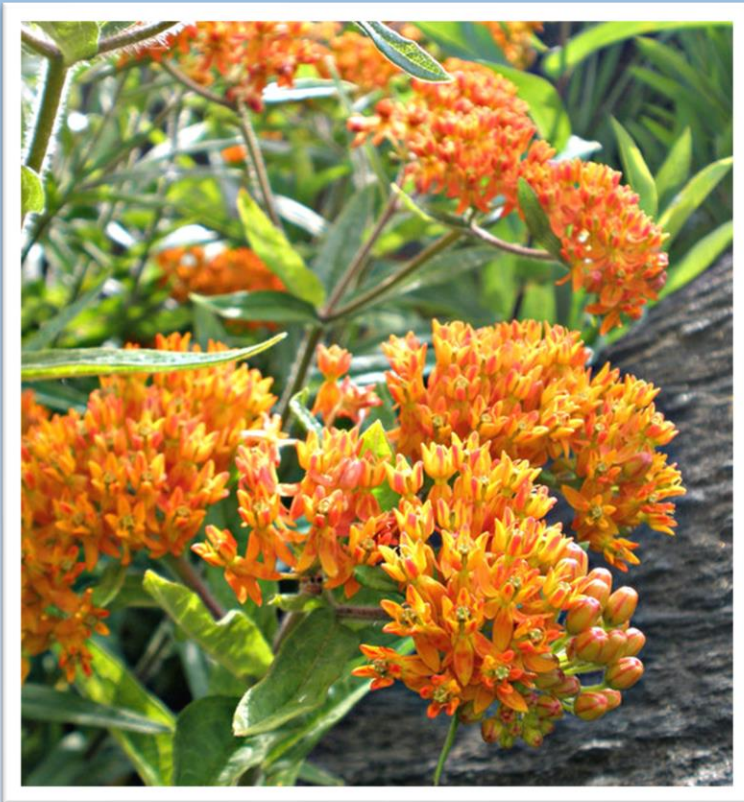
Photo: CCMG



Joe Pye Weed,
Eutrochium dubium: 2-5 ft tall,
shorter cultivars available,
zone 3-9, DR

Photo: CCMG

Sunny, Medium-Dry Garden: Perennials for Summer Blooms, Jun-Aug



Butterfly Weed, *Asclepias tuberosa*: 1-3 ft tall, zones 3-9, slow to establish, aphids can be nuisance, deep taproot, can reseed, Monarch host & nectar plant

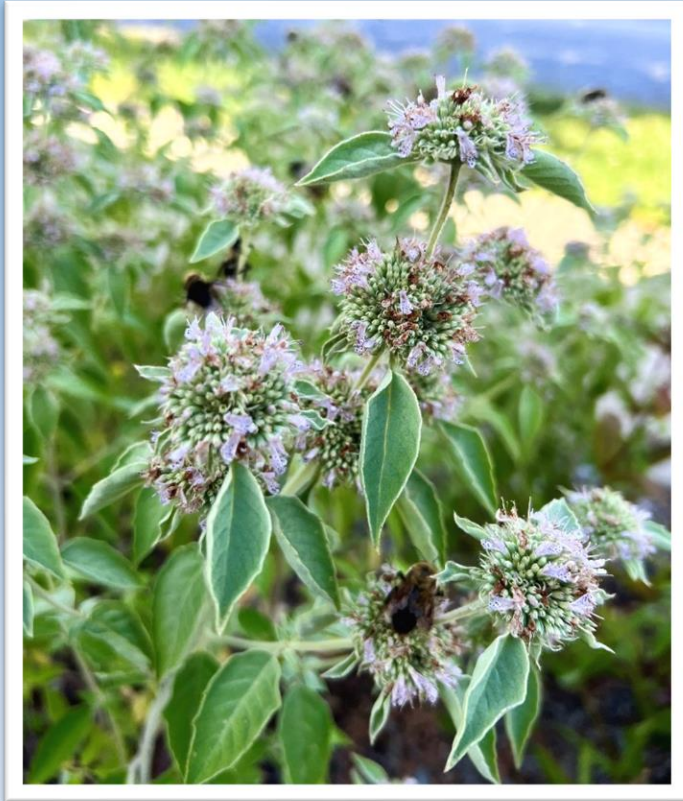
Photo: Ansel Oommen, Bugwood.org



Common Milkweed, *Asclepias syriaca*: 4-5 ft tall, zones 3-9, can reseed, irritating sap, spreads vigorously by rhizomes, Monarch host & nectar plant

Photo: Rob Routledge, Sault College, Bugwood.org

Sunny, Medium-Dry Garden: Perennials for Summer Blooms, Jun-Aug



Hoary Mountain Mint,
Pycnanthemum incanum: 3-6 ft tall,
zones 4-8, DR, can reseed and
spread quickly

Photo: CCMG



Wild Bergamot, *Monarda*
fistula: 2-4 ft tall, zones -
9, nectar & host plant, can
reseed, deadhead for
re bloom

Photo: Elmer Verhasselt, Bugwood.org

Winter Sowing Challenges

- Improper seed sowing or containers
- Improper watering
- Humidity levels - can get too high, can cause damping off (open container to dry out)
- Location & security
- Unpredictable weather
- Not transplanting timely
- Pests and critters - may damage or destroy containers
- Impatience
- Not winter-sowing



Photo Tina Webster UME MG Washington Co

UME Extension Native Pollinator Demonstration Gardens Committee

- Develop and showcase model gardens
- Offer self-guided demonstration gardens or guided tours
- Provide educational talks or workshops
- Advise on designing native gardens
- Promote sustainable gardens and habitats

Winter Sowing

Questions?

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PLANT CLINIC

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POLLINATORS

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University of Maryland Extension
Master Gardener Program

Charles County

Extension Demonstration Gardens Project
Committee

Contact Information

Charles County Master Gardeners

- Website: <https://extension.umd.edu/locations/charles-county/master-gardener>
- Facebook: Charles County Master Gardeners, University of Maryland Extension
- Julia Rycyna, D.P.M., Home Horticulture Educator/Master Gardener Coordinator
- Address: 9501 Crain Highway, La Plata, MD 20646
- Phone: 301-226-7513
- Email: jrycyna@umd.edu

Native Plant Sales

- Adkins Arboretum: On the eastern shore of MD. Maintain a native plant nursery and hold periodic sales.
Website: www.adkinsarboretum.org
- Butterfly Alley, Hollywood, Maryland
Website: <https://butterflyalley.net>
- Chesapeake Natives: Non-profit nursery at Rosaryville State Park in Upper Marlboro. Website: www.chesapeakenatives.org
- Calvert County Master Gardeners Plant Sale - May 3
- Charles County Master Gardeners Plant Sale -
May 17 at La Plata Farmer's Market
- Maryland Native Plant Society - [Maryland Native Plant Society - Native Plant Nurseries \(mdflora.org\)](http://mdflora.org)

Reference Material on Pollinators

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5. Xerces Society, GARDENING FOR BUTTERFLIES, Timber Press, 2016.
6. Landscaping with Native Plants - Maryland Native Plant Society
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8. Home Garden Information Center, <https://www.extension.umd.edu>

Reference Material on Germination/Propagation

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<https://www.pubs.ext.vt.edu/426/426-001/426-001.html>
2. University of Illinois Urbana Champaign Extension. Seed stratification: What seeds require cold treatment.
<https://extension.illinois.edu/blogs/good-growing/2022-01-27-seed-stratification-what-seeds-require-cold-treatment>
3. Iowa State University Extension and Outreach. Milkweed Planting Project.
<https://storemedia.extension.iastate.edu/SecondaryFiles/Milkweed%20Cold%20Stratification%20Process.pdf>
4. Rutgers, The State University of New Jersey Cooperative Extension. Native Plant Seed Propagation. <https://njaes.rutgers.edu/fs1329/>
5. University of Minnesota Extension. Starting Seeds Indoors
<https://extension.umn.edu/planting-and-growing-guides/starting-seeds-indoors#when-to-plant-seeds-1178964>