

Equipment Needed

Note: See the publication, *Biological Control of Purple Loosestrife – 4-H Leader’s Guide (4-H 918, available at Purdue Media Distribution), Appendix E, Outdoor Rearing of *Galerucella* Beetles, for more information.*

The following instructions are for 8 to 10 purple loosestrife rootcrowns to be potted and placed in a children's wading pool with water. Each pot will have a tomato cage placed into it and a fine mesh bag that serves as a cage pulled over the top. After 4 to 6 weeks of plant growth, you will place approximately 25 *Galerucella* beetle adults in each cage. Six to eight weeks later 500 to 1,500 new beetles will be produced from each pot. With 10 pots in each wading pool, 5,000 to 15,000 or more adult beetles will be produced for release into a purple loosestrife-infested wetland.

A typical timeline for rearing and release of *Galerucella* beetles is given below. Your dates will vary depending on your location and weather.

Event	Approximate Date
Pot rootcrowns	April 5
Place beetles into cages	May 10
Release beetles into wetland	June 30

The first step will be to assemble the materials necessary for the rearing process, A list of supplies needed for the beetle rearing kit and their approximate cost is listed in the box below.

Item	Quantity	Cost
Wading pool (6-foot diameter)	1	\$15.00
Wire tomato cage (42 in.)	10	\$2.50
Soilless mix (<i>Baccto High-Porosity Professional Planting Mix, 40 qt., or similar product</i>)	2	\$4.00
Osmocote™ (or similar) fertilizer(14-14-14 NPK)	2.5 lbs	\$12.00
Four gallon pot	10	\$1.00
Six-foot metal fence posts (T-post)	4	\$2.00
Heavy duty string	1	\$1.50
Sleeve cage (fine mesh netting,	10	\$6.00
Aspirator (if desired - to remove beetles from the plants)	1	\$15.00
PVC pipe (10 ft.)	4	\$20.00
Total		\$79.00

Suppliers

You may be able to purchase all of your supplies from a local garden center or nursery (they might even donated materials). Or, you may wish to order your supplies. Costs can vary considerably depending on the supplier. Be sure to call suppliers for current pricing, ordering restrictions, and shipping costs. Some suppliers have minimum purchase orders.

Collecting Purple Loosestrife Rootcrowns

Before you grow the plants, purple loosestrife rootcrowns must be collected. The rootcrown is the portion of the plant that survives the winter. It consists of hard, woody storage roots and stem buds that arise from them. Rootcrowns are used to establish plants rather than establishing from seed because the rootcrowns will produce multiple, hardy stems in much less time and with less effort.

Root crowns may be collected in the late fall after purple loosestrife topgrowth has died, or early in the spring prior to new growth. Leave the rootcrowns outside so they don't begin to grow. Collect from mature stands of purple loosestrife that are two years or more old. Mature stands have larger rootcrowns that contain more stored energy for plant growth.

Locate groups of dead stems from the most recent year's growth and dig around these "clumps" to dislodge them from the soil. A tile spade, one with a long, narrow blade, works well for this type of digging, but any spade will work. Use the spade to break apart large rootcrowns into sizes that will fit into the pots being used. These will be roughly eight inches in diameter. Using the spade, knock away loose soil from the rootcrowns and cut away all but about six inches of the dead stem topgrowth. It is not necessary to clean all soil and debris from the rootcrowns. Live, healthy rootcrowns are tan to brown on the outside and are pink to whitish on the inside and are somewhat flexible. Rootcrowns that are dead will be charcoal-black and brittle. Sometimes buds can be found sprouting from the rootcrowns, ensuring a healthy rootcrown has been chosen.

Root crowns collected in the spring may be potted immediately, or stored outdoors for a short time. Keep the rootcrowns moist until ready for planting. Fall-collected rootcrowns may be stored outdoors. If collecting in the fall, gather twice as many rootcrowns as you will need in order to compensate for winterkill and other factors that can damage the rootcrowns. Moisten the pile, then cover it with a tarp to help keep rootcrowns moist and out of the light. Do not cover with straw, as this attracts nesting animals that may feed on the rootcrowns during the winter months.