

## WYSONG GINSENG PRODUCTION

Final Report

FNE 93-7

The ginseng production project is very successful. The project land preparation, liming, cultivating, planting and mulching has been accomplished. The planted roots will be appearing in May as ginseng is a late plant to leaf in the spring because it requires shade. Therefore, the ginseng must wait until the tree leaves appear.

### Land Preparation:

The site was selected with the assistance of the extension agent. The lower growing brush was sprayed with Roundup™. Later, the brush and undergrowth was removed by hand and by tractor. As many roots as possible were removed from the soil surface. All conifers and small trees that did not contribute to the needed shade were removed.

Lime and fertilizer was applied at recommended levels.

Rows were dug with a potato plow or by hand.

### Seeds and Roots:

1 year old roots	1,300
2 year old roots	1,000
3 year old roots	180
seeds	3 pounds (22,500)

### Planting:

The roots were planted by hand in the rows. Distance between plants was nine inches and six inches between rows. The seeds were planted in seed beds for future transferring to permanent locations. Ginseng seeds sometime require two or even three years to germinate.

### Mulching:

With the assistance of the Extension agent, eight different materials were used for mulching. These included wood shavings, sawdust, whole leaves, shredded leaves, straw, hay, shredded paper and shredded tobacco stalks. The whole leaves which are nature's material for mulching will be used as the control plots. Three replications four feet in width and twenty-five feet in length were constructed. One year old roots will be used as the basis of information for comparison.

### Designating Plots:

Each plot and each replication was marked with stakes.

**Study Information:**

Each mulch will be studied to determine ease of growth, amount of growth, weed control and disease and insect factors.

**Outreach:**

With the assistance of the extension agent, a slide presentation was developed showing the steps in starting a ginseng patch with roots and various mulching materials. A handout was developed explaining how to plant ginseng. A copy of each is enclosed.

**Future Aspects:**

The future will develop information on the differences of each mulching material.

Within three years, a portion of the plot will be at the proper age for harvesting.

The harvested roots will be sold through a coop being developed.

May 15, 1994  
Date

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## INTRODUCTION

Ginseng, also called just '*sang*' is a wild plant growing in the eastern United States as far north as Maine, south to northern Georgia and west to the Mississippi River. Ginseng has been planted in many other states including Alaska. A more important nickname of ginseng is '*green gold*.'

### Slide 1

Ginseng grows wild in areas very similar to this. It requires 70 to 80% shade from hardwood trees. The environment requiring shade, proper moisture, airflow and drainage make ginseng very difficult if not impossible to tame like corn or potatoes. The environmental requirements are the same for wild woods grown or cultivated ginseng.

### Slide 2

The first step in preparing a site is to clean the area of undergrowth, small trees, bushes and any pine trees. Make sure to leave the canopy trees which supply the shade. Ginseng is so dependent on shade that it does not start appearing in the spring until the trees have leaves. It also disappears in the fall before leaf fall.

### Slide 3

To plant ginseng, a hoe like the one in the slide or a special ginseng hoe is very helpful. Planting can be done with seeds or one, two, or three year old roots. This slide series deals with planting roots. Using the hoe, dig a trench or individual hole four to five inches deep.

#### **Slide 4**

The hole should be deep enough to place the complete root about one and one half inches below the surface. Plant the roots nine inches apart and the rows six inches apart. The plants need air movement to help control diseases.

#### **Slide 5**

When working with ginseng roots, protect the bud. The bud is the growing point as seen between the fingers. The bud is vital to all future growth. Each year, the plant develops a new bud on the opposite side of the root. If the bud is damaged in anyway, that plant will die.

Therefore, make sure you are careful in handling the rootlets.

#### **Slide 6**

Carefully place the root into the hole. Make sure the bud is pointing upward. The rest of the rootlets can be placed at any angle. Carefully and firmly place soil around the root and bud. The bud should be one to two inches below the surface.

#### **Slide 7**

After planting, make sure the bed surface is smooth. You should also make sure the beds are no more than four feet wide between pathways. This allows you to reach all plants from adjoining pathways without walking in the plants. This helps prevent damage from walking on rootlets plus helps prevent the spreading of diseases by brushing against plants.

**Slide 8**

Mark the rows with good sturdy stakes so you can easily recognize the planted areas.

Another important aspect of growing ginseng is to properly mulch the ginseng after planting. Cover the bed with a suitable mulching material. The mulch should be two to four inches deep.

**Slide 9**

Mulch the area immediately after planting. The mulch is essential for retaining moisture, reducing weeds, stopping erosion and protecting from frost damage during cold weather. It regulates soil temperature. Materials that make excellent mulching materials include leaves, straw or sawdust/bark mixtures. Pine bark or sawdust or needles should not be used.

**Slide 10**

When applying the mulch make sure it is spread evenly. Check the area often to make sure the mulch is not blown or disrupted. Mulch also is constantly decaying, leaving a natural fertilizer. This research project is studying different types of mulches.

**Slide 11**

This slide shows four different mulches in the project. The center light colored area is mulched with wood shavings. On the left is shredded tobacco stalks. On the right is nature's hardwood leaf mulch. Three replications of each mulch are included.

#### **Slide 12**

This slide shows straw in the middle with paper on the left and the shredded tobacco stalks on the right. Notice the stakes showing the boundaries of each plot. Also, leaves were placed between the plots.

#### **Slide 13**

Some areas have tobacco farms. For years, the stalks have been a problem. Some are burned, buried, plowed under or just piled up to rot...Zeke Wood, extension agent, decided to try shredded stalks as a mulch. The tobacco stalks shred well, contain nitrogen and appear to be an excellent material for soil conditioning and rootlet protection.

#### **Slide 14**

Here is a view of the different mulches used in the experiment. These include from left to right, shredded tobacco stalks, sawdust, leaves, paper, wood shavings, and chopped leaves. Data will be collected to determine such factors as ease of growth, amount of growth, decaying ability, frost protection, soil temperature regulation and weed control.

#### **CONCLUSION**

Ginseng is a complicated and very sensitive crop to grow. Factors affecting growth include soil, shade, mulch, disease, and animal damage such as mice and insects. However, ginseng roots can be harvested at five to seven years of age. Prices in 1993 were about \$250 per pound. Growing ginseng under wild simulated conditions can yield between \$10,000 and \$50,000 per one-half acre. Anyone wishing to grow 'sang' should thoroughly research the operation.