

NATIVE PLANT NOTES

ESTABLISHING A NATIVE MEADOW

Introduction

Americans have a peculiar love/hate relationship with lawns. The modern lawn is a distinctly American invention. We lavish them with an annual average of 70 million tons of fertilizer, 30-60% of our urban water supply, and spend an annual average of \$40 billion on our lawns, followed by countless mowing hours requiring over 800 million gallons of gasoline.

Over the course of the last twenty years, we've begun to look at more sustainable alternatives to lawns. One model can be found in the plant communities that surround us. The most natural alternative to lawns in Western Pennsylvania is woodland, but another option is meadow. Indeed many plants that make up the true "prairies" of the Midwest still occur in Pennsylvania as reminders of periods in the last 10,000 years when prairies expanded eastward during warm, dry periods. Today, we can create low-maintenance meadows of Western Pennsylvania native plants that attract butterflies, birds, and other wildlife, and serve as beautiful transitions to woodland areas in the natural garden.

How to Establish a Meadow of Natives

Site selection

How much lawn area do you really need? Where would meadows look best? Think about how to make transitions from more formally landscaped areas to the meadow.

Site analysis

Is the site moist or dry? How steep is it? Is the soil deep and rich, or shallow and dry? Does it receive full sun?

Site preparation

The keys to proper site preparation are controlling weeds and providing a good seed bed.

Selecting a planting method

Small sites (2500 square feet or less) can be planted entirely with small transplants or "plugs" of native grasses and wildflowers. Larger sites (up to one acre) can be planted with a combination of seeds and plugs. For sites over one acre, seeding is usually the most cost-effective method.

Plant selection

Use plant lists, like the one included here, to select the proper species for your site. Native Grasses must be included to help exclude weeds.

Soil preparation

Solarize the area in early spring by covering it with thick

plastic for 40 days, allowing the sun to heat the area and kill grass, seeds and weeds. Remove the plastic, and then do shallow tilling. Several weeks later, weed seeds may have germinated and can be killed with another shallow cultivation. Follow this by preparing a finely graded seed bed prior to planting. Do not add fertilizer.

Planting

Seeding rates will vary, but generally you'll need about 40-60 seeds per square foot or about ¼ pound per 1,000 square foot (10 pounds/acre). Spring seeding is usually done from about May 15 to June 30. The seed should be mixed with an inert material (like sawdust, peat moss, or sand) then broadcast over the area. The seed should then be shallowly raked or lightly rolled, and finally lightly mulched with very clean materials such as fresh grass clippings or a pelleted paper mulch.

Plugs can be trowel-planted following a seeding operation. If the planting is to be all plugs, follow the above steps (except seeding) and plant through the mulch layer 18-24 inches apart.

Sheet Mulching, an alternative "no-till" method for converting lawn to meadow.

- Cut vegetation as low as possible.
- Lay down cardboard or thick newspaper, then water thoroughly.
- Apply at least 4 inches of organic matter.
- Apply 2-4 inches of mulch.
- Poke a hole in cardboard and plant large seeds, tubers and small seedlings in organic matter.

First-year maintenance

Mow the meadow to 4-6 inches each time it reaches 12 inches. A string trimmer works well. If the meadow was established entirely by transplants, it can be hand weeded the first year.

Second-year maintenance and beyond

Keep an eye out for problem weeds that can be controlled by spot applications of hand weeding or additional mowing. By the third year, one mowing or burning** in early spring should be sufficient.

**Check your municipality for rules on burning

Native Grasses for Meadows

Common Name	Scientific Name	Height in Feet	Moisture (Dry-Moderate-Moist)	Comments
Bottlebrush Grass	<i>Elymus hystrix</i>	2-4	Dry/Moderate	Pretty seedheads
Little Bluestem	<i>Schizachyrium scoparium</i>	2-4	Moderate	Nice fall color
Indian Grass	<i>Sorghastrum nutans</i>	3-6	Dry/Moderate	Nice fall color

Meadow Wildflowers

Common Name	Scientific Name	Height in Feet	Bloom time, Color	Moisture (Dry-Moderate-Moist)	Comments
Nodding Wild Onion	<i>Allium cernuum</i>	1	June, Pink	Dry/Moderate	Nice for short meadows
Thimbleweed	<i>Anemone virginiana</i>	2-3	July, White	Dry	Durable
Turtlehead	<i>Chelone glabra</i>	3	August, White	Moist	Wet areas
Tall Coreopsis	<i>Coreopsis tripteris</i>	4-8	July, Yellow	Moderate	Birds like seedheads
Joe-Pye Weed	<i>Eutrochium sp.</i>	4-6	Sept., Pink	Moderate/Moist	Attracts Butterflies
Oxeye Sunflower	<i>Heliopsis helianthoides</i>	4	July, Yellow	Dry/Moderate	Long bloomer
Blazing Star	<i>Liatris spicata</i>	3-4	July, Purple	Moderate/Moist	Upright bloom spikes
Turk's Cap Lily	<i>Lilium superbum</i>	4-5	July, Orange	Moderate/Moist	Unusual Flower
Monkey Flower	<i>Mimulus ringens</i>	4	July, Blue	Moderate/Moist	Naturalizes
Thin-leaved Coneflower	<i>Rudbeckia triloba</i>	2-3	July, Yellow	Moderate	Long bloomer
Whorled Rosinweed	<i>Silphium trifoliatum</i>	3-7	August, Yellow	Moderate	Tall
Vervain	<i>Verbena hastata</i>	4-5	July, Violet	Moist	Fast growing biennial
New York Ironweed	<i>Vernonia noveboracensis</i>	4-8	Sept., Purple	Moist	Late bloomer
Culver's Root	<i>Veronicastrum virginicum</i>	3-5	August, White	Moderate-Moist	Upright flowers

Native Plant Nurseries for Meadow Plants

Audubon Center for Native Plants
614 Dorseyville Road
Pittsburgh, PA 15238
aswp.org

Wetland Supply
194 Goodview Drive
Apollo, PA 15613
wetlandsupply.com

Ernst Conservation Seeds
9006 Mercer Pike
Meadville, PA 16335
ernstseed.com

Audubon Suggested Reading List – Available for purchase at the Audubon Nature Store

Bringing Nature Home by Douglas W. Tallamy
Milkweeds, Monarchs and More by Rea, Oberhauser and Quinn
The Wild Garden by Robinson & Darke
National Audubon Society Field Guide to Wildflowers
Newcomb's Wildflower Guide by Lawrence Newcomb

Wildflowers of Pennsylvania by Mary Joy Haywood
Understanding Perennials: A New Look at an Old Favorite by William Cullina
Attracting Native Pollinators by the Xerces Society
Native Plants of the Northeast by Donald J. Leopold

For further info and plant purchases: Audubon Center for Native Plants 412-963-6100 • www.aswp.org