

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
PLANT MATERIALS CENTER  
BIG FLATS, NEW YORK

Production of Bristly Locust, Robinia hispida, NY-3018

Eight-year Summary

1. Seed should be properly cleaned, scarified and inoculated,
  - a) Scarification is by soaking in concentrated sulfuric acid for 10 minutes. Seed should be drained and thoroughly flushed with water. Each lot must be tested to determine if seed is properly scarified. Some Lots may require a treatment longer than 10 minutes. Mechanical scarification could be used.
  - b) Obtain special inoculant from Nitragin Company, Milwaukee, Wisconsin,
2. Seeding date has been last week of May.
3. Seeding rate is 1 oz. per 12 sq. ft. or 120 seeds per sq. ft. (Broadcast seeding). Rate based on 23,000 seed per pound. Row seedings have not been made at this location; however, they are planned for Spring 1968. It is believed this method may be advantageous in stand establishment and plant growth.
4. All plants at this location are grown in beds which are 6-8 inches above the normal ground level. This facilitates digging.
5. The seed are rolled in lightly and covered to a depth of 5/16 inch with a mixture of equal parts of sand and sawdust. The soil at this location is a sandy silt loam which has a tendency to surface crust. The use of the sand and sawdust should be regulated to site conditions.
6. The beds are mulched with four inches of weed-free rye straw to prevent surface drying. The straw is held in place with mulch netting.
7. Germination normally begins four days after seeding and is completed within 30 days.
8. The straw is removed when 30% of the seedlings have emerged. This is critical as the emerging seedlings are easily smothered.
9. Supplemental water is usually necessary during germination, especially after straw is removed. This must be watched closely as the beds dry quickly without mulch.

10. Damping-off of seedlings is controlled by use of Captan 50-W. This is applied through our sprinkler irrigation system. Of course, it could be applied with a regular field sprayer. Rate of application is 2 pounds of material in 100 gallons of water per acre.
11. Plants are fertilized with ammonium nitrate twice during the growing season. The second application should not be later than July 15, in order that the plants can harden off before freezing temperatures occur. The rate of application is one pound of material per 120 sq.ft. for each of the two treatments.
12. The plants normally reach a minimum height of 36 inches before frost. They are shipped as 1-0 plants, 2-0 plants become too large for practical use. Estimated number of acceptable seedlings per pound of seed is 2,000 to 3,000. Acceptable seedlings for transplant to the field should have a minimum stem diameter of  $\frac{5}{32}$  inch, measured one inch above the root collar, and a minimum height of 12 inches.

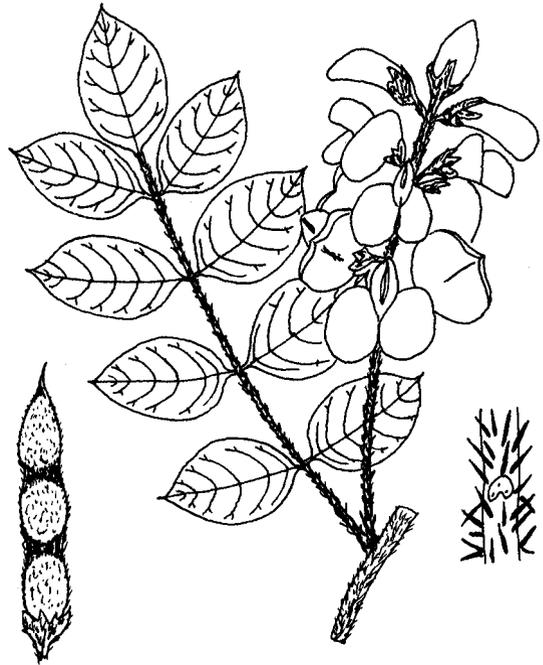
January, 1968.

Prepared by:  
Clifford L. Williams, Manager, and  
Robert L. Sherman, Conservation  
Technician

**ARNOT BRISTLY LOCUST (*Robinia fertilis*)**  
**For Erosion Control and Wildlife Plantings**  
In Indiana, Michigan, Wisconsin

Description: Arnot bristly locust was developed by the Soil Conservation Service at the Big Flats Plant Materials Center, Big Flats, New York. It was selected from plants in the Arnot Forest, Newfield, New York. Seedlings used in this planting were grown from purchased seed collected in New Jersey. It is a shrub legume that is attractive, is open branched, and forms thickets where it is well adapted. It spreads from root suckers, especially on coarse-textured soils where herbaceous cover is not dense.

The compound leaves are bright green and are arranged alternately on bristle-covered branches. The blossoms appear in May through June with numerous, large, rose-purple flowers. On fertile sites, mature plants reach a height of 8 to 10 feet, but 5 to 7 feet is most common. Seed crops are produced annually. Seeds are in bristle-covered pods. It has ability to fix nitrogen.



Purpose: To evaluate Arnot bristly locust for use in erosion control, beautification of critical areas and wildlife plantings, such as roadbanks, borrow areas, lakeshores, minespoils, and similar sites where plant cover is needed.

Standard for Comparison: Autumn olive, junipers, crabapples, silver buffaloberry, or the existing woody plants in the immediate area will normally be considered the standard.

Site: Soil adaptation for Arnot bristly locust is broad. Successful plantings have been made on acid minespoils with a pH of 4.0, as well as on alkaline sites with a pH of above 7.5. Arnot is drought tolerant and has the ability to thrive and form dense thickets on low fertility sites. Although it spreads aggressively on barren sites, bristly locust does not compete well with established vegetation and is not likely to move into areas where it is not wanted. Hardiness limits have not been determined but successful plantings have been made near Burlington, Vermont, and East Lansing, Michigan, (-20° to -10° F.).



Site Preparation: Prepare site by plowing or disking if equipment can be used. Minimum soil preparation should consist of scalping sod off an area at least one foot across.

Date of Planting: Early spring, as soon as possible after materials have been received.

Planting Method: Soaking roots in water an hour or so just prior to planting usually increases survival. Plants may be planted by hand or with a tree planter. If in rows where equipment can be used, allow enough room to mow or cultivate for weed control. A spacing of 3 to 4 feet in a single row or 6x6 for clump plantings is suggested.

Management: Weed control is necessary for good establishment and uniform growth. Selective approved herbicides provide good weed control after establishment year; follow the instructions on the label. Protect from 2,4-D type sprays, fire and trampling by livestock.

Dorian A. Carroll, Plant Materials Specialist  
U.S. Soil Conservation Service  
East Lansing, Michigan  
4-9-73