



GINSENG

GROWING AND USING AMERICAN GINSENG

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THE GINSENGS

- American ginseng – *Panax quinquefolius*
- Korean or Asian ginseng – *Panax ginseng*
- Family: *Araliaceae*
- *Panax*, derived from Greek *Panakos*, a “panacea”, or a “cure-all”

THE TWO GINSENGS

Korean ginseng – Panax



American ginseng – P. quinquefolius



THE TWO GINSENGS

- The Chinese word for ginseng is Jin-chen, meaning “in the image of a man”
- The current Korean word for wild ginseng is sansam, meaning “mountain jin seng.” The Korean word for cultivated ginseng is insam. In older texts, it’s called shim.
- The Cherokee ceremonial word for ginseng is Yunwi Usdi which means “little man.” Native Americans believed that the plant was imbued with spirits that helped humans.

GINSENG



The Cherokees speak of the plant as a sentient being ... able to make itself invisible to those unworthy to gather it. — William Bartram, naturalist, Philadelphia, 1791

DIGGING “SENG”

- The Appalachians called it “sang or seng.”
- Seng is both a verb and a noun.
- Seng or senging is the action of hunting the plant.
- You go senging to gather the seng.



AMERICAN GINSENG

- One of the most widely used herbs in history
 - Traditionally eaten raw or used in tea by Native Americans
 - King of all Tonics
 - In Appalachia, it is called Sang or Little Man
 - Source of Daniel Boone's wealth
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AMERICAN GINSENG

- 90% of grown or wild-harvested ginseng is sold to Hong Kong
 - Sorted, graded and shipped to Korea, China, and other areas of Asia
 - Wild ginseng is a rarity in China
 - South Korea is the largest exporter of ginseng in the world followed by China, Canada, and the United States
 - American ginseng is now being grown in Korea and China
 - In 2023, China imported American ginseng valued at \$87,586,788 (retail value)
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CITES

- International treaty known as CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
 - Export regulated by the U.S. Fish & Wildlife Service (FWS)
 - Monitors the status of American ginseng and other species in commercial trade among countries
 - Export of wild American ginseng falls under CITES treaty
 - The whole plant has to be intact for export
 - https://cites.org/sites/default/files/eng/prog/Livelihoods/case_studies/2022/CITES_%26_livelihoods_fact_sheet_American_Ginseng_USA.pdf
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AMERICAN GINSENG

- Slow growing
 - Considered endangered but much debate on this
 - Reproduces only by seed
 - Poaching in National Parks where harvesting is illegal
 - Loss of habitat due to development and mountain top removal; over-harvesting; invasive plants; and changes in rural culture and increased economic incentives have increased the price of wild roots
 - Trade embargos with China has affected the price of American ginseng
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GINSENG PHYTOCHEMICALS

- Several compounds are involved in adaptogenic properties
- Phytosterols: reduce cholesterol by competing with receptors; also involved in stimulating immune system
- Immunomodulating polysaccharides
- Ginsenosides, saponins, glycosides
- Pharmacological activities of American ginseng different from those of Asian ginseng
- 60 ginsenosides have been isolated roots, leaves, stems, flower buds and berries
- Research indicates that ginsenosides may affect the hypothalamus–pituitary–adrenal axis and the immune system



GINSENG – PROPERTIES

- Increases stamina
- Cardiac tonic
- Circulatory aid
- Hepatic tonic
- Alterative or wound healer
- Adrenal stimulate
- Adaptogen
- Expectorant
- Nervine
- Immuno–stimulant
- Chemo–preventive
- Lowers blood sugar
- Diuretic
- Increases longevity

GINSENG USES

- Weakness
 - Whole body tonic
 - Fatigue
 - Lack of concentration
 - Depression
 - Hormone imbalance
 - Sexual stimulant
 - Stress
 - Heart
 - Protects against cancers of the breast, cervix, bladder, and thyroid
 - Endocrine stimulant
 - Diabetes
 - Enhances fertility
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GINSENG RESEARCH

- Enhances learning ability
 - Protects skeletal muscles from oxidative stress
 - Hypersensitizes multi-drug tumor cells to chemo
 - Anti-stress action for the prevention of disease
 - Reduce blood glucose levels
 - Increased anti-bacterial activity and shorter recovery times from infection
 - Reduced bacterial load of *Pseudomonas aeruginosa*
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AMERICAN GINSENG RESEARCH

- Improves erectile dysfunction and premature ejaculation
 - Supports immune system
 - Manages blood sugar and cholesterol
 - Improves thinking and memory
 - Increases strength and endurance
 - Reduces cancer risk
 - Reduces stress and anxiety
 - Helps mild depression
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AMERICAN GINSENG RESEARCH

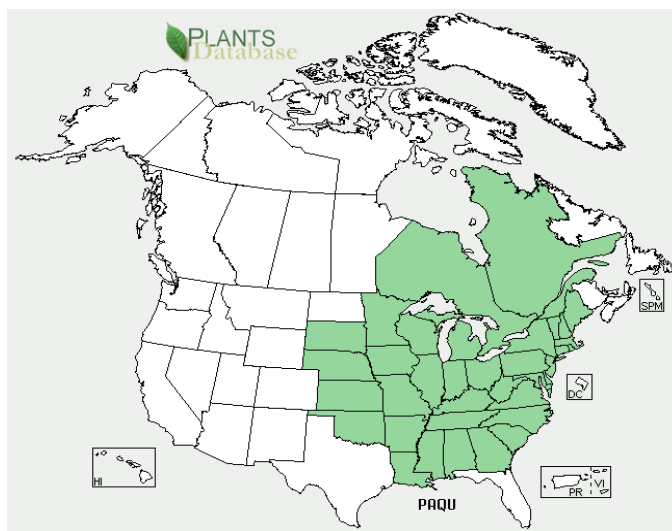
- Regulation of the microbiome balance
 - Protects premature skin from UVB-induced photodamage
 - May reduce risk of Alzheimer's disease
 - Demonstrated that AG had radioprotective effects
 - Antioxidant and anti-inflammatory activity
 - Removes excess water from the body
 - Reduces length of common cold
 - Relieves fatigue
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GINSENG – CAUTIONS

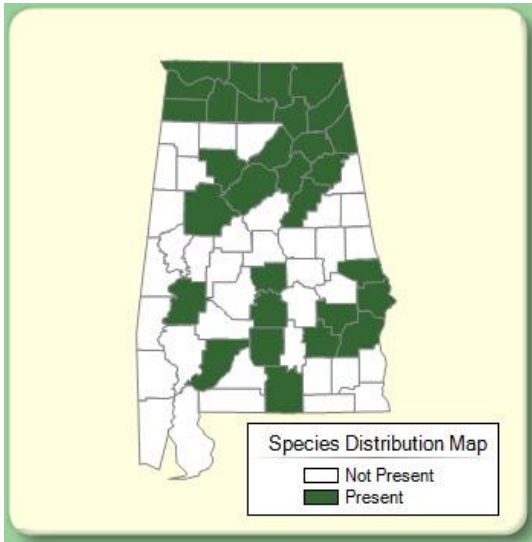
- Ginseng abuse syndrome after 2 years of high doses can cause nervousness, excitation, and auditory hallucinations. Symptoms are gone within 2–4 weeks of stopping the high doses.
- Avoid in high fever, excessive menstrual flow, or with MAO inhibitors, and caffeine use.
- No definitive information on concurrent use with blood thinning medications.



WHERE DOES IT GROW



WHERE DOES IT GROW IN ALABAMA



Alabama Plant Atlas

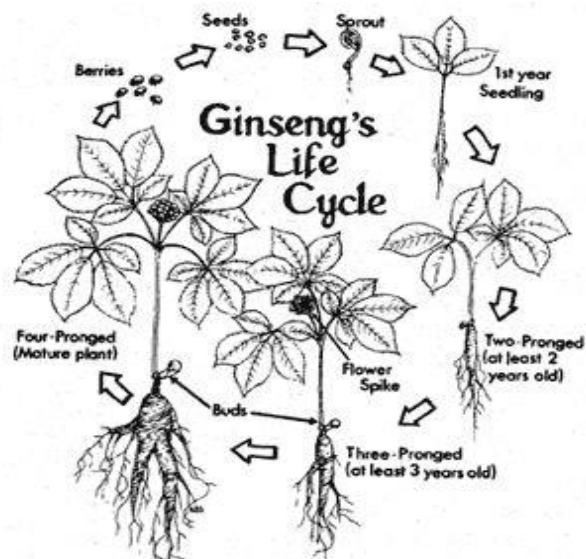
<http://www.floraofalabama.org/Plant.aspx?id=438>

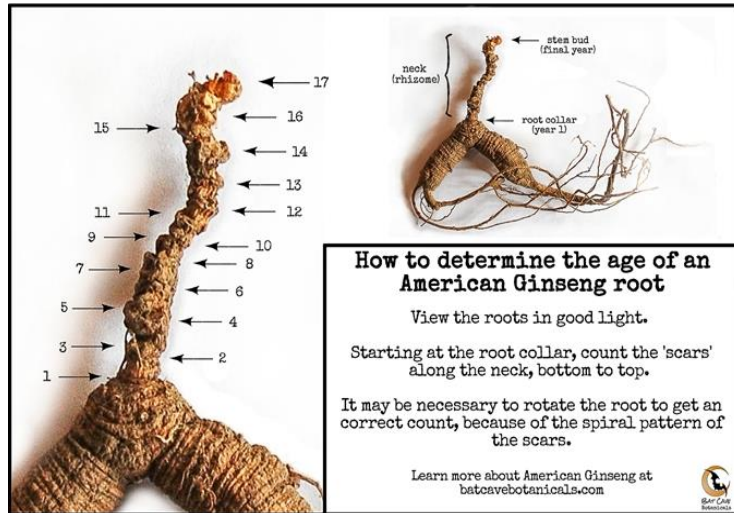
AMERICAN GINSENG

- Grows only in deep shade
- Needs rich, moist soil; well-drained
- Wild-simulated plants can be harvested after 5–8 years
- Prefers north and east sides of slopes but not necessary
- Grows in mixed hardwoods with oak, hickory and sweet gum
- ½ acre yields about 200 pounds of dried root

TRADITIONAL HARVESTING

- Harvest only in season – Sept 1– Dec 13
- Must have 3 five-leaf prongs and be 5 years old
- Break off and replant the arm and shoulder
- Replant the tip of root and rootlets
- Plant mature, red berries (seeds) upon harvesting
- Leaves glow florescent under full moon





GROWING WILD SIMULATED

- Plants stay as seedlings for one to two years and then begin to progress through one-leaf, two-leaf, three-leaf, etc. stages of development over time
- They can stay in seedling stage for several years depending upon environmental conditions
- Must have 3 leaves before they can reproduce but 5 leaves is mature
- Blooms in July–August
- Plants can self-pollinate or cross-pollinate
- Red berries develop after pollination and are ripe August – October
- Deer, birds, and other animals love the berries and help disperse the seeds

GROWING WILD SIMULATED

- Collect red berries and immediately plant them into the ground
 - Plant seeds in the fall before the leaves start dropping
 - Seeds planted will not come up for about 2 –3 years
 - Seeds can be dried and kept for one year. They will keep longer frozen at 0 degrees.
 - Remove the pulp from the seed by soaking about 24 hours. Rinse well and blast with water hose or agitate to remove last of pulp. They can now be stratified or germinated.
 - Seeds can be stratified for better germination numbers
 - To stratify, place seeds in a box with sand and bury for 1 year. Water needs to be able to move through the box but rodents should be kept out.
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GROWING WILD SIMULATED

- The neck can also be replanted
 - The root can be replanted
 - The arm can also be replanted
 - A stem bent over and replanted will sometimes grow
 - Plant in the shade and in mixed hardwoods
 - Seed can be purchased from a commercial grower
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PREPARING THE SITE

- Ginseng needs good airflow
 - Clear away any fallen branches, large rocks, etc
 - May need to remove small shrubs, trees, and undergrowth
 - Rake deep leaf litter to clear site for beds. Take a garden rake and scuff up the soil. Plant the seeds and cover with the leaf litter.
 - Once the plants are up and thriving, may need to thin to maintain good air flow and to remove diseased plants. 1–2 plants per sq. ft.
 - Poaching could be an issue. Deer, mice, and voles love ginseng.
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HARVESTING THE PLANTS

- Wild simulated plants are subject to the same laws as wild plants and must have a permit
 - Can only be harvested from August 1 – December 1
 - Must have 3 leaves with 5 leaflets and 4 or more stem scars on the neck
 - Must be at least 5 years old; 8 year old plants have much, much better market value
 - Dig the roots and slightly wash or brush clean. If the roots are too clean, the market value is lower.
 - Dry on a screen in a well-ventilated area between 85–95 degrees. If the humidity is high, you might need 100 degrees.
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Plants too close in bed



Too close. These will need to be sprayed with fungicide.



THANKS FOR COMING!!!!!!

