Native Wildflower Seed Production in Florida

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Growers in Florida are producing seed of native herbaceous annual and perennial wildflowers. Not only are these wildflowers native but they are derived from naturally occurring populations in Florida. Therefore, they are already adapted to Florida's conditions in meadows, roadsides, natural areas and other noncultivated sites.

Why is that important? Wildflowers that are native to Florida but are derived from other parts of the country do not necessarily perform well under Florida's environmental conditions, especially in noncultivated sites like those mentioned above. The same applies to many of the showy cultivars of native wildflowers. These cultivars, which are often available in retail outlets and seed catalogs, are the result of extensive selection and testing. However, cultivated varieties are typically introduced into the trade based on their performance under garden conditions, not the harsher conditions of Florida's roadsides and meadows.

Species

Coreopsis leavenworthii

Phlox drummondii

Rudbeckia hirta

Florida's wildflower seed producers are currently focusing on spring and summer flowering species including our state wildflower, *Coreopsis* (tickseed). There are 14 species of *Coreopsis* in Florida, three of which are in production. Lanceleaf Tickseed (*Coreopsis lanceolata*) and Goldenmane Tickseed (*Coreopsis basalis*) flower in the spring. Leavenworth's Tickseed (*Coreopsis leavenworthii*), which is found mainly in Florida, flowers in spring and summer in northern Florida but all year round in southern Florida. Other species include the popular Drummond's Phlox (*Phlox drummondii*), which carpets our roadsides in the spring with mainly pink and purple flowers, Blanketflower (*Gaillardia pulchella*), which thrives in dry sandy soils, and the ever popular Black-eyed Susan (*Rudbeckia hirta*).

Growers are beginning to grow fall flowering species including Giant Ironweed (*Veronia gigantea*), Blazing Star (*Liatris* spp.), Golderod (*Solidago* spp.), and even some native grasses. Limited amounts of seed of some of these species should be available in 2006.

Production Practices

Seed in Florida is being produced in two types of cropping systems. Some growers are producing crops in a traditional field planting. Most wildflowers can be grown this way.

The other method for wildflower seed production is the landscape fabric system. In this system, wildflowers are grown in narrow rows between parallel strips of woven landscape fabric to minimize weed problems and facilitate harvesting. Rows are typically 2 to 4 inches wide, although some growers use wider rows. Ripe seed falls to the fabric where it is harvested by vacuum. Since the harvest mostly consists of mature seed, the cleaning process is simpler and less costly than if a crop is harvested by combining as in field plantings. Yields tend to be greater with the landscape fabric system. Drummond Phlox must be grown in this system because of the manner in which it disperses seed. Other species are being grown with this method as well, especially those species that flower for several months.

Traditional field planting

Phlox in rows with landscape fabric

Another Production Option

Naturally occurring stand of *Coreopsis basalis*

A low-cost option is to harvest a naturally occurring stand of wildflowers. The stand should be relatively pure. This would be ideal for those in the bahiagrass seed business who are considering diversifying, and a combine, seed drying and seed cleaning facility are already available. For example, in northern Florida there are many acres of Goldenmane Tickseed growing in fields used for hay or other crops. For a reasonable fee, landowners are usually amenable to having someone harvest the seed.

Facilities and Equipment – Needs and Costs

Land

Landscape fabric system

Wildflower seed production is ideal for those that already produce crops—from agronomic crops to vegetable crops to ornamental crops. In many cases, existing equipment and facilities can be adapted for wildflower seed production.

Generally, about 10 acres is needed for field production because the cost for outsourcing combine harvesting is relatively high for fewer acres. For the landscape

Land
(continued)

fabric system, at least one acre is needed. However, when first starting out, experiment with one to three species on about 1/4 to 1/2 acre in a landscape fabric system. Woven landscape fabric plus landscape staples will cost about $3,000 to $3,500 per acre. Fabric costs have risen sharply over the past few years because fabric prices are tied to oil prices.

Select a site in full sun that has well-drained soil. Such a site should be chosen with the goal of minimizing weed growth. The best site would be one with sparse to moderate growth of bahiagrass and few to no broadleaf weeds or nutgrasses. To minimize weed growth, avoid sites where weed growth is dense because there is probably a substantial weed seed bank in the top 2 to 3 inches of soil. Inhibiting germination and growth of weeds at sites that strongly support their presence could be costly or futile. Also avoid sites with a considerable amount of yellow or purple nutgrass (*Cyperus esculentus* and *Cyperus rotundus,* respectively). These sedges can spread rapidly, are extremely competitive, and are difficult to eliminate. The only practical option for establishing a large field planting is to use seed.

Seed or Transplants?

Mechanical row seeder

Coreopsis leavenworthii flowers in late spring and summer in northern Florida but all year round in southern Florida.

As of spring 2006, most seed cost about $50 to $100 per pound. Fields can be planted with a no-till seed drill. A much less expensive option is a manually operated broadcast spreader. It will take about 45 to 60 minutes to sow seed on one acre.

For the landscape fabric system, purchasing transplants (~$800 to $2,100 per 1/4 acre, depending on plant spacing) is much more expensive and time consuming. However, a pre-emergence herbicide can be applied within a few days after transplanting to prevent weed growth while the wildflowers become established. The cost for herbicide on a per acre basis will be very low since it is only being applied to narrow rows. If seed is used, plots must be hand weeded since there are no herbicides that can be applied until seedlings are well established. Hand weeding may be necessary for one to several months and could be very labor intensive. The wider the space between strips of fabric, the greater the cost of hand weeding.

Seed or transplants of Florida ecotypes of native wildflowers can be purchased from the Wildflower Seed and Plant Growers Association, Inc., commonly

known as the Florida Wildflower Seed Co-op. Wherever transplants or seed is purchased, make sure that the original source was from a naturally occurring population in Florida. Obtain documentation from the seller stating that the seed or transplants have been certified as originating in Florida. This documentation will be needed when it is time to certify your seed (see "Seed Testing and Certification"). The Florida Wildflower Seed Co-op sells seed that is certified as such. It is commonly referred to as "Source Identified" or "Yellow Tag" seed. This is a critical issue because certified seed commands a higher price.

Seed or Transplants?

(continued)

Adequate moisture is critical during flowering and while the seed are maturing. Those growing field crops will need to rely on rain since applying supplemental irrigation is cost prohibitive. However, those using the landscape fabric system can economically irrigate their crops. A drip system (~$300 per acre) is often used. A simpler, less costly irrigation system (~$100) is a set of risers/sprinkler heads attached to old tire rims, concrete blocks, etc., with hose end fittings that allow a garden hose to be attached.

Irrigation

Irrigation tubes are buried in rows of soil

Irrigation
(continued)

Whichever system is used, include a fertilizer injector ($200 and up) if rows are less than 3 inches wide. Do not drill a new well solely for wildflower seed production. Too many years are required to recover the costs of a new well.

Chemicals

A fertilizer injector is patched into the irrigation pipe

Growers also need herbicides that selectively kill grasses that might be interfering with crop growth. However, postemergence grass herbicides can be expensive so pre-emergence herbicides should be used to inhibit growth of grass as well as broadleaf weeds. A backpack sprayer will cost $150 and up. Since weeds will be the major pest problem, only one sprayer should be necessary. Do not use an herbicide sprayer to spray any other type of pesticide. A wick applicator for directed applications of nonselective herbicides like glyphosate costs about $20 and up.

Fertilization at 10 to 35 pounds of nitrogen per acre can increase yields. For the landscape fabric system, a granular controlled release fertilizer can be used for rows over 3 inches wide. Apply a water-soluble fertilizer through the injection system for rows less than 3 inches wide.

Harvesting

Combine harvesting of field plots costs about $50 to $75 per acre, but the minimum charge is typically $500. A leaf vacuum for harvesting seed off landscape fabric can cost as little as $110. Vacuums designed to be pulled or mounted on an ATV or garden tractor will cost several hundred dollars.

Vacuum harvester

Drying

Begin drying the seed the same day it is harvested. A fan will facilitate drying. Alternatively, a drying bin can be constructed for less than $250. The bin is constructed of plywood with a porous false bottom through which warm air is blown. Openings in the false bottom need to be small enough that seed does not fall through. The warm air can be supplied by an old furnace fan. The warm air needs to be less than 100°F.

Wood drying bin

Cleaning

Seed cleaner

For seed cleaning, minimize costs while experimenting with seed production by working with an established seed producer that has seed cleaning equipment. The smallest air-screen cleaner, the work horse of seed cleaning, is about $5,000, plus the costs of screens (~$35 each).

The cost for outsourcing seed cleaning varies. Some will charge about $1.00 to $2.00 per pound of seed after it has been cleaned. Others will charge by the hour. Alternatively, travel to a grower with seed cleaning equipment and use it on-site or assist the grower in cleaning your seed. Seed should be at least 90% pure and not contain any more than 1% weed seed; both of these standards are on a weight basis. There is zero tolerance for seed, tubers, rhizomes, or stolons of noxious weed species.

Experiment with different seed harvesting, drying, or cleaning methods. Equipment designed specifically for wildflower seed production is very limited.

Seed Testing and Certification

Seed must be tested prior to sale. Purity, germination and viability testing costs about $80 to $100 for each wildflower seed crop that will be sold. It is best if the viability test is run separately. A viability test is sometimes accepted in lieu of a germination test because of the nature of the wildflower seed being produced here in Florida.

Some buyers, like the Florida Department of Transportation, might require that the seed be certified as "Source Identified," which is also referred to as "Yellow Tag." Seed certfication is conducted by the Southern Seed Certification Agency, a joint agency of Florida and Alabama. Certification currently costs $250 per year, regardless of the number of species that were harvested, plus $0.10 per pound of seed to be sold.


SOURCE IDENTIFIED SEED

SSCA

CERTIFICATION WARRANTY - DISCLAIMER

SPECIES
CIENFUEGOSIA YUCATENENSIS

COMMON NAME	KIND
BITTERWEED	WILDFLOWERS
CERT. #	LOT #
1-3	0031
PURE SEED	INERT MATTER
90.00 %	8.50 %
WEED SEED	OTHER CROP SEED
1.00 %	.50 %
GERMINATION	HARD SEED
60.00 %	.00 %
DATE TESTED	NET WT.
8/2005	25 LBS.
NOXIOUS WEED SEED	ORIGIN COUNTY/STATE
NONE	DADE - FLORIDA

PRODUCTION COUNTY/STATE
DADE - FLORIDA

FLORIDA WILDFLOWER COOP
ALACHUA, FL

MEMBER OF ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES

Seed certification tag example

Memberships

Seed producers can join the Florida Wildflower Seed Co-op, a for-profit new generation co-op. Currently, it is only $100 to join as a non-voting Associate Grower. Full membership, which includes voting rights plus shares in the co-op, currently costs $500. Minimum production standards must be met in order to apply for full membership.

Growers that are serious about becoming part-time seed producers are strongly encouraged to enroll in the Florida Agricultural Promotional Campaign, also known as *Fresh from Florida,* for $50. It is a marketing program run by the Florida Department of Agriculture and Consumer Services (FDACS) that is worth every cent, and then some.

Markets for Native Wildflower Seed

Existing and potential buyers are those in Florida and in the coastal plains region of the lower south who oversee the purchase of seed and plant materials for:

- Roadsides
- Restoring and enhancing
  - Federal and State forests
  - Water Management Districts
- Phosphate mine reclamation

Other buyers include those involved in creating or enhancing natural areas:

- City, County and State parks
- Commercial and residential developments
- Owners of large tracts of land

Where Can I Get Help?

Florida seed growers have proven to be very helpful to each other. They realize that this type of wildflower seed has the potential to be very profitable based on the demand, and recognize that the path to success is to continue to cooperate.

Contacts:

Wildflower Seed and Plant Growers Association, Inc.
PO Box 776
Crescent City, Florida 32112
(352) 988-8117

Email: businessmanager@floridawildflowers.com
www.floridawildflowers.com

Research and extension publications:

http://nfrec.ifas.ufl.edu/norcini/publications.htm

Marketing and development information:

Florida Department of Agriculture and Consumer Services
www.Florida-Agriculture.com
(850) 488-4132

Becoming a Wildflower Seed Producer

And finally, if you decide to become a wildflower seed producer:

1. Keep your day job.
2. Start small, regardless of farming experience.
3. Be prepared to invest a lot of sweat equity.

*Disclaimer:
The Florida wildflower industry is a young but growing industry. There is good to excellent profit potential over the long term and broad-based public/private support and demand for wildflowers and this type of seed.

As with any new business, it could take up to 5 years to become profitable. This is dependent on whether you're diversifying an existing farm operation or a landowner starting from scratch. Since the industry is new to Florida, there is much to be learned about the most efficient methods of production and marketing.

Florida Department of Agriculture
and Consumer Services

Charles H. Bronson, Commissioner

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Designed by:
Florida Department of Agriculture
and Consumer Services

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Florida Department of Agriculture
and Consumer Services

Charles H. Bronson, Commissioner