

Growing American Ginseng in Ohio: Site Preparation and Planting Using the Wild-Simulated Approach

Chip Carroll

Rural Action Sustainable Forestry
and Appalachian Forest Resources Center

Dave Apsley

Natural Resources Specialist
Ohio State University Extension

Growing American ginseng has been a popular income-generating pastime for over 200 years. Many people throughout Appalachia and beyond have experimented with growing ginseng or have tended wild patches of ginseng in the woods over many years.

In the early days of ginseng cultivation, most plants were simply transplanted out of the wild and into beds where one could keep a closer eye on them and tend to them more easily. Due to the limited availability of ginseng seed outside of the wild, most prospective growers started with transplanted roots. Today an aspiring ginseng grower has many options to get started. In addition to seed, 1-, 2- and 3-year-old rootlets are readily available for planting.

In this fact sheet we will be focusing on growing ginseng in the wild-simulated fashion. Wild ginseng from the Appalachian region in particular, is the most highly valued ginseng in the world. In the wild, the ginseng plant begins to produce seed after about 3 years of age. In the fall before the vegetation dies back for winter, ginseng seeds fall to the ground and lay dormant for 16–18 months before germinating (Figure 1). Upon germination, the root must negotiate obstacles such as rocks, twigs, and leaves to become established. Growing under these natural conditions tends to make the root take on interesting shapes as it grows into the soil, working its way around pebbles, neighboring roots, and other obstacles. The slow grown root with unique characteristics is highly valued in the Asian market.

The goal in growing wild-simulated ginseng is to produce a root which is virtually wild in appearance. This allows the grower to receive wild ginseng prices when it comes time to market the product. Growing in this method is almost always done exclusively from seed.

Wild-simulated ginseng production requires little capital to get started; however, you must have a

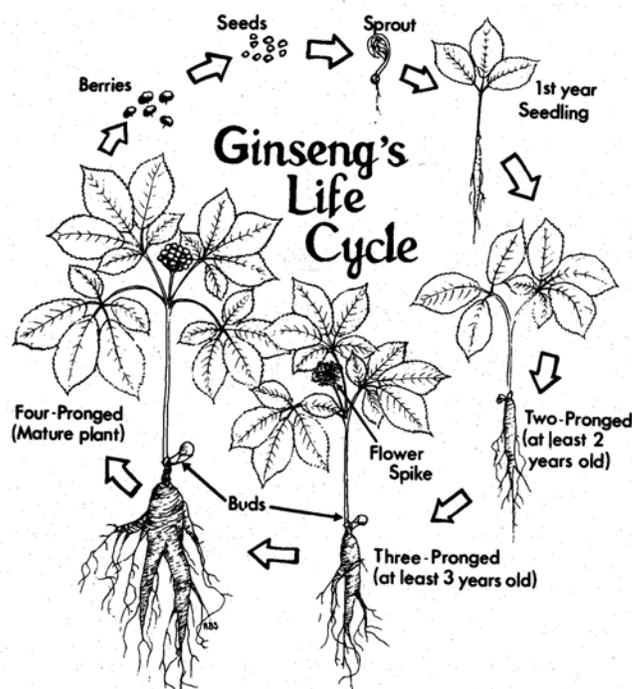


Figure 1. Life cycle of American ginseng. Photo from: *American Ginseng GREEN GOLD* courtesy of W. Scott Persons.

woodland with suitable ginseng sites in order to produce wild-simulated ginseng. To ensure adequate drainage, ginseng is usually planted on slight to moderate slopes. If terrain is flat, be sure to avoid areas with poorly drained soils. Some indicators of a good ginseng site include sugar maple and tulip-poplar trees with spicebush, ferns, goldenseal, jack-in-the-pulpit, and blue cohosh as understory vegetation. Every site varies; refer to Ohio State University Extension Fact Sheet F-58-13, *Growing Ginseng in Ohio: Selecting a Site* for information about selecting the proper site. A few simple tools such as a leaf rake, steel garden rake, pruners, and mattocks, as well as good seed are all that are needed to get started.

Site Preparation

Before preparing any site one should consider many factors, foremost is security. Be sure to pick a site that isn't frequently used by others and that you can monitor regularly. Ginseng's biggest pest is the poacher, and due to its high value, many poachers covet ginseng. Poaching is a serious problem and many growers have thrown in the towel after seeing many years of work go down the drain after being poached.

It is important to remember that ginseng (particularly ginseng under cultivation) is a plant prone to many diseases. The cause of many of these ginseng diseases is too much moisture and not enough air movement through the plants. Stagnant air in a moist setting can create serious disease problems, which can be very hard to control. Overcrowded plantings tend to have many more disease problems than well-spaced plantings. Usually the first step in preparing a wild-simulated ginseng growing site is to remove the necessary understory trees and shrubs in order to create an environment where air can flow more freely over the ginseng plants.

This usually means going out with some hand pruners and pruning the lower branches off of small trees and shrubs such as pawpaw and spicebush that may be growing on your ginseng site. Typically, you do not want to remove these trees and shrubs altogether. Performing selective pruning allows increased air flow while maintaining proper shade levels. These small trees and shrubs will provide habitat and protection for your ginseng if managed properly. Pay attention to what direction the wind tends to blow on your site and clear accordingly to allow for maximum air flow over your ginseng plants. This will require yearly maintenance and some pruning to maintain good air circulation.

The next step in site preparation is picking up any large rocks or sticks that may be lying in the area you wish to plant. Consider using the larger rocks and sticks to line the bottom or downhill side of your planting area

to help catch debris or soils that may be blown or erode off of the site.

Site preparation work can begin any time throughout the spring and summer of the year, but it must be completed prior to planting in the fall. Now that the site is prepared you are ready to begin the planting process.

Planting Wild-Simulated Ginseng

The process of growing wild-simulated ginseng begins by planting seed in the autumn around the time the trees begin to shed their leaves, but before the ground freezes (in Ohio this is usually done between October and November). Ginseng seed must go through a period of cold dormancy (also known as stratification) before it can germinate the following spring (Figure 2). To ensure success we recommend that the novice ginseng grower acquire stratified seed from a reputable commercial seed source. Cost of good quality, stratified ginseng seed is around \$85 to \$150 per pound.



Figure 2. Stratified American ginseng seed. Photo courtesy of Rural Action Sustainable Forestry.

It is a good idea to spread your plantings out over many years for a variety of reasons. Planting over a number of years will eventually allow you to harvest mixed aged roots on a yearly basis rather than having one entire crop come into maturity all at once. Planting over a number of years can also help ensure that you won't have a complete loss of your crop due to weather, rodents, or other environmental factors that can wipe out a young planting in one season.

Ultimately you want no less than one and no more than two mature ginseng plants per square foot upon maturity. This density helps to ensure minimal disease problems and maximum growth. Normally planting four to five seeds per square foot ensures proper density

at maturity, since germination will not be 100%, and mortality in the first two years is often high. The first year plants will emerge the following spring and do not resemble a mature ginseng plant at this stage. They can be easily overlooked if you're not familiar with their appearance (Figure 3).



Figure 3. One-year-old American ginseng seedling. Photo courtesy of Rural Action Sustainable Forestry.

Some novice growers have even mistakenly weeded out all of their first-year ginseng seedlings.

Begin the planting process by raking back the leaf litter along the bottom of the slope you are going to plant. You will want to rake the leaf litter off of an area about 5 feet wide and 40 feet long if possible. This is best done with a large heavy-duty leaf rake. This 5 × 40 foot area is equal to 200 square feet and will require approximately two ounces of seed. One pound of ginseng seed contains approximately 6,400 to 8,000 seeds (400 to 500 seeds to an ounce). Therefore, each ounce of seed should cover approximately 100 square feet at the optimal seeding rate. Once this area is clear of leaves, go back and scratch the soil surface with your rake to loosen the soil up to about ¼-inch deep. This helps the seed to make better soil contact and increases your seed germination rate. The site is now ready to be seeded. Try to spread the seeds evenly over the plot by walking along the top of the plot and sprinkling the seeds by hand. Although it may take some getting used to, this should become a comfortable technique to use for seeding your ginseng. Remember you want to seed at a rate of four to five seeds per square foot. The next step is to move upslope and begin the process over again. This time you will use the leaf litter that you are raking downhill off of the next area to be seeded to cover the previously seeded plot. Make sure to cover the seeded plot entirely with leaf litter, but do not exceed more than 3 inches of leaf litter over the

seeded plot. Once you've raked the leaf litter down onto the seeded plot, your next plot should be ready to seed. Repeat the process and continue until you have seeded your whole area.

On sites where raking and other site preparation would be difficult, ginseng can also be planted by hand one seed at a time. Although this method will substantially increase the time spent planting, it will dramatically increase germination rates and will also allow you to plant areas that may be more difficult to plant with the technique described above. Many growers like to use a variety of techniques to seed their wild-simulated ginseng. You should experiment and determine what works best for you on your sites.

Summary

Growing wild-simulated ginseng can be a relaxing and rewarding experience. You should take time to do research on growing ginseng and on the laws that govern ginseng harvesting and sales before ever planting a seed. Currently in Ohio it is illegal to market a ginseng root under five years of age. This law also applies to wild-simulated ginseng growers because wild-simulated ginseng is typically not distinguished from wild ginseng in the marketplace.

In Ohio, ginseng is regulated under Ohio Revised Code Chapter 1533.87 (Ohio Ginseng Management



Figure 4. Raking to remove leaf litter in preparation for planting of American ginseng seed. Photo courtesy of Rural Action Sustainable Forestry.

Program Laws). Administrative Rules for The Ohio Ginseng Management Program are available through the Ohio Department of Natural Resources, Division of Wildlife and should be obtained, read, and understood before taking up this pastime.

Acquiring Seed and Planting Stock

Contact the Rural Action Forestry Program for information about how to obtain seed and planting stock of ginseng and other medicinal herbs:

9030 Hocking Hills Drive

The Plains, OH 45780

(740) 677-4047

<http://ruralaction.org/programs/forestry/>

The Roots of Appalachia Growers Association (RAGA) is another resource for ginseng growers. They can be contacted through Rural Action Forestry.

Acknowledgements

Thanks to David Cooke, West Virginia University Cooperative Extension; Greg Duskey, Wild American Ginseng Company; and Deborah Hill, University of Kentucky Cooperative Extension for reviewing this

document and providing valuable suggestions for improvement.

References

Growing American Ginseng in Ohio: An Introduction. Ohio State University Extension Fact Sheet F-56-13.

Growing American Ginseng in Ohio: Selecting a Site. Ohio State University Extension Fact Sheet F-58-13.

Hankins, A. (2000). *Producing and Marketing Wild Simulated Ginseng in Forest and Agroforestry Systems.* Virginia Cooperative Extension Service Publication 354-312.

Persons, S. (1994). *American Ginseng: Green Gold.* Bright Mountain Books Inc. Asheville, North Carolina.

Persons, S. (2002). Tuckasegee Valley Ginseng Newsletter. P.O. Box 236, Tuckasegee, North Carolina 28783, (828) 293-5189.

Ohio Department of Natural Resources, Division of Wildlife. 1-800-WILDLIFE.

Ohio Department of Natural Resources, Division of Wildlife. (2013). "Ohio's Green Gold-American Ginseng" [Online]. Available: <http://www.dnr.state.oh.us/Portals/9/pdf/pub007.pdf>

EMPOWERMENT THROUGH EDUCATION

Visit Ohio State University Extension's web site "Ohioline" at: <http://ohioline.osu.edu>

Ohio State University Extension embraces human diversity and is committed to ensuring that all research and related educational programs are available to clientele on a nondiscriminatory basis without regard to age, ancestry, color, disability, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, sexual orientation, or veteran status. This statement is in accordance with United States Civil Rights Laws and the USDA.

Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension; and Gist Chair in Extension Education and Leadership.

For Deaf and Hard of Hearing, please contact Ohio State University Extension using your preferred communication (e-mail, relay services, or video relay services). Phone 1-800-750-0750 between 8 a.m. and 5 p.m. EST Monday through Friday. Inform the operator to dial 614-292-6181.