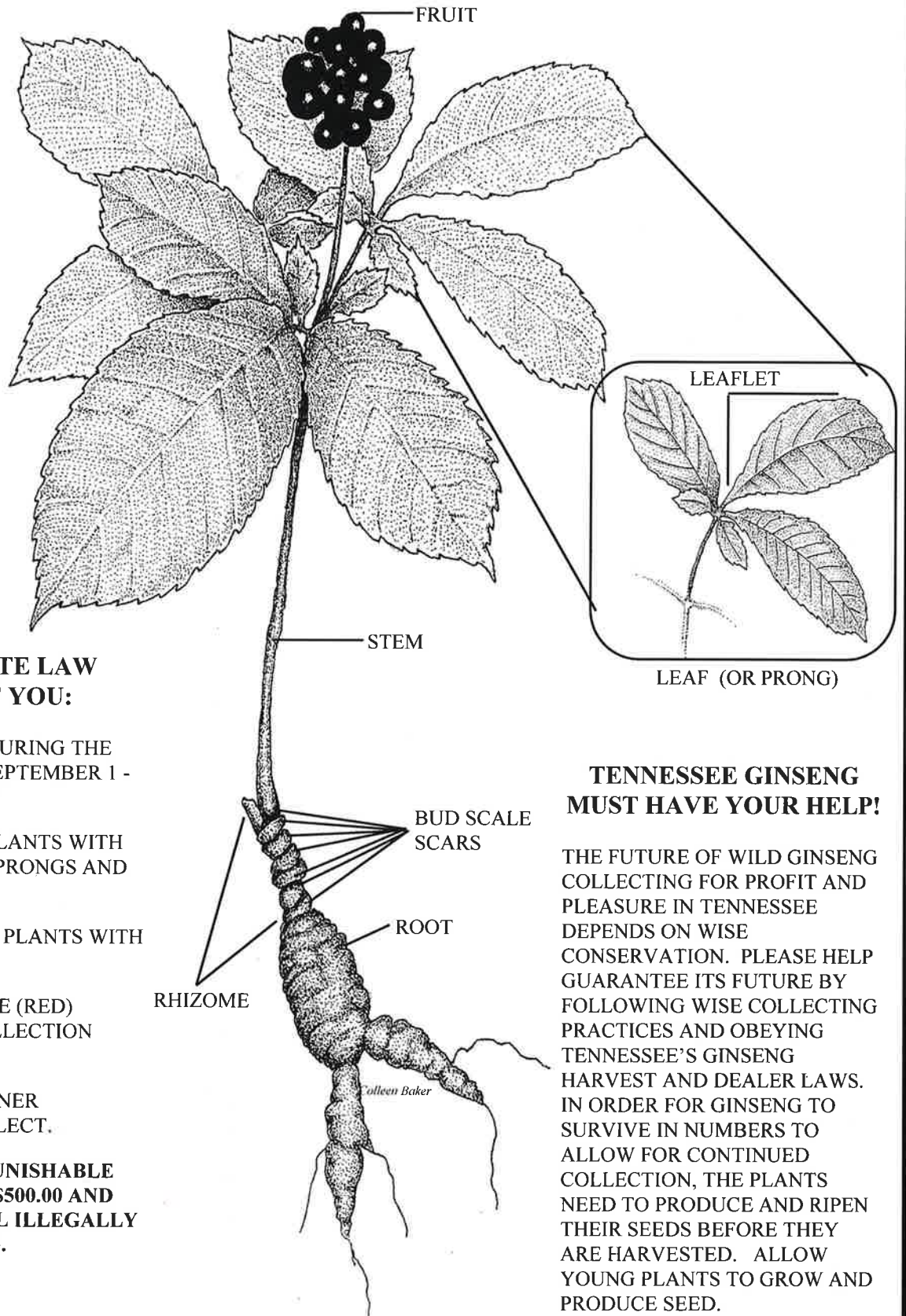


TENNESSEE GINSENG PROGRAM



TENNESSEE STATE LAW REQUIRES THAT YOU:

- ☞ COLLECT ONLY DURING THE HARVEST SEASON SEPTEMBER 1 - DECEMBER 31.
- ☞ COLLECT ONLY PLANTS WITH THREE (3) OR MORE PRONGS AND RIPE (RED) BERRIES.
- ☞ DO NOT COLLECT PLANTS WITH GREEN BERRIES.
- ☞ REPLANT THE RIPE (RED) BERRIES AT THE COLLECTION SITE.
- ☞ OBTAIN LANDOWNER PERMISSION TO COLLECT.

**VIOLATIONS ARE PUNISHABLE
BY FINES OF UP TO \$500.00 AND
FORFEITURE OF ALL ILLEGALLY
OBTAINED GINSENG.**

TENNESSEE GINSENG MUST HAVE YOUR HELP!

THE FUTURE OF WILD GINSENG COLLECTING FOR PROFIT AND PLEASURE IN TENNESSEE DEPENDS ON WISE CONSERVATION. PLEASE HELP GUARANTEE ITS FUTURE BY FOLLOWING WISE COLLECTING PRACTICES AND OBEYING TENNESSEE'S GINSENG HARVEST AND DEALER LAWS. IN ORDER FOR GINSENG TO SURVIVE IN NUMBERS TO ALLOW FOR CONTINUED COLLECTION, THE PLANTS NEED TO PRODUCE AND RIPEN THEIR SEEDS BEFORE THEY ARE HARVESTED. ALLOW YOUNG PLANTS TO GROW AND PRODUCE SEED.

PROTECT YOUR LIVELIHOOD!



For more information, contact: Tennessee Ginseng Program, Department of Environment and Conservation, Division of Natural Areas, W.R. Snodgrass TN Tower, 312 Rosa L. Parks Ave. 2nd Floor, Nashville, Tennessee 37243-0447, Phone 615/532-0431.

AMERICAN GINSENG IN TENNESSEE

Scientific Information

Scientific Name: *Panax quinquefolius* L.

Family: Araliaceae; Ginseng Family

Status: *Federal* - CITES, Appendix II

State - S-CE (Special Concern - Commercially Exploited). Special Concern Species means any species or subspecies of plant which is uncommon in Tennessee, or has unique or highly specific requirements or scientific value and therefore requires careful monitoring of its status. Commercially Exploited, due to large numbers being taken from the wild and propagation or cultivation insufficient to meet market demand. These plants are of long-term conservation concern.

Heritage Program - Global Rank G3G4, State Rank S3S4 (Rare and uncommon to widespread and secure)

Description and Habitat Information

Plant: An erect, glabrous herb arising from short rhizomes and tuberous roots, 0.5-2 feet tall.

Root: Large and spindle shaped, fleshy, aromatic, often branched.

Leaves (Prongs): (2) 3-4 in a single whorl at top of stem, palmately compound; leaflets 3-5, elliptic, finely toothed.

Flowers: Greenish-white, 6-20 in a terminal solitary umbel.

Fruits: 2-3 seeded red berries, grouped together in a head.

In 1716, Father Joseph Francois Lafitau, a Jesuit priest, discovered American ginseng near Montreal, Canada. Today, ginseng is elusive, due in part to its superficial vegetative resemblance to other plants that share its habitat. More importantly, ginseng is becoming more elusive due to its relatively low reproductive capacity and the sustained harvesting pressure of ginseng collectors. Ginseng has been a valuable medicinal herb, particularly in the Asian markets, for over 200 years.

Ginseng grows mainly in small groups or as solitary plants on shady slopes in deciduous hardwood forests containing beeches, maples, hickories, oaks, basswood and tulip poplar. Under this tree canopy, ginseng is well shielded from direct sunlight and is provided cool air circulation. The rich loam soil in these forest communities is moist, light, and porous with a high content of rotten leaves, and may be very rocky. Ginseng may also grow well in forest clearings, such as after selective tree harvesting.

Growth of Wild American Ginseng

The first year of growth produces a small plant with one compound leaf having three leaflets. With successive growing seasons, the plant matures and produces additional leaves until a maximum of five compound leaves or "prongs" with five leaflets is attained. Second and third year plants have two prongs, four year old plants may have three prongs, and plants older than four years of age may have three to five prongs. Some plants may remain dormant for several years. Plants are reproductively mature at three years of age. During June and July a stalked inflorescence of six to thirty small, greenish-white flowers is produced at the top of the stem. Flowers are cross-pollinated by halictid bees or are self-pollinated. Fertilized flowers produce small berries that are green at first, but turn a brilliant red when mature. Each fruit contains two or three wrinkled seeds. In early autumn the berries ripen and fall from the plant, where

they become vulnerable to predation from rodents and birds. After the first frost, the leaves turn a golden-yellow before dying. Ginseng seeds require a germination period of eighteen to twenty-one months. Roots in the Southern United States grow rapidly for the first few months of late spring and early summer then level off during the warm summer months with little weight gain. After flowering and seed production is another root growth spurt before die off in mid-autumn.

Differences between Wild and Cultivated Ginseng

1. Wild ginseng grows naturally within its natural habitat conditions.
2. Cultivated ginseng is grown as a crop by sowing seeds and consists of three types: woodsgrown, wild-simulated, and field-cultivated.
3. Woodsgrown ginseng is sown under natural shade in prepared beds and may require the use of fertilizers and pesticides.
4. Wild-simulated ginseng is sown under natural shade and natural habitat conditions but scattered and not in beds. This category is not recognized by all states, including Tennessee, and is treated as wild ginseng.
5. Field-cultivated ginseng is sown under artificial shade in prepared beds and often requires the use of fertilizers and pesticides.

Wild ginseng roots are about the size of an adult's thumb and are lightweight, wrinkled, ringed, often branched, and dark tan in color. In comparison, cultivated ginseng roots are larger than an adult's thumb and are heavy, smoother, few ringed, less branched, and light straw colored. The growth of cultivated ginseng is much faster than wild ginseng under normal conditions. Cultivated ginseng plants are more robust and produce more berries and seeds than wild ginseng plants.

Conservation and Harvest

1. Only plants with three (3) or more leaves (prongs) and red ripe berries should be harvested. These are plants at least five (5) years old and reproductively mature. Mature plants will produce a cluster of green flowers which will produce the ripe berries after fertilization. Collect only during the Harvest Season September 1 to December 31. This accomplishes two things:
 - 1.) the plant has time to produce fruit and set seed,
 - 2.) the ginseng root has time to reach a marketable size. Ginseng roots are heaviest in the fall based on the plant's biology and physiology, so it makes sense to harvest roots late in the fall. Also, it takes just as much time to dig a small root as it does a large root, so spend time wisely by harvesting only mature profitable roots.
2. To insure harvestable populations for future generations, it is important that all ripe berries and seeds be planted in the approximate location of the parent plant after harvesting. Do not simply scatter the seeds on the ground as they will be eaten by rodents or birds. The seeds require about 18 months of dormancy and must remain moist in order to germinate. Summer droughts can kill the seeds if they are not protected under leaves.
3. Mature, reproductive plants are very important to the survival of wild ginseng populations. The conservation minded collector should not harvest all mature plants found in the wild. Conserving ginseng today will protect your livelihood in the future.
4. Special care should be taken when harvesting ginseng not to damage the root. Start by digging around the plant at least 6" from the stem. Dig down until the root is visible and remove it with as many of the small rootlets as possible. Brush off any loose soil and rinse, but do no scrub, the roots in water. A little soil left on the root highlights the rings around the root and will enhance the value of the root. Be careful to keep the rhizome or "root neck" attached to the root.
5. Cleaned roots should be slowly dried over several days to several weeks. The drying time will depend upon

- the size and moisture content of the roots and the conditions under which the roots are dried.
6. Roots should be placed on a screen or rack and dried outdoors in the shade or in a well-ventilated attic. Turn the roots occasionally to insure that they dry evenly. Once dry, store the roots in a cool, dry location until they are sold.
 7. Do not dry roots in a conventional oven or microwave oven. This dries the root too fast and often burns it, rendering it worthless. Do not waste this forest resource by improperly harvesting or drying the roots.

Why is Ginseng Regulated?

Wild American ginseng is one of many plant and animal species protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora of 1973 (CITES), an international trade agreement which the United States and 134 other nations have signed. The objective of the Convention is to monitor, control, and restrict, as necessary, the international trade of certain wild plant and animal species to prevent adverse impacts to their populations and to insure the continued existence of those species in their natural habitat. In the United States, the Fish and Wildlife Service (USFWS) has been delegated the U.S. CITES scientific and management authority since the treaty went into effect in 1975. Before a CITES export permit can be issued, the USFWS must determine whether the ginseng roots were legally acquired and whether further exports will be detrimental to the species' survival. The Office of Management Authority (OMA) determines whether the ginseng was legally acquired, and the Office of Scientific Authority (OSA) determines whether export of ginseng roots is detrimental to the species' survival.

The USFWS has established a joint ginseng management program with the states in order to monitor and regulate ginseng harvest and commerce, and meet the CITES requirements. The states must establish regulations that ensure ginseng populations under their jurisdiction will not be harmed by harvest. The Tennessee ginseng program was approved in 1978. Ginseng dealers must register with each state in which they purchase and sell ginseng roots and must report their transactions to the states. The states must inspect, weigh and certify that the ginseng was legally harvested within the state of origin. The states then compile the dealers' reports and other information on ginseng biology, harvest, regulation and commerce into an annual report that is sent to USFWS. These annual reports are used by OMA and OSA to evaluate the state ginseng management programs, harvest levels, and impacts of harvest on wild ginseng populations in order to determine whether the states should be approved for ginseng export ("non-detriment" finding). Without the annual approval of the USFWS a ban will be placed on the export of wild ginseng from Tennessee.

CITES does not require a "non-detriment" finding for cultivated ginseng, but the cultivated ginseng stock must be established in a manner not detrimental to the species' survival in the wild. "Woodsgrown" ginseng is considered "Cultivated" ginseng and should never be reported as "Wild" ginseng.

Once ginseng is approved by USFWS for export, each shipment is inspected and approved by a port inspector of the U.S. Department of Agriculture (USDA), Division of Plant Protection and Quarantine (PPQ), a division of the Animal and Plant Health Inspection Service (APHIS). If all the USFWS and CITES requirements are met, the port inspector will validate the CITES export documents and approve the shipment for export.

State regulations require all merchants or firms that purchase wild or cultivated ginseng with the intent to resale or export and/or that cultivate ginseng with the intent to export, obtain a Dealer Permit from the Department. In addition, each ginseng dealer is required to complete and submit monthly purchase reports and an annual report of their purchases. All the necessary forms and purchase receipts are provided by the Department. Unlike the 1978 management program, the Department is not asking Tennessee ginseng collectors to obtain a permit and submit an annual report of their harvests.

Without strong cooperation from the ginseng dealers of the state on providing the data on the quantity of wild ginseng harvested and the counties from which it was collected, the OSA may rule against export of

Tennessee ginseng for the upcoming year. Therefore, it is in the best interest of all ginseng collectors and dealers to comply with the rules and regulations of the Tennessee Ginseng Program.

No ginseng can be harvested on State or Federal land without written permission of the land management agency. Ginseng harvesting is not permitted in State Parks, State Forests, or State Wildlife Management Areas (WMA), except North Cumberland WMA. Ginseng harvesting is not permitted in National Parks, such as Great Smoky Mountains National Park. Annual permits for harvesting ginseng in Cherokee National Forest may be obtained for a small fee at the District Ranger offices.

Notes on Tennessee Ginseng Harvest Season Laws

1. The wild ginseng Harvest Season is from September 1 to December 31st of each year. It is unlawful to dig wild ginseng for the purpose of sale or export on any date not within the ginseng Harvest Season.
2. No permits are required to dig wild or cultivated ginseng, but one MUST have the landowner's permission to enter the property and dig wild or cultivated ginseng. It is unlawful for any person to knowingly dig, harvest, collect, or remove wild ginseng from any land that such person does not own, on any date not within the wild harvest season. Ginseng collectors may dig wild ginseng on their own land.
3. It is unlawful to dig, for the purpose of sale or export, any wild ginseng plant that has green berries or that has less than three (3) prongs. A "prong" means a ginseng leaf with three (3) to five (5) leaflets.
4. It is unlawful to dig wild ginseng for the purpose of sale or export, and remove the berries of the wild ginseng from the approximate location from which the wild ginseng was dug, and to fail IMMEDIATELY after such digging to plant the berries of the wild ginseng in the approximate location from which the wild ginseng was dug.

Notes on Tennessee Ginseng Dealer Laws

1. Ginseng is a federally protected plant with each state required under federal regulations to control its harvest and trade.
2. The ginseng Buying Season, to buy and sell, is from September 1 – March 31st for green roots and September 15th – March 31st for dry roots.
3. To buy ginseng for resale or to transport ginseng across a state line, one MUST have a state ginseng Dealer Permit. This is required by federal law, but the permit is issued by each individual state.
4. The ginseng Dealer Permit shall be issued and become effective on September 1 (or date of issuance thereafter) of each year and will be good and valid through Aug. 31 of the next year. The fee for registration shall be \$250.00 PER year.
5. To move ginseng out of state, one must have a Dealer Permit AND an Export Certificate as required by federal law.
6. Moving ginseng out of state without an Export Certificate is a violation of federal law, regardless of whether or not one has a Dealer Permit.
7. In certifying the acquired ginseng for export out of the state, the dealer must bring the ginseng, Purchase Receipt Book(s), Dealer Permit and scales to the certifier for the completion and verification of the Export Certificates. Certificates will not be issued unless Purchase Receipts are presented for inspection EXCEPT where the dealer has harvested the ginseng instead of buying it from a collector, grower or another dealer.
8. Wild or cultivated ginseng that has been inspected and issued an Export Certificate may be exported throughout the entire permit period.
9. It is unlawful to sell wild or cultivated ginseng that was harvested or collected from any state other than

Tennessee UNLESS such ginseng has been certified or otherwise approved for export by the state of origin, and is accompanied by a certificate showing that it has been certified and approved for export.

10. Ginseng dealers must keep ACCURATE records and submit Monthly Purchase Receipts of their purchases and an Annual Report of their purchases and sales as required by federal regulations.
11. Any ginseng dealer possessing ginseng at the end of the Buying Season (March 31) must obtain a Weight Certificate for that ginseng from a certifying official. The Weight Certificate should be retained by the dealer and presented at the time of and in exchange for any future certification of that particular ginseng for export.
12. In order to buy wild or cultivated ginseng for resale, or transport wild or cultivated ginseng across a state line, a ginseng Dealer Permit must be obtained from the Department of Environment and Conservation, Division of Natural Areas.

Stewardship Harvesting of Wild American Ginseng

There are a number of harvest practices that must be followed for a collector to be a ginseng steward:

GET PERMISSION TO HARVEST

Whether you are on private or public land, always get permission before digging ginseng. Some National Forests and state-owned lands will allow harvest of ginseng but require you to obtain a permit. Harvest is not allowed in any National Park.

When digging on public land, always obtain required permits and comply with all rules. When digging on private property, get the permission of the landowner or his/her agent. Also, report any signs of property damage, habitat loss, or trespassing to the landowner.

RESPECT AMERICAN GINSENG'S LIFE CYCLE

American ginseng's life cycle, as shown, illustrates the life stages of the plant. Seedlings have only 1 prong (leaf), which usually has 3 leaflets. The next phase has 2 prongs, with 3 or 5 leaflets on each. Mature plants have 3 or 4 prongs, each with 5 leaflets.

Researchers have estimated that each ginseng plant in the wild needs to produce over 90 seeds to replace each plant harvested. Never harvest seedling (1-prong) or juvenile (2-prong) plants, or plants that are less than 5 years old with at least 4 "bud scars" on the neck at the top of the root. Roots from younger plants are not allowed to be exported and many ginseng buyers won't buy these small roots, so it's best to leave these plants in the ground for future harvests.

DIG SOME, LEAVE SOME

Good stewardship requires diggers to leave enough plants so that populations continue to be healthy and plentiful. Always leave some mature plants in every ginseng patch where you dig.

HARVEST ONLY IN THE HARVEST SEASON

The harvest season for wild ginseng varies by state. Make sure you know the legal state harvest season where you dig ginseng, and always comply with the state rules.

Never harvest plants before the fruit is ripe (red). This is a requirement in most states, and is an essential good stewardship practice.

PLANT RIPE FRUIT

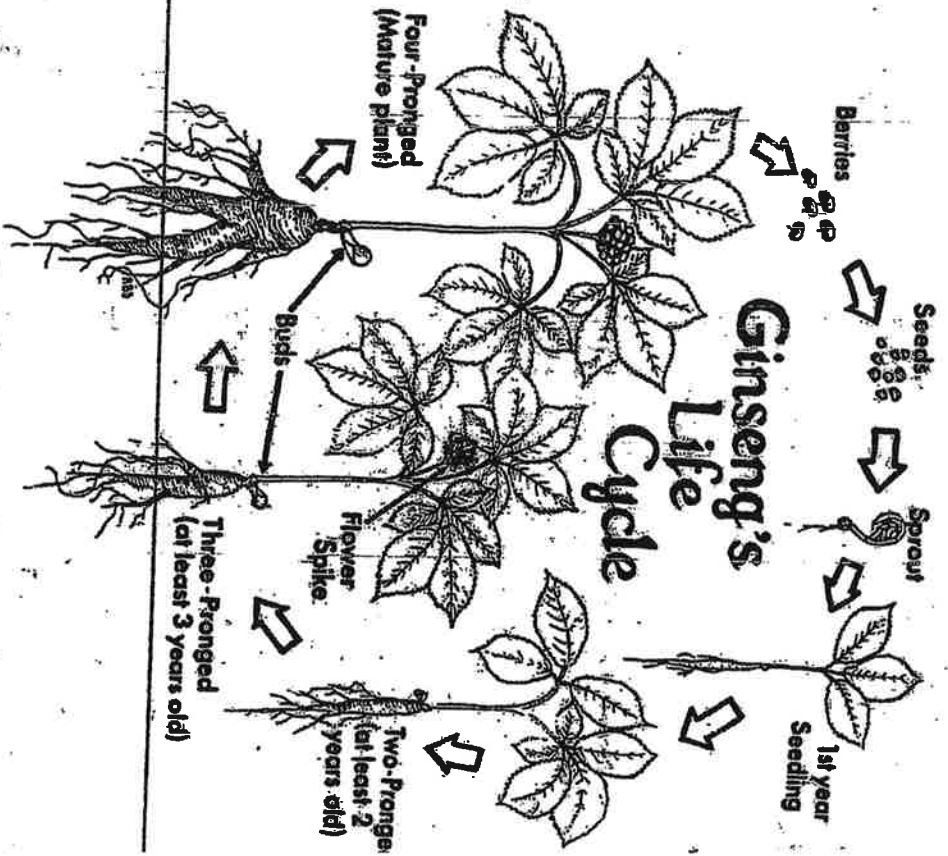
Experienced harvesters know to plant ginseng's red berries as they dig the roots. This stewardship practice may explain why ginseng is still in the woods after three centuries of digging.

The best practice is to plant the red berries under at least 1 inch of soil. Researchers have found that planting the ripe seeds at this depth can produce up to 8 times more seedlings!

PROTECT AMERICAN GINSENG'S HABITAT

Stewards of wild ginseng must care for the plant, as well as its native habitat.

Be aware of land-use and zoning activities in your community and join with local organizations to make your voice heard. Though landowners' property rights should be respected, make sure they are aware of the value of ginseng and other non-timber plants on their land.



Drawing from WS Parsons and JM Davis, *Growing & Marketing Ginseng, Goldenseal & Other Woodland Medicinals*, Bright Mountain Books, 206 Riva Ridge/Flatview NC 28730, ©2005. Used with permission.

OTHER STEWARDSHIP PRACTICES

- Every ginseng steward should be aware of a few other practices:
- After you dig some of the mature plants in a ginseng patch, and have planted all of the red ripe seeds, break the stems off of any remaining plants so that others don't take more plants from the same population.
- Think about planting your own woodland ginseng patch with local native seeds so that even more ginseng is produced for the future.

TENNESSEE GINSENG DEALER INSTRUCTIONS FOR PURCHASE RECEIPTS

A record of the purchase must be completed when purchasing ginseng from a grower digger or another dealer. This record is in the form of a Purchase Receipt that is contained within the Ginseng Dealer Monthly Purchase Record Book. In accordance with State law (TCA 62-28-102) and Tennessee Department of Environment and Conservation regulations (TDEC Rule 0400-6-01) all registered ginseng dealers are to submit monthly reports of all their ginseng purchases. The monthly purchase records cover a single month period beginning on the 1st of one month and ending on the 15th of the following month. The 1st report will be due on October 15. Purchase receipts should be sent to:

TDEC, Division of Natural Areas
W.R. Snodgrass TN Tower
312 Rosa L. Parks Ave. 2nd Floor
Nashville, Tennessee 37243

The numbers below refer to the numbers circled on the attached copy of the Purchase Receipt in your book. Please write clearly and press down hard when writing because of the multiple copies. If you make a mistake void the receipt and start a new one. You will need to send in the voided receipts as well as completed ones.

1. **DEALER NAME and PERMIT NUMBER:** Record your name and dealer permit number.
2. **ROOT TYPE:** Indicate whether the roots being purchased are wild, cultivated or woodsgrown.
3. **ROOT CONDITION:** Indicate whether the roots being purchased are green (wet) or dry at the time of purchase.
4. **DATE OF COLLECTION and COUNTY OF COLLECTION:** indicate, as nearly as possible, when the roots were dug and also name the county where they were dug. If the purchase is made from a dealer, then do not complete these spaces.
5. **PURCHASED FROM:** Indicate whether the roots being purchased are from a digger or dealer.
6. **DATE OF PURCHASE:** Indicate the date on which the purchase is being made.
7. **WEIGHT OF PURCHASE:** Indicate the actual weight of the roots at the time of purchase. If the roots are green record the green weight. Please be clear whether your weight is in lbs and ounces or in decimal pounds (1 lb 2 oz. or 1.13 lbs (decimal)).
8. **SELLER'S NAME, ADDRESS, CITY, STATE, and ZIPCODE:** Record the name and address of the digger or dealer that you purchased from.
9. **SELLER'S SIGNATURE:** Obtain the signature of the digger or dealer from whom the roots are being purchased.

SEND THE ORIGINAL TO THE GINSENG PROGRAM COORDINATOR; RETAIN THE YELLOW COPY FOR YOUR RECORDS; GIVE THE PINK COPY TO THE SELLER.

NOTE: Failure to satisfactorily complete and remit monthly purchase records, as well as to knowingly purchase illegally harvested ginseng, is a violation of state law and regulation (TCA 62-28-105 & TDEC Rule 0400-6-1-05), and may result in fines and/or suspension or revocation of your ginseng dealer permit or the denial of issuance of a permit to you in the future.