



Michigan Technical Note

USDA-Natural Resources Conservation Service

Biology Technical Note # 21

Sweetgrass Collection, Propagation, and Harvest

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Purpose:

This document was produced by the staff at the Rose Lake Plant Materials Center in East Lansing, MI and the Bridger Plant Materials Center in Bridger, MT. The purpose of this document is to provide recommendations for the collection and propagation of sweetgrass [*Hierochloe odorata* (L.) P. Beauv.]. It also provides recommendations on techniques for harvesting the leaves of sweetgrass during the growing season.

Sweetgrass [*Hierochloe odorata* (L.) P. Beauv.]

Collection, Propagation, and Harvest

Sweetgrass, also known as wiingash and vanilla grass, is a moderately tall, rhizomatous perennial. The fragrance of the leaves is due to the presence of coumarin, a natural anticoagulant. The geographic range of this grass is quite extensive, with populations found throughout the United States, Canada, and Eurasia. In the Great Lakes region, the Northern Great Plains, and Rocky Mountains, it is usually found in wet meadows, low prairies, edges of sloughs and marshes, bogs, shaded stream banks, and lakeshores.

Sweetgrass Identification

Distinguishing sweetgrass from other grass plants can be challenging. Here are a few tips to help with sweetgrass identification:

- Sweetgrass has white rhizomes (underground stems).
- Leaves have a rough edge and have very shiny, hairless undersides.
- Often has a reddish-purple color near the base of the plant.
- Sweetgrass flowers very early in the growing season (March–May) before most grasses start flowering.



Figure 1. Sweetgrass white rhizome with new shoot.



Figure 2. Sweetgrass leaves. Shiny, hairless blades.



Figure 3. Sweetgrass seed heads.



Figure 4. Sweetgrass flower (detail).

Plant Collection and Separation

Collecting sweetgrass plants for transplanting from a field or garden is relatively easy (see a video demonstration here: https://www.youtube.com/watch?v=4UdQ6_ZtPwc). Insert a shovel into the ground so that the tip is deeper than the rhizome and root zone. In most cases the rhizomes and roots will be 10 inches deep or less. Remove as large a clump of sweetgrass as possible, minimizing rhizome and root breakage. Carefully remove the soil from around the rhizomes and roots by soaking the root mass until soil disperses into the water. Keep the plants moist until transplanting. If collecting sweetgrass from a garden area for transplant to another location, dig plants in a pattern so that the remaining plants will be able to fill in the disturbed area within 1–2 years.

Test the soil prior to transplanting. Apply phosphorus, potassium, and other nutrients (except nitrogen) as recommended by the soil test. Nutrient applications should follow recommendations for cool season grasses in your area. Nitrogen can be applied after the plants are established.

If the planting stock needs to be separated, ensure that each “plantlet” has a rhizome or rhizome bud. Cover each plant or rhizome with a shallow layer of light, loose soil. The green, leafy material should stay above the soil surface. Provide full light.

Plantlets that are field-planted should be installed on 2–3 ft centers (absolute minimum 1 foot). Plants will fill in, making solid stands of sweetgrass in 1–3 years. Cut the leaves of the plantlets to 3 or 4 inches in height after transplanting. This will encourage root development and reduce moisture stress on the plant.

Plants must be kept moist and need to receive frequent watering. Plants may need to be protected from herbivores, such as rabbits or gophers.



Figure 5. Sweetgrass with exposed root system.



Figure 6. Sweetgrass planted in flats with green tissue above the soil surface.

Plant Maintenance and Foliage Harvesting

Weed control helps reduce competition for light, nutrients, and water, and encourages vigorous plant growth and development. To avoid damaging small seedlings, wait until plants have grown to a minimum height of 4–6 inches before beginning routine weeding and vegetation removal. Sweetgrass prefers a moist environment, so water the site often, especially in areas with low precipitation. The rhizomes quickly develop. New shoots will emerge during the first growing season. The grass will continue to spread if left undisturbed.

Applying nitrogen fertilizer in the first year of establishment encourages weed growth and is not recommended. Nitrogen may be applied beginning one year after establishment. Use fertilizer rates recommended for cool season grasses in your area.

The leaves can grow approximately 12–24 inches long. They can be harvested once or twice a year. The foliage is very relaxed. It will be necessary to carefully lift the leaves and cut the stems close to the ground (leave 1–2 inches of plant stem). Some sources recommend snapping the leaves off at ground level. **BE CAREFUL NOT TO DISTURB THE ROOTS IF THIS METHOD IS USED.**

The actual number of leaf harvests per year will depend on climatic conditions, seasonal timing, and the variety of sweetgrass. Plan the final harvest (late summer in northern climates) so that there will be adequate time for the plants to prepare for the onset of cold temperatures and winter conditions. If this natural hardening-off process does not occur, it will eventually have a detrimental effect on the long-term persistence and survival of the stand.

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Photo Credits

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Figure 7. Production field of Spirit germplasm sweetgrass at the Bridger, MT Plant Materials Center.

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