

MENOMINEE TRIBAL LEGISLATURE-REGULAR  
JULY 15, 2021

A MOTION

MYRNA WARRINGTON: I move to approve the Menominee Wild Ginseng Management Plan.

RON WAUKAU SR.: I second the motion.

CHAIRMAN: All those in favor of the motion signify by saying Aye. Opposed. The Motion is carried: 4 for, 2 opposed (AWONOHOPAY AND FRECHETTE), 0 abstentions, and 2 absent (PETERS AND CORN).

*Please note Legislator Awonohopay qualified his opposition as follows: "I believe we are not listening to our Tribal Members comments on the issue."*

*Please note Legislator Frechette qualified his opposition as follows: "Same as Legislator Awonohopay, I believe Tribal Members wanted change."*

*Please note Legislator Waukau qualified his vote in affirmation as follows: "In means of sustainability, we need to sustain the resources that we do have."*

# 08 on agenda



GUNNAR PETERS, Tribal Chairman  
MENOMINEE INDIAN TRIBE OF WISCONSIN



# **MENOMINEE WILD GINSENG MANAGEMENT PROGRAM**



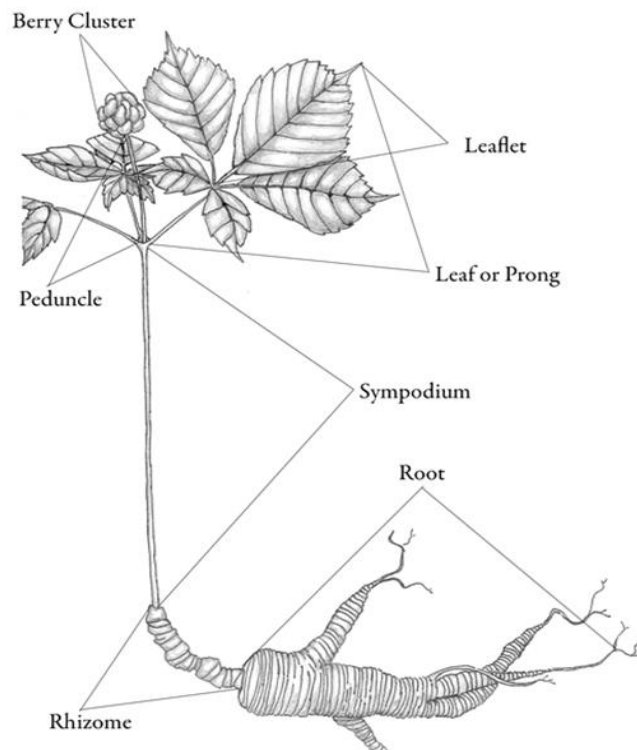
## **BIOLOGY:**

American ginseng is an inconspicuous herbaceous plant found in the understory of the Eastern deciduous forest. In fact, to the untrained eye, ginseng looks very similar to many leafy green perennials blanketing the forest floor. These plants experience a sheltered life, literally. Large trees shade the understory, absorbing sunlight and preventing the excess evaporation of water. Herbaceous plants, like ginseng, may be particularly sensitive to changes in their stable environment.

## **GINSENG ANATOMY:**

<http://wildginsengconservation.com/Ginseng%20Biology.html>

Plants adapt their basic body plan in amazing ways in order to fully exploit their environment. Take the saguaro cactus, for example. Those needles, which constitute a prickly defense against herbivory, are actually modified leaves! Ginseng also has a few evolutionary surprises. Ginseng's stem is actually found below ground. During the growing season, this structure, known as a rhizome, develops a bud that will grow into the next year's visible ginseng plant. Each fall, when the aboveground part of ginseng senesces, a scar is formed on the rhizome. This allows us to age ginseng plants, and is a particularly important feature for controlling ginseng harvest. In order to be sold legally, ginseng must be presented with its rhizome attached. This is to make sure that the plant has been harvested in compliance with the law, which mandates that only plants of 5 years in age and older can be legally harvested.



## **GINSENG LIFE CYCLE:**

Ginseng plants, like humans, go through different developmental stages. Ginseng begins life as a seed, remaining in the soil 18 months prior to germination. A recently germinated ginseng has 1 leaf with 3 leaflets. These fragile plants are more susceptible to the 'elements' than they are at any other life stage; a drought or a disease outbreak may kill off all but the strongest juvenile plants. Ginseng may remain a 1 leaflet plant for several years as it accumulates enough energy to grow into a 2 leaflets, adolescent ginseng. Two leaflet ginseng may develop flowers and seeds, but reproduction is intermittent and low. Ginseng remains in this 2 leaflet stage for another 3-5 years before developing into a large adult plant (typically with 3 leaflets), which may in old age eventually have 4, or rarely 5 leaflets. These adult plants are hardy, and contribute the majority of seeds produced in a population of ginseng. It is these large adult plants that are removed from the population during a harvest event.



**American ginseng seedling (left), juvenile (middle) and adult (right)**

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**Four leaf adult**

Defining these life stages is important for demographic research. As you can see, plants at different life stages vary in terms of fecundity and mortality. In order to accurately model population growth in American ginseng, life stages that capture these demographic characteristics must be created. This type of classification is referred to as stage-based classification, because we use the size or stage of the plant, not the age, to assign ginseng to groups. In our actual demographic model of ginseng population growth we use a more detailed version of the life cycle described above. In order to capture differences in reproduction of larger plants, we divide adult plants into two groups based on leaf area. Finally, we incorporate an age-based model of the progression of seeds through the seed bank. Seeds can remain viable in the soil for up to four years. As seeds age, however, the likelihood of that seed germinating decreases. Hence, we incorporate this aspect of ginseng biology into our demographic model of population growth, by adding information on seed bank dynamics.

<http://wildginsengconservation.com/Ginseng%20Biology.html>

#### **WILD GINSENG REPRODUCTION:**

Ginseng does not spread clonally, and therefore populations expand only through production, dispersal and germination of seeds. Ginseng flowers are not showy, but rather small and whitish-green, bunched together in an umbel. Ginseng flowers mature centripetally; flowers on the outside of the umbel blooming before the flowers located in the center of the umbel. Ginseng has a mixed mating system, meaning that seeds may be produced autogamously or through outcrossing events. Autogamous reproduction means that the plant reproduces via self-fertilization, and outcrossing refers to an ovum being fertilized by an external pollen source. There are two known pollinators of ginseng: syrphid flies and halictid bees. Both of these insects are generalist pollinators, meaning that they visit multiple species of plants when gathering pollen and nectar.

Ginseng berries are bright red when mature, and contain between 10 and 30 seeds. Ginseng seeds are thought to be dispersed primarily by gravity, but in actuality little is known about ginseng dispersal.

<http://wildginsengconservation.com/Ginseng%20Biology.html>



Picture 1: Green Berries Forming



Picture 2: Wild Ginseng with Ripe Berries

## **Ginseng Conservation and What You Can Do to Decrease Extinction Risk of this Important Native Species?**

### **CONSERVATION STATUS:**

Ginseng was added to Appendix II of CITES (Convention on International Trade in Endangered Species) in 1973. In order for CITES-listed species to be exported from the U.S., federal authorities must deem harvest to be 'non-detrimental' to long-term persistence of the species. Each year, individual states report the previous year's total harvest, as well as the location of harvest. The U.S. Fish and Wildlife Service (USFWS) then use these data, supplemented by findings of scientific research, to determine whether harvest is sustainable on a state-to-state basis.

Please note the Menominee Tribe should consider changing the date of the Menominee Harvest Season from September 1 to November 1. The majority of states that permit the harvest and sale of American Ginseng have established a beginning harvest date of Sept. 1. To improve consistency, reduce confusion and prevent potential illegal trade, the U.S. Fish and Wildlife Service requested from all States and Tribe's to change the harvest season start date to Sept. 1.

### **WHAT IS GINSENG AND HOW IS IT USED**

American ginseng is a perennial herbaceous native herb that is native to the eastern half of the United States and Canada. Parts of the ginseng plant are exported or sold domestically and processed for consumption or as additives to food and cosmetic products. Products from the ginseng plant are believed to be a cure for many ills and have strength building qualities. Ginseng

root is believed to have special medicinal properties. Leaves from the plant are used as a tea and other consumable products. The greatest markets for ginseng are over-seas. Much of the ginseng harvested in North America is exported to Asia for processing and resale. However, there is a growing domestic market for ginseng products.

<http://www.vdacs.virginia.gov/forms-pdf/cp/plantpest/vaginsengmngmt.pdf>

### **MENOMINEE INDIAN TRIBE OF WISCONSIN HISTORICAL GINSENG USE:**

The cultural and historical aspect of ginseng with the Menominee Indian tribe is important with past and present generations. In Smith's "Ethnobotany of the Menominee Indians" states many native plants did get utilized for medicinal and cultural purposes. Generations of Menominee people understood the ecological interpretation and importance of their plant lore. Ginseng being economically important species continues to be used by the Menominee people for subsistence. Menominee people being culturally minded, insured ginseng would continue to be part of the forest for future generations.

### **MENOMINEE INDIAN TRIBE OF WISCONSIN WILD GINSENG RULES AND REGULATIONS:**

#### **(Appendix)**

Recognizing that commercial demands may cause over harvesting of ginseng, the Menominee Indian Tribe of Wisconsin law regulates the harvest, sale and purchase of wild ginseng in the Tribe. In order to promote the most sustainable harvesting practices, international trade agreements permit U.S. export of wild ginseng only from those states (tribes) that can annually show that harvest and export are not harming the wild ginseng resource.

#### **Definitions:**

##### **Wild Ginseng:**

Wild ginseng (*Panax quinquefolius*) means an unprocessed plant, dry root or live (fresh or green) root that is not grown or nurtured by a person.

##### **Green Ginseng:**

Means a ginseng root from which moisture has not been removed from drying.

## **Wild Ginseng Harvester/Dealers:**

### **Licensing**

Any enrolled Menominee Indian Tribe of Wisconsin Member who purchases at least 8 ounces of wild ginseng for the purpose of resale shall have a valid wild ginseng dealer license issued by the Menominee Indian Tribe of Wisconsin. All dealer licenses are valid July 1 to June 30 of the following year. Three classes of resident dealer licenses are available.

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### **Transactions and reporting**

- 1.) Dealers shall maintain records (log books) of the quantity purchased, the name and wild ginseng license number of the vendor (harvesters or other dealers), and date of purchase for every purchase transaction.
- 2.) Names, Enrollment Number, and Financial Transactions.
- 3.) Dealers shall commit to Audits and Random Record Checks by the Menominee Conservation Fish and Wildlife Department, MITW or any other Federal Entity that validates Wild Ginseng.
- 4.) Shipments of wild ginseng to locations outside of the Menominee Reservation, Wisconsin by licensed dealers or harvesters shall be accompanied by a certificate of origin.

## **Wild Ginseng Harvesters:**

### **Licensing**

Any enrolled Menominee Indian Tribe of Wisconsin Member who cuts, roots up, gathers or destroys wild ginseng must have a valid wild ginseng harvest license issued by the department prior to harvest. This does not apply to a person who cuts, roots up, gathers or destroys wild ginseng growing on the person's own land if the ginseng is not sold.

Plant Size Restriction: Wild ginseng may not be harvested unless it is at least 10 years old..

Seeds: When harvesting wild ginseng, harvesters are required to plant all of the seeds from the harvested plants in the vicinity of the parent plants in a manner which will encourage their germination and growth. Wild seed may not be sold or transported away from the site of the parent plant except by express written permission from the department. To properly plant the seeds, squeeze the seeds from the red berries and plant in the vicinity of the parent plant, six inches apart and 1/4 inch deep in loosely mulched soil. Cover with leaf litter. Importation of any seeds onto the Menominee Reservation is strictly prohibited.

## **Wild Ginseng Personal Use:**

Harvest for personal use must be specified on the Harvest License/permit and cannot be harvested outside of the general harvest season or regulations identified herein. All ginseng harvested for personal use must be certified by the Menominee Conservation Department, MITW.

## **THREATS TO WILD GINSENG PERSISTENCE IN THE WILD:**

<http://wildginsengconservation.com/Ginseng%20Conservation.html>

## **HARVEST**

Harvest of ginseng is an important economic endeavor for the Enrolled Members of the Menominee Indian Tribe of Wisconsin. Harvest of ginseng began early in Menominee history, and is a tradition passed down from generation to generation in many families. As an important cultural and economic practice, the right to harvest ginseng should be preserved for future generations. Protecting the tradition of harvest, however, hinges on protecting the health and abundance of natural ginseng populations in the Forest.

Harvest of ginseng's root kills the plant, selectively removing the largest, most fecund ginseng from the population. Loss of these large reproducers may slow population growth rates in several ways. Primarily, it reduces seed production, which is the mechanism by which a population maintains itself over time. Secondly, removal of plants decreases population size and plant density. For some species, decreasing population size has been noted to elicit a reduction in individual reproductive rates. This phenomenon, known as the Allee effect, likely results from increased difficulty encountering a mate (in this case, a pollen source) due to a decrease in the number of near-by individuals. Moreover, the Allee effect has been documented experimentally in populations of ginseng (Hackney and McGraw 2001). At the same time, harvest reduces genetic variation in natural populations of ginseng as individuals are removed (Cruse-Sanders and Hamrick 2004). Reduction in genetic diversity may decrease the likelihood that populations will respond evolutionarily to environmental changes, and may result in suppressed vigor due to inbreeding depression, often the result of the expression of recessive deleterious alleles that occurs when closely-related individuals mate. Pollination studies with American ginseng have suggested that some populations display symptoms of inbreeding depression (Mooney and McGraw 2007).

Ginseng harvest is currently regulated by the U.S. Fish and Wildlife Service. Regulation of ginseng began after ginseng was added to Appendix II of the CITES (Convention on International Trade in

Endangered Species of fauna and flora) treaty. While regulation of ginseng is an important component of ginseng conservation, even many compliant harvesters lend to population decrease in natural ginseng populations (Van der Voort and McGraw 2006). A recent analysis of 5 - 11 years of data from 30 populations showed that harvest practices are frequently illegal in terms of the timing (compliance with seasons), location of harvest (forbidden by law on certain properties), and size of plants taken (McGraw, Souther and Lubbers 2010). All of these findings suggest a review and revision of ginseng harvesting regulations is needed to ensure that harvest is sustainable in the long term. The good news is that it is relatively simple to practice good harvest behavior, which doesn't negatively impact ginseng growth.



**Picture 3: Wild Ginseng Root**

#### **BROWSE BY WHITE-TAILED DEER:**

White-tailed deer are currently the most abundant ungulate in the Menominee deciduous forest. Population sizes have remained relatively stable and habitat conversion of forest to adding additional forest openings and aspens stands. Humans are currently the white-tailed deer's greatest predator. Still hunting regulations maintain herds at a stable deer population. If the Menominee Tribe's Deer Herd would get over 13 deer per square mile the forest would begin to see signs of stress. At this time, the effect of deer browse in the understory would be notable; in regions of high deer density the forest floor may be practically bare by the end of the growing

season. Deer graze on a variety of herbaceous species in the forest including ginseng. Long-term population viability of ginseng is decreased as browsing rates increase. Deer negatively affect population viability in two ways. Deer are ginseng seed predators, meaning that seeds consumed by deer are destroyed during the mastication and digestion process. Secondly, early season browse can cause decreased growth rates in browsed compared to non-browsed plants. Consecutive years of early-season browse appear to eventually kill ginseng plants. The Menominee Tribe's Deer Herd is not at this point yet, but there is still a chance that browse from deer could potentially damage the production of wild ginseng. For this management report it is noted as a potential threat to wild ginseng.

### **INVASIVE SPECIES:**

Non-native plants are continually being introduced into natural ecosystems. These introductions occur by accident, when non-native species hitchhike to the U.S. on ships, planes, cars, and/or people. Quite frequently, however, non-native species are intentionally introduced. A good example of this is the use of non-native species as ornamentals for lawn and garden beautification. Of all the non-native species in the U.S., a few will demonstrate extreme vigor and competitive ability in their new habitat, and are referred to as invasive species. Famous examples of invasive species include: kudzu, garlic mustard, Japanese honeysuckle, and multiflora rose. The debate is still out about what characteristics allow particular non-native species to become invasive. Whatever the cause, invasive represent a major threat to native biodiversity in the U.S. due to their ability to outcompete native species. Once established, invasive often form dense, monotypic stands that prevent native reestablishment in the area.

Many invasive species have been found in the ginseng populations that we monitor, including Multiflora rose, Japanese barberry and Garlic mustard (Wixted and McGraw 2008). Detailed experimental studies of garlic mustard's effects on ginseng show strong effects on mortality of seedlings, but limited effects on growth of seedlings or established plants (Wixted and McGraw 2010).

### **FOREST MANAGEMENT:**

Menominee Tribal Enterprises is guided by a well-developed Forest Management Plan. The plan incorporates other entities in their decision making process for forest management. The Menominee Forest contains a variety and abundance of excellent timber species. Anecdotally, we know that ginseng can survive logging events. Some ginseng hunters even seek out recently logged areas, because although ginseng plants may become photobleached and die back in the first year, they may resume growth in the second or third year after harvest. Stimulated by the high-light levels created during timber-removal, these plants can grow quite large. At the same

time, no studies have followed the population dynamics of ginseng in timbered areas. For this reason, it is difficult to state conclusively how populations behave several years after timber harvest, or to understand how the secondary effects of timbering, such as change in community composition mediated by altering light levels, may affect the long-term viability of these ginseng populations. Additionally, different timbering methods likely affect ginseng populations to different degrees - ginseng may be stimulated by an increase in light levels, but light levels that are too high will destroy ginseng's photosynthetic machinery, and the plant quickly becomes bleached and senescent. Therefore, clear-cut forest management practice probably has a dramatically different effect on long-term ginseng population growth compared to selective harvest methods. Future research into the effects of timbering practices on understory ginseng populations could help guide timber regulations and practices throughout the Menominee Forest. **CLIMATE CHANGE:**

Currently, one of the most potential serious threats to the integrity of natural ecosystems is global warming. Plants and animals have evolved morphological, physiological, and phenological (timing of life cycle events) traits to take advantage of the climate that they experience. Rapidly changing climatic conditions may negatively affect fitness, as a plant's physiological and morphological characteristics are no longer matched to local climate conditions.

Currently there are thousands of unknowns in the field of climate change ecology. For instance, how will warmer temperatures affect pest and pathogen abundance? Will warmer temperatures lead to a phenological mismatch of species which have developed important mutualisms, such as plant-pollinator relationships? With respect to ginseng, the tribe may want to partner with WDNR, State Colleges and Universities, and Menominee Tribal Enterprises to develop a long-term dataset to examine the relationship between ginseng demography and temperature, in order to make projections of ginseng response to climate change. This may turn into an issue over the next several years.

#### **SUBURBAN SPRAWL:**

This may not happen if the Menominee Tribe continues with its Forest Management Plan, and the Menominee Tribe Plan of Land Development. This paragraph is added to identify a potential future threat. The effects of suburban sprawl and other forms of development may affect the area in secondary ways. Along forest edges abutting developed areas, the light, temperature, and moisture regime is altered, affecting populations in unknown ways. Additionally, roadways and housing developments are often corridors for invasive species, particularly when non-native species are planted as ornamentals in yards and lawns.

Land conversion from forest to suburban lots is also likely to increase local densities of whitetail deer. Fragmentation of forested habitat may disrupt gene flow among populations, potentially

reducing within-population genetic diversity. Reduction in genetic diversity may lead to decreased fitness of plants due to inbreeding depression, and may decrease the ability of a population to adaptively respond to changing environmental conditions. It is very hard to see into the future of wild ginseng. This paragraph is added with a lot of “What ifs?” This will not affect the Tribe’s Wild Ginseng Plan.

#### **GENETIC POLLUTION:**

With the demand for ginseng increasing as Asian countries experience a growth in expendable wealth, cultivation of ginseng has become a popular enterprise. Ginseng in cultivation is exposed to dramatically different conditions than those experienced by ginseng in the wild. Naturally, ginseng cultivators have selected ginseng seed stock that performs better under these artificial conditions. These seeds are then purchased by people all over the eastern United States who are interested in farming ginseng, simulating wild ginseng, or restoring natural populations by broadcasting seeds into the forest. Inevitably, cultivated genotypes infiltrate natural populations. This may occur when pollen is carried from cultivated plants to wild ginseng, or simply when the seeds from cultivated plants are sown in woodlands.

On the surface, the introduction of cultivated plants into the wild may not seem like a threat to ginseng. However, there is growing evidence that many populations of ginseng are locally adapted, meaning that the populations have undergone genetically-based phenotypic changes which allow that population to thrive at a particular site. You can imagine that introducing cultivated ginseng, bred for survival in artificial agricultural conditions, may negatively affect the long-term fitness of wild ginseng populations, by breaking-up the suite of traits that constitute local adaptation. The extent of contamination of wild populations by these cultivars is unknown. We do know that crosses between wild and cultivated plants yield morphologically distinct offspring (Mooney and McGraw 2007). Therefore, applying Aldo Leopold's 'precautionary principle', the conservation biologist's recommendation is to keep cultivated genes separate from wild populations. An economic reason for such isolation may be found as well: If the economic premium the market yields for truly wild plants is based on genetic and biochemical differences between cultivated and wild, then it makes good economic sense to keep the two groups isolated since cultivars could dilute the value of wild plants.

#### **OBJECTIVES:**

- 1.0) To keep accurate records on the amount of Wild Ginseng that is harvested each year from the Menominee Indian Reservation, Wisconsin;**

- 2.0) To educate Enrolled Menominee Tribal Members on the Conservation of Wild Ginseng.
- 3.0) To Certify Department Officials that are tasked with Certifying Ginseng.
- 4.0) To work with Menominee Tribal Enterprises in monitoring Deciduous Forest and Continual Forest Inventory Plots to detect ginseng presence.

**OBJECTIVE 1.0: TO KEEP ACCURATE RECORDS ON THE AMOUNT OF WILD GINSENG THAT IS HARVESTED EACH YEAR FROM THE MENOMINEE INDIAN RESERVATION, WISCONSIN.**

**STRATEGY 1.1: MENOMINEE WILD GINSENG CERTIFICATION PROCESS:**

Ginseng harvest is currently regulated by the U.S. Fish and Wildlife Service. Regulation of ginseng began after ginseng was added to Appendix II of the CITES (Convention on International Trade in Endangered Species of fauna and flora) treaty. The Menominee Indian Tribe of Wisconsin has Wild Ginseng Harvesting Regulations in place since September 21, 2012.

- 1.) Enrolled Menominee Indian Tribe of Wisconsin members that dig ginseng on the Menominee Indian Reservation is required to possess a “Harvester/Dealer” Permit acquired from the MITW License and Permits Department.
- 2.) Any Enrolled Menominee may sell wild ginseng root acquired on-Reservation as long as they possess a “Harvester” Permit.
- 3.) Any Enrolled Menominee that sells wild ginseng off-Reservation is required to possess a “Harvester/Dealer” Permit acquired from the MITW License and Permits Department.
- 4.) Any wild ginseng root leaving the Menominee Indian Reservation, Wisconsin must be certified by the Menominee Conservation Fish and Wildlife Department, MITW during normal working hours.
- 5.) Menominee Conservation Fish and Wildlife Department, MITW normal working hours are Monday through Friday: 8:00 am – 4:30 pm.
- 6.) No certification will be conducted after normal working hours.
- 7.) Menominee Conservation Fish and Wildlife Conservation Staff will:
  - a. Will “all” be certified by a licensed Federal Certifier of Ginseng.
  - b. Will inspect “all” ginseng roots to assure the fact that they are “wild”.
  - c. Will age all ginseng in order to determine that they are 10 years or older.
  - d. If Ginseng younger than 10 years of age is harvested, the seller will receive a Citation.

- e. After authenticity and ages of wild ginseng are validated, the root will be placed upon a scale and weighed.
- f. Conservation staff is required to fill out a certification sheet by listing: weight of the root, Dealer's name, address, enrollment number, telephone number, name and address of recipient of root (where the root will be sold), and date of shipment. Conservation Staff will sign and date the certification form.
- g. The dealer or seller is given the original certification form and one copy of the original certification form that is kept on file.
- h. Menominee Conservation Fish and Wildlife Department will retain one copy of the original certification form that is kept on file.

### **STRATEGY 1.2: MAINTAIN MITW CITES AUTHORITY**

<http://www.cites.org/eng/disc/what.php>

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

1. Assure annual trainings are conducted for certifying MITW Staff
2. Maintain compliance with CITES, including annual reporting

### **STRATEGY 1.3: THE MENOMINEE INDIAN TRIBE OF WISCONSIN C.I.T.E.S REPORTING.:**

In 2012, the Menominee Indian Tribe of Wisconsin applied for a Department of the Interior U.S. Fish and Wildlife Service Federal Fish and Wildlife Permit Application Form OMB No. 1018-0093 (CITES) and received acceptance from the United States Fish and Wildlife Service. In each year of the program the Menominee Tribe must complete an Annual Report to complete C.I.T.E.S. Requirements. The Menominee Indian Tribe of Wisconsin will continue to complete Annual Reports and send them to the USFWS.

- 1. Submit annual report to MITW Conservation Commission**

### **OBJECTIVE 2.0: TO EDUCATE ENROLLED TRIBAL MEMBERS ON THE CONSERVATION OF WILD GINSENG.**

## **STRATEGY 2.1: WILD GINSENG STEWARDSHIP: “What you can do to be more than compliant Harvester?”**

The Menominee Tribe of Wisconsin has a native population of wild ginseng and wants to conserve it, while leaving open the possibility of occasional harvest for profit or personal use for its tribal members in your future. This paragraph will look at the possibilities in “How can you 'steward' this population for the long-term?”

### **HOW TO SUSTAINABLY HARVEST WILD GINSENG?**

- 1.) Find a naturally growing wild ginseng plant population.
- 2.) Assess the wild ginseng population size (number) and structure (number of 1, 2, 3, and 4-leaf plants) to provide a baseline; document this in writing, noting the date of your assessment.
- 3.) Maintain a September 1<sup>st</sup> harvest date with the rest of the United States.
- 4.) Provide training that teaches harvesters the proper way to replant berries on site where plants are harvested.
- 5.) Stewardship Steps:
  - a. Remove red (ripe) berries from all reproductive plants (leave green berries to ripen); may require repeat visits to site.
  - b. Plant seeds 1/2” - 1” deep in loose soil 2 to 10 ft. from parent plant (one berry per location). Plant red berry 12 inches apart.
  - c. Clip all stems from all 2-, 3 - and 4-leaf plants after all their berries have been planted (hiding plants from other potential harvesters).
  - d. Provide facts from available scientific research as referenced earlier in this plan.
  - e. Harvesting
    - Harvest 50% of adults having 5 berries or more.
    - Harvest legally Sept. 1 or later; only after berries are ripe.
    - Leave all of the rest, and treat them in a stewardship fashion.
    - Never harvest to the point where numbers are less than the initial population size.

### **STRATEGY 2.2: CONDUCT AN ANNUAL NATIVE WILD GINSENG MEETING:**

The MITW Natural Resource Programs will hold an annual meeting in early August with harvesters and licensers. The basis for this meeting will go over federal guidelines, rules and

regulations, and express the department's effort to work cooperatively with Wisconsin State Conservation Wardens and USFWS Federal Agents on the policing of Wild Native Ginseng.

In 2013, WDNR launched an analysis of DNR ginseng records dating back to 2007. Dubbed Project Red Berry, the review raised questions about roughly 400 diggers. The DNR sent 42 two-person warden teams out to question those diggers over seven days this September. The interviews resulted in 185 verbal warnings and 109 citations against 65 people for violations dating between 2013 and 2007.

Many of the violations were for trespassing on private property, leaving the roots' stems and stalks in the woods, harvesting out of season and harvesting on public land. All the offenses were civil violations, similar to a speeding ticket; none were criminal.

### **OBJECTIVE 3.0: DEPARTMENT OFFICIALS WILL BE CERTIFIED.**

#### **STRATEGY 3.1: CERTIFICATION TRAINING.**

All native wild ginseng collected from the Menominee Reservation must be certified. MITW Natural Resource Programs Personnel must have adequate training to certify wild ginseng roots. The department will seek out appropriate certification training for wild ginseng identification. The Menominee Indian Tribe of Wisconsin regulates the harvesting of wild American ginseng (*Panax quinquefolius*). This includes licensing of collectors and dealers in Menominee wild ginseng, certification of roots prior to sale, and monitor in the overall health of the wild ginseng population. Our program is conducted in cooperation with the US Fish and Wildlife Service program, in accordance with the Convention on International Trade in Endangered Species (CITES). Without the Menominee Indian Tribe of Wisconsin's program, harvesting and trade in wild ginseng would be prohibited in the Tribe and Wisconsin.

### **OBJECTIVE 4.0: TO WORK IN COOPERATION WITH MENOMINEE TRIBAL ENTERPRISES IN MONITORING THE DECIDUOUS FOREST AND MONITORING THE CONTINUAL FOREST INVENTORY PLOTS FOR THE PRESENCE OF WILD GINSENG.**

#### **STRATEGY 4.1: MENOMINEE TRIBAL ENTERPRISES CONTINUAL FOREST INVENTORY:**

The Menominee Indian Tribe of Wisconsin will begin to take steps to monitor the presence of "Wild" Ginseng in the Menominee Forest. To date, after completing a literature review, there is no survey that can be followed to provide the tribe with an estimate of "How much Ginseng exists

in the wild.” The Menominee Indian Tribe of Wisconsin will work in cooperation with Menominee Tribal Enterprises in a joint effort to estimate the presence of native wild ginseng.

Menominee Tribal Enterprises has a level of planning that is designed to give forest-wide information as to the condition of the forest and calculates allowable cut values. Continual Forest Inventory (CFI) is an inventory system that involves measuring and analyzing a set of 941 permanent inventory plots on the forest. These plots are measured every 10 years, allowing for the calculation and monitor change in the forest and monitor trends that may be occurring. From calculations on the inventory measurement periods, the annual allowable cut calculation can be calculated.

In the upcoming CFI measurement periods scheduled, the Menominee Tribe may want to work in cooperation with Menominee Tribal Enterprises. The CFI Plots provide an avenue of monitoring current existing Wild Ginseng as they may occur on their plots. This may be one method of measurement. CFI Plot Measurers will be asked if they can identify Wild Ginseng within the scheduled plot. Does the plot have wild ginseng growing in the plot or not.

After completion of the CFI Measurements, a group of training Menominee Indian Tribe of Wisconsin and Menominee Tribal Enterprise Employees may want to assess the presence of wild ginseng on the forest. This can be completed by actively going to the CFI Plot which has Wild Ginseng growing within the circle. The Menominee Tribe than can monitor the success of failure of the wild ginseng within these plots as years progress and new surveys are conducted. The Menominee Tribe may want to conduct research on these plots with removal and planting ginseng, monitor the years it takes to grow one mature stock, etc, research possibilities may be endless.