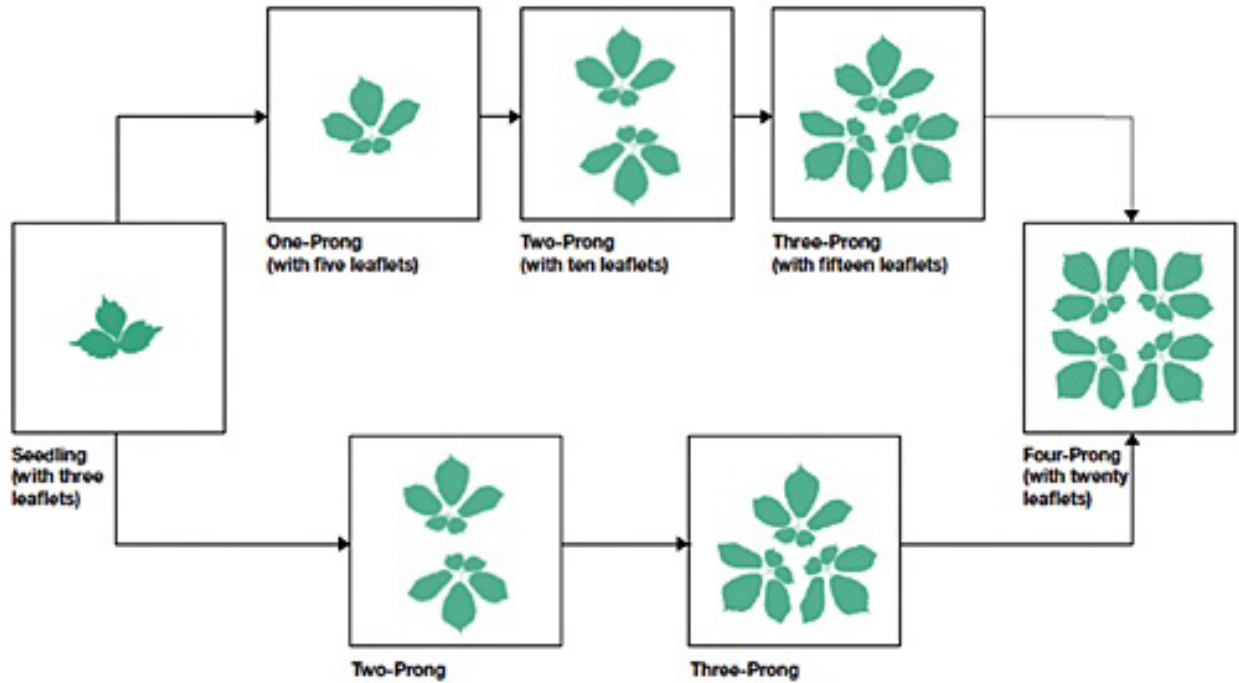


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Ginseng Life Cycle



The new ginseng seedling that sprouts in the spring is easy to mistake for a strawberry plant. Look closely, and you'll see three serrated leaves. As a ginseng plant grows, it adds more leaflets, on stems commonly called prongs.



After the plant is three or four years old, it can produce seeds. You'll easily spot the bright red berries of the seed heads. They ripen in late summer in most areas, and may fall to the ground or stay on the plant as a little ball of red. Each berry contains two seeds, and just one plant may produce as many as 100 seeds.

will produce a steady income, as there will be mature plants, seeds and rootlets to harvest each year.

Preparing The Growing Beds

Woods-Cultivated Method

After you've selected a well-shaded spot that meets the basic growing requirements, you'll need to prepare the growing area for planting. If there is any underbrush, clear it away to at least ten feet from the growing beds.

Warning! *Do not replant ginseng in the same soil that has been used to grow ginseng. Pathogens toxic to ginseng seedlings build up in the soil and will kill new plants.*

Using a walk-behind tiller, work the soil over several times to loosen it to a depth of at least six inches. Many growers till the beds several times in the year before planting ginseng, to reduce weeds that can compete with the ginseng seedlings.

I've owned a Troy-Bilt rear-tine tiller for years, and prefer it for tilling new ground, as it has the weight to keep it from bouncing around when it hits rocks or roots. If you re-till the beds, you can use a smaller tiller like the Mantis. On the first go-around, aim for a six-inch depth.

If you're planting rootlets in the growing beds, plant them at an angle of about 45 degrees from vertical, with the bud an inch below the soil surface. Space the rootlets six to eight inches apart, in rows that are eight to twelve inches apart.

If you're planting seeds, plant one-half to one inch deep, three inches apart, and keep the rows about eight inches apart. The young ginseng shoots are very small at first, with three small leaves.

A six-bed garden could produce 3 pounds of seed annually, worth \$450 to \$500 when sold, or 4800 two-year rootlets every two years, worth around \$9600.

The cost of setting up a nursery is low – just the boards for the raised beds, the soil to fill them, and the overhead shade cloth to create the 80% shade needed. You can find the 80% shade cloth at a variety of online suppliers, such as www.Farmtek.com, www.Gemplers.com, www.Greenhousemegastore.com and www.Shadeclothstore.com.

Follow these tips for a successful raised bed nursery:

- Using a 4-foot wide raised bed allows you to reach the center of the bed from both sides.
- Using a 12-foot length for the beds so you can use a standard width of shade cloth above it, instead of ordering a more expensive custom size.
- Use 2" by 10" or 2" by 8" pressure-treated boards for the raised beds.
- Use 4" by 4" treated posts, connected with galvanized wire, to hang the shade cloth above the raised beds.
- Use new soil each time you re-plant the beds to avoid disease problems.
- Each raised bed will need about 36 cubic feet of soil that drains well, but will still hold enough moisture to not dry out. A good basic blend is 6 parts weed-free topsoil, 3 parts peat moss and 2 parts sand.
- Add about 5 pounds of agricultural gypsum per bed. Gypsum can provide calcium to encourage root growth, improve acidic soils, improve soil drainage and improve soil structure. Sprinkle it on top and till it in with a small Mantis-type tiller.
- Check the pH of your finished raised beds. It should range from 6.0 to 6.5



part of a root, don't throw it away. Buyers will still purchase pieces, but won't pay as much as for whole roots.

The Indian "wildcrafters" always harvested the roots after the fruit had matured. When they dug the root, they buried the berries in the same spot, thus insuring a future harvest.

Drying Ginseng Roots

Correctly dried, ginseng roots bring top dollar from the buyers, while poorly dried roots may be rejected. Buyers will break a few roots open to test for dryness. They want a root that breaks with a crisp "snap" and is clean and free from fungus.

Here's how to dry the roots right:

First, clean them thoroughly. Most growers spread the roots out on a screen and hose the roots with water. Stubborn dirt can be removed by rubbing with your finger. Don't use a brush, as it could damage the fragile skin. A little dirt will not lower the price buyers will pay for roots.

Next, spread the roots out in a shaded area until the surface water is gone. Then it's time to condition the roots in your refrigerator.

After cleaning and drying, cool the roots to around 34-36 degrees for 2 to 4 weeks for "conditioning." You can do this in your refrigerator. This time allows roots to go dormant, and the moisture in the root to escape. Conditioning roots can improve the color and texture of the ginseng, and even increase the price buyers will pay for the roots.

After conditioning for 2-4 weeks, it's time to finish drying the roots. Most small growers prefer to let the roots dry naturally. Here's how:

- Spread the roots out on a screened rack. Don't pile them up – a single layer will speed drying time. Sunlight will burn the roots, so you'll need a covered place to