

Growing Ginseng in the Forest

Table of Contents

- [Introduction](#)
- [The Plant](#)
- [History](#)
- [Uses of Ginseng](#)
- [Types of North American Ginseng](#)
- [How to Grow Ginseng](#)
- [Maintenance](#)
- [Harvesting](#)
- [Hazards](#)
- [Today's Market](#)

Introduction

First used in this country by Native American people, North American Ginseng root has been harvested from the hardwood forests in the Appalachian Region of North America for over 250 years. Now American Ginseng is scarce in the wild and is increasingly becoming difficult to find. Consequently the price that woods grown American Ginseng root demands has made it very lucrative crop for many forest landowners interested in making a second income. Indeed, many with extensive forest holdings are making a full time career out of growing and harvesting ginseng roots.



Natural Range for Wild Ginseng

The Plant

Ginseng is a perennial plant that grows in cool, shady settings in rich loamy soil with good drainage. Conditions such as are found naturally in a sloping, lower hardwood forest floor in the eastern US. It is less likely to grow well in sunny locations preferring to grow on a Northern or Eastern facing slope where it is protected from the

Northern or Eastern-facing slope where it is protected from the blazing afternoon sun. Wild ginseng occurs naturally in forested areas that are populated by tulip poplar, maple, beech, hickory, and walnut and oak trees. Ginseng does not grow well in oak forests. In most cases it does not grow well in pine forests or under mountain laurel. One thing ginseng hunters look for are companion plants; that is forest floor plants that are similar to ginseng and that grow in the same environmental conditions that ginseng grows amongst in the wild. Some of the companion plants to ginseng are goldenseal, solomon's seal, bloodroot, may apple, jack in the pulpit, wild yam, black cohosh, spice bush, and poison ivy.

2 Yr Old with 1 Yr Old Ginseng Plant

Ginseng emerges from the ground in Mid-April. When fully mature, it grows a stalk about 20" high which falls away as winter approaches. The root forms a solitary growth bud below the ground and hibernates, freezing with the ground until the following spring when a new stalk grows from the bud. In its 1st year of growth ginseng grows a skinny stalk about 2" to 5" tall with 3 tiny leaves.



In year 2 the ginseng plant will grow to 5" or more and typically sprouts two leaf prongs, each with 3 to 5 lobes branching from the central stem. In successive years ginseng will grow as many as 5 leaf prongs with 5 lobes each.



3 Year Old Ginseng Plant

In the 3rd year of growth ginseng grows a green flower cluster that forms on a prong rising from the center of the stalk. The flowers develop into green berries that turn red over the summer forming seeds inside. As many as 50 berries, each with 2 seeds inside can be produced by a single mature plant. Seeds planted from berries in the fall don't sprout the following spring. They go through a stratification process allowing them to develop the energy to grow in the second spring. Usually ginseng seed is sold to growers already stratified from berries picked the previous year so it would be expected to emerge as one year old plants the following spring.

History

Panax Ginseng = Asian Ginseng

Asian Ginseng has been used in China for over 4,000 years, now is virtually extinct in the wild in China. Used mainly by the Chinese aristocracy, wild Asian ginseng was harvested to the point of extinction. Now most forested areas in China are gone having been cut down for lumber and for fuel. Although the Chinese have instituted reforestation programs. it will take

100's of years for the forests to re-grow and create the rich forest loam soil needed by the ginseng plant to thrive. Most of the worlds Asian Ginseng is now grown in cultivated fields in Korea under artificial shade. It is allowed a short growing period. Only 3 years.

Panax Quinquifolium = North American Ginseng

North American Ginseng was discovered in Quebec Province in the early 1700's. The first recorded export to China was in 1752 for \$1.50/ LB. The unique properties of North American Ginseng made it highly prized in Asia. Ginseng exports from North America have increased annually except for a short period in history due to the Japanese blockade of World War II.

The largest consumers of American ginseng in the world today are the people of Chinese extraction who live in and in the Pacific basin countries - China, Japan, Taiwan, Korea, the Philippines, Singapore, Malaysia, etc. They use approximately 85% of the total exports. The Orient uses a grading system to determine the value of ginseng roots. Aspects considered are age, size, shape, texture, color. The smaller, older wild ginseng roots are most highly prized, and higher priced.

Uses of Ginseng

Ginseng has long been used in the orient as a panacea type of herbal supplement. It is believed that consuming ginseng root enhances energy and strength, increases sexual performance and helps to ward off illnesses and promotes healing. The Chinese believe that ginseng balances the organs in the body against induced poisons that adversely affect their ability to function. The western world has awakened to the mysterious powers of the ginseng root and now ginseng is being used increasingly in the Americas and in Europe. Indeed ginseng has enjoyed a increase in popularity across this country where we see it advertised by major vitamin companies and see it sold in various forms at natural food stores and on the counters of convenience stores. The active ingredients of ginseng are called ginsenosides, which are derived from the plants saponins in the root and leaves. Early results of studies being conducted on ginsenosides in the U.S and Europe are proving that ginseng enhances the ability of the organs in the body to process oxygen. This effect is observed on the performance of all the organs such as the heart, liver, kidneys, eyes, skin, etc.

Types of North American Ginseng

Artificial Shade Cultivated

Cultivated ginseng is grown under artificial shade in open fields, which lends itself to mechanization. Cultivated ginseng accounts for the majority of the ginseng that's exported to Asia. Canada and the US exported about 6 million pounds of dried American ginseng roots in 1999. Only 50,000 pounds of this was wild or woods grown ginseng. The majority was cultivated in open fields under artificial shade. The largest cultivated ginseng growing operations in the US are located in Marathon County, Wisconsin. All together the growers of Wisconsin exported approximately 1.2 million pounds of dried ginseng roots last year.

It only takes 3 years to grow an artificial shade cultivated root to harvest. Graded at the lowest end of the scale the roots are generally larger and smoother, less likely to have the classic man shape that is the most desired in Asia. Prices for American ginseng roots cultivated under artificial shade have fallen drastically over the last decade from around \$40 per pound in 1994 to <\$18 per pound in 1999. Primarily due to over cultivation in the Americas and in Korea.

Wild

Propagates naturally from berries dropping to the ground from mature plants. Wild American ginseng continues to be found in the Appalachian region but it is very scarce. Wild harvesters still find patches of it growing only in the most remote areas. The locations of wild ginseng stands are closely guarded secrets amongst "Sang" hunters, as they are known in the hills. Sometimes the locations of patches are passed down from generation to generation within a family but often, old timers will pass on without ever revealing the locations of their patches. It is possible to get shot for getting caught digging up someone else's wild ginseng patch in some places. Poaching is a problem especially for some growers in the Appalachian Mountain regions where ginseng hunting is part of the culture. It has become a federal crime to poach ginseng. Wild American ginseng is still to be found in the Allegheny Mountains. If you have a ginseng collector's permit available from the State Dept of Agriculture, it's legal to harvest ginseng from the wild provided you have the landowners permission.

Wild Simulated

Minimum effort is involved in growing wild simulated ginseng. No tilling or unnatural disturbance is made to the ground. It requires less labor to plant and less need for maintenance. Wild simulated roots are generally smaller, more gnarly looking and are graded as more valuable. Longer growing cycle; 10+ years. Growing in this manner is a less intensive use of land, about 1 plant per square foot.

Woods Grown

Ginseng Beds

Ginseng roots cultivated in natural woods settings are graded together with wild grown roots. Ginseng plants grow more slowly under a forest canopy and are generally smaller. Ginseng roots are believed by the Chinese to accumulate more potency from the earth the longer they are allowed to grow. Woods cultivated ginseng roots can fetch a little more than half of the price that wild or wild simulated roots go for. The minimum growing cycle is 6 years to get a respectable price per pound. If allowed to grow longer woods grown ginseng takes on more of a wild appearance and can eventually fetch prices closer to what's paid for wild roots.



How to Grow Ginseng

Site location is important. If possible choose a site that is on the cooler, East-South-Eastern to Northern facing side of a hill. Closer to the toe of a mountain is where companion plants such as mayapple, jack in the pulpit or bloodroot are seen growing which indicates an excellent potential site. If the area lacks lush forest floor growth it is less likely that ginseng will do well. It will also not do well in swampy areas where water doesn't drain well. Constant exposure to moisture eventually causes root rot or fungus problems which kill the plant

The area should be well shaded, preferably by a natural canopy of hardwood trees. If a natural forest canopy isn't available, ginseng can be grown under simulated forest shade conditions by constructing artificial shade canopies made of wood lath strips or canvas netting. Ginseng will burn up if subjected to long periods of direct afternoon sun. It likes some intermittent sunlight but only about 10 - 20% like what streams in through the dappled forest shade.

Do test plantings with seeds and with ginseng rootlets that are minimum 2 or 3 year old and that are known to be healthy. If the seeds germinate and do well in the area and if ginseng rootlets which are already robust and healthy continue to flourish, then the potential site is more likely a to be a good one. It's a good idea to have a sample of the soil tested from the prospective site. A soil analysis will give a breakdown of the essential soil elements, provide the PH value and the concentration of organic matter. The ideal PH for ginseng is 5.0 to 5.5. Also ginseng likes soil with high calcium content. If calcium levels are below 1,000 lbs. per acre, calcium amendments can be added.

Security issues are easier to address if the grower is living on the land where they are growing. If the neighbors are trustworthy it helps to inform them of your enterprise and enlist their watchful eyes against potential poachers. Put up "no trespassing" signs to discourage through traffic. Also a noisy dog can be a great way to ward off intruders.

Wild simulated

Wild simulated is the least labor intensive methods of growing ginseng. Ginseng is basically planted and left to grow with the natural vegetation. Once a site has been selected stake the area to be planted. Ginseng takes a long time to grow and the woodland terrain seems to change over time so the stakes will help locate the plantings. Wooden stakes are a discreet way of marking the area, as they will tend to blend into the environment.

Obtain stratified ginseng seed from a reputable source. One pound of stratified ginseng seeds go for \$50 to \$80 per pound and contains 7,500 to 8,000 seeds. That breaks down to 450 to 500 seeds per ounce. In 1/10 acre is about 4,400 square feet so a 2 pounds of seeds will give a distribution of about 4 per square feet. At this concentration it could be expected that 1 or 2 ginseng plants per square feet would germinate and eventually reach maturity. There is little need to maintain a wild simulated ginseng patch. Allowing some weeds to compete with the ainsena plants helps in some ways. First it creates a bio-diverse

environment helping to reduce chances of disease. Second the stress of competition on the roots helps add wild characteristics to the ginseng roots appearance.

Woods Cultivated

Growing woods cultivated ginseng takes more of a commitment to time and physical labor than growing wild simulated ginseng. Growing woods cultivated ginseng in raised beds is the preferred way to raise ginseng for profit amongst ginseng farmers. If you don't have an abundance of woodland acreage with the correct site conditions, higher intensity, raised bed planting can be used to grow a few pounds of ginseng per year or 100's of pounds depending upon how much land and time you have at your disposal.

Mark off the selected site with string lines and wooden stakes and clear the under story growth. It's not necessary to rake back the leaves. Roto-till the area to a depth of about 6 inches working the leaves and organic matter in with the soil Dig parallel trenches forming raised planting beds about 4 1/2 feet wide with about 1 1/2 feet space between so the trenches serve as walkways between adjacent beds. The beds should be raised 8" to 10" high with a slight rise in the center to allow water to drain away from the centers and down to the trenches. Trench down hill if on a slope. Using a hand trowel draw shallow rows in the dirt across the width of the bed about 1/4" to 1/2" deep. Space the rows 6" to 8" apart.. Drop seeds into the rows spacing them 4" to 6" apart across the width of the beds. Walk up and down the beds and lightly cover the seeds in with a rake. Cover the beds with 3" to 4" of fresh leaf mulch. Tulip poplar or maple leaves make excellent mulch material for ginseng plants. Some commercial woods growers like to use straw together with whatever leaf matter falls from the forest canopy.

Maintenance

Spraying a fungus preventative is sometimes necessary in a woods cultivated planting. In a concentrated planting air flow around the plants is reduced. In the mid summer the air becomes still and the humidity increases. When plants of the same species are grown close together in a mono culture (without other plant species) the possibility increases that a fungus could infect a weak individual and then spread through out the patch.



Picking berries can be a profitable maintenance. The seeds that are derived from the berries may be use to further expand your ginseng growing operation or they may be sold to other growers at the current market price. Remove dead ginseng stalks at the end of the season to reduce the possibility of developing soil based pathogens.

Picking Ginseng Berries

Harvesting

A pitchfork is used to aet below the roots and lift them out of the around. One of the thinas

to strive for is to not cut into the roots or scar them with the pitchfork, as it will lower the graded value of the roots. Lay the roots out on a screen and wash them off with a hose. Don't over wash or scrub the roots. Drying is critical. Small to medium scale harvests can be dried in a well ventilated room with a temperature between 70° to 100°. Spread the roots apart on a screen so they don't touch and turn them occasionally.

Hazards

Ginseng has very few natural enemies. Sometimes deer sample the leaves but don't bother the roots. Turkey and chipmunks like eating the berries. The biggest animal enemy of ginseng is moles and voles that burrow underground in their search for bugs. They drill right through the roots killing them underground. Set out traps or poison rodent baits if there's a persistent problem.

A big concern is disease. Alternaria blight is a fungus that can be controlled by spraying of commercially available fungicides. ie. Bordeaux mix or a Maneb-based fungicide. Phytophthora cactorum (Root Rot) is caused by excessive moisture. Good drainage and adequate air circulation is essential when growing ginseng so that the plants are resistant to root rot and Alternaria blight.

Today's Market

Ginseng cultivated under artificial shade, down from \$45 to \$28 per LB in 1989, now averages \$18 LB and the outlook remains uncertain for big commercial growers. The prices fetched by Woods Grown American Ginseng root have risen steadily since it was first exported from North America. American Ginseng root continues to rise in demand in the Orient and thus in value. The rising price of wild ginseng root is spurring heavy hunting so American Ginseng Root is increasingly harder to find in the wild. A peak price for wild simulated roots was \$575 per LB in 1999 which is up more than 100% from 1989 when peak was \$270 per LB. Typical woods grown ginseng prices ranged from \$305 to \$450 per LB. in 1999 depending on how closely the roots resembled wild. The price for woods cultivated is directly tied to the price of wild and as wild ginseng becomes scarcer, woods grown ginseng will be more heavily demanded. Although it's more highly desired, woods grown American ginseng root isn't affordable to most of the Asian people. Only those few who have enjoyed moderate success in the Asian economies are able to buy it. As the economies of those countries develop, so does the buying power of their populations. As China enters the world of nations, trading with China is projected to begin normalizing. If the flow of commerce between the US and China becomes easier her economy is projected to improve dramatically thus improving the buying power of its people and their ability to afford American ginseng.

[Top](#)