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GROWING BLACK LOCUST TREES

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GROWING BLACK LOCUST TREES

By WILLIAM E. JACKSON

The Black Locust, *Robinia pseudacacia* (sometimes called Yellow Locust) is one of the most desirable trees to grow on the farm because of its dense, durable wood which is excellent for many farm uses. In soil of average quality the growth of the tree is very rapid as compared with the growth of other hardwood trees. Under normal conditions posts four to six inches in diameter may be cut from trees eight to ten years old. The tree usually reaches maturity in twenty-five to thirty years. Since the locust is a legume, growth of these trees probably does not tend to exhaust the nitrogen supply in the soil.

Black locust trees planted the Spring of 1934 which have, with the aid of check dams, about reclaimed this once badly gullied area.

Where to Get Trees. Nursery seedlings may be obtained from the State Forest Service, Frankfort, or from a commercial nursery, or trees may be grown from seed. If unable to get trees from either of these sources, write the Extension Forester, Experiment Station, Lexington. Trees should be ordered well in advance of planting time and enough should be ordered for the whole area to be planted. Order blanks may be obtained from the County Agricultural Agent, from the Extension Forester, or from the State Forest Service, Frankfort.

Care Before Planting. If the trees are from a nursery, the bundles should not be opened until the ground is ready. If they cannot be planted at once and must be kept for several days, the bundles should be opened and the trees "heeled in" in a shady place, in a shallow trench dug with one sloping side. The roots should be carefully spread out and covered immediately with fine earth, and watered if the soil is dry.

A badly gullied area which can be best reclaimed by planting black locust trees.

Preparation of the Ground. If the land is level or gently sloping, furrows may be plowed, running with the contour of the site, in which to set the trees. If there is danger that furrows may cause the soil to wash, holes should be dug with a mattock or grubbing hoe. Care should be taken to have the holes so wide and deep that the roots can be spread out in a natural manner.

The Use of Fertilizer. If the soil is very worn and deficient in fertility, quicker growth may be had by the application of a 3-10-3 fertilizer. About a tablespoonful of the fertilizer should be allowed to each tree. After placing the tree in the hole, about an inch of dirt should be put around and over the roots before the fertilizer is added. If the trees are to be planted in furrows, the fertilizer may be distributed along the furrow by hand or by the use of a fertilizer distributor.

When to Plant. Early spring, before the leaf buds begin to swell,

is the best time to plant black locust seedlings. Trees set in the Fall on open, worn sites, are liable to be killed or injured by the alternate freezing and thawing of the soil. If the trees are set out late in the Spring, those with deficient root systems or that have begun leafing out, should be cut back near the ground.

Breaking down the top of a gully bank in preparation for planting black locust trees.

How to Plant. The trees should be placed on loose soil in the bottom of the furrow or hole, slightly deeper than they were in the nursery, with the roots spread out naturally, and loose soil pulled over and around the roots and firmly tamped down. Very long roots may be cut back about one fifth. It is well to water the trees, if the ground is dry. At all times during planting work, care should be taken to keep the roots protected from the sun and wind. The trees to be planted may be distributed from a 12-quart bucket containing enough water to keep the roots wet. A tree should not be taken from the bucket until a place is made ready for it, so that the roots may be immediately covered and protected. Seedlings twelve to eighteen inches high stand a better chance of surviving after replanting than taller ones. Those more than twenty-four inches high should be cut back when they are planted.

Spacing. The purpose for which the planting is made should determine the spacing of the trees. Close spacing causes competition for light and the trees grow tall, straight and free from low branches. A good spacing is six feet apart each way. This requires about 1200 trees to the acre.

Cultivation and Care. As the sites planted to locust usually are in the rough land, little cultivation other than with a hoe need be given the young trees. It is very important that the planted area be well fenced against livestock. Young locust seedlings are very attractive to grazing animals and one or more head of livestock can damage or ruin a planted site in a very short time. If danger from grass fires exists, several plow furrows may be run around the planted area. Pruning the lower branches promotes the growth of the trees, but keeping the stems of the trees shaded helps to keep the borer beetle away.

HARVESTING

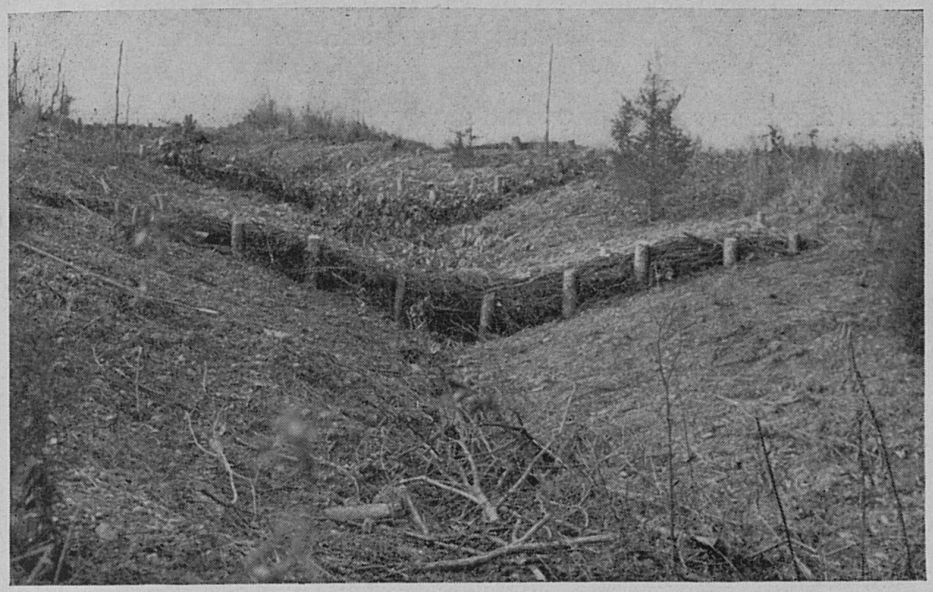
Locust trees should be cut when they are dormant, in the fall or winter. Timber from locust trees cut during this period dries out and seasons better and is more lasting, especially when in contact with the soil.

GROWING LOCUST SEEDLINGS ON THE FARM

Locust seedlings may be produced at home with as little trouble as growing ordinary garden crops. Seed may be bought at a moderate price or gathered from locust trees. Care should be taken to get seed only from healthy, well-formed trees. The seed may be shelled from the pods by hand or by machine.

The seed bed should be in the near-by garden area, preferably with a northern exposure. A light silt loam in a fine, workable state is the most satisfactory; heavy soil may be made lighter by addition of well-rotted manure or vegetable material. An old tobacco plant bed is very satisfactory for growing locust seedlings. If the soil is poor in phosphate, 20-percent superphosphate may be applied at the rate of 12 to 15 pounds to 100 square feet; or the equivalent of some other phosphate. A complete fertilizer may be used. If the soil is strongly acid, application of 8 to 10 pounds

of ground limestone to each 100 square feet should be beneficial. The phosphate should be well worked into the soil before the locust seed are planted.



Temporary dams of brush constructed across gullies after the banks have been sloped and planted to black locust trees are effective in retarding soil erosion, until the trees are able to control conditions.

Locust seed should be soaked in lukewarm water for 24 hours before planting. The seeds should be dropped about one half inch apart in shallow drills about 18 inches apart, and covered about half an inch deep with soil well firmed down. After the seedlings show thru the ground, the soil should be cultivated lightly. The bed should be kept free from weeds and watered if necessary. Seed beds made in soil inclined to form a hard crust, should have a light mulch of straw or leaves until the sprouts appear. If the seeds are planted in late April or early May and have a normal growing season, the seedlings should reach a height of twenty-four to thirty-six inches by Fall.

PLANTING TO CHECK EROSION

Before planting locust trees in a severely gullied area, it is advisable to break down the tops of the gully banks and to build check dams of logs, mill slabs, stones or brush across the gully

bottoms. No regularity of spacing should be observed and enough trees should be set in the gully to stop further washing of the soil as quickly as possible. Two to three feet apart is not too close.

Living Check Dams may be formed by planting locust trees in hedge formation from the top of one side of the gully across the bottom and up to the top of the opposite side. The trees should be set about two inches apart, in three rows about twelve inches apart, to form each dam. After the outwash of the gully has been checked the stand may be thinned to gain better growing space for the trees retained.

Stone dams, with black locust trees planted on the sloped gully banks in the rear, may be used to check soil out-wash while the trees' roots are getting firmly established.

PLANTING WILD STOCK

Young locust trees or sprouts from roots may be dug from nearby groves and grown successfully. Care should always be taken to keep the roots from drying before they are replanted. In practice, however, wild stock has not proved so desirable as nursery-grown stock. The stems, buds and root systems are better developed in nursery stock ensuring quicker growth when transplanted.

INSECT ENEMIES

The Locust Borer. This insect injures locust trees by boring into the wood. Thus it not only impairs the growth of young trees

but also impairs the quality of timber produced. It is the grub of a black-and-yellow beetle which is common on the flowers of tall goldenrod, feeding on the pollen. The beetle is about ¾ inch long and is characterized by zigzag, bright yellow stripes across the body. It deposits eggs on the bark of locust trees. In a few days grubs emerge and bore thru the bark to the surface of the wood where they stay over winter. Then they bore into the wood, feeding on the wood and growing thru the intermediate stages until

A once worn and gullied area, of no use for agricultural purposes, now growing a fine crop of black locust trees.

they become mature beetles and come out of the tree about the time the tall goldenrod blooms. The beetles do not place eggs on trees or branches smaller than about an inch in diameter and they seem to avoid shade, so that plantings of small trees are not molested at first, but it is important to destroy goldenrod about a planting, especially the tall kind. This tends to drive the beetles away in search of food elsewhere.

Weed growth in locust groves and plantations is very desirable, to discourage borer infestation by providing shade. For this reason livestock should not be permitted to graze in locust plantation areas even after the trees have grown to such a height that there

may be no longer any danger from browsing. Opening up locust groves by livestock grazing tends to invite the borer infestation.

The Locust Twig-miner. This insect is especially injurious to young trees. The larvae of a small moth bore into and mine the twigs and branches of young trees, causing elongated swellings, thereby weakening them and causing a tendency to break. Young locust trees growing on very poor land seem to be most susceptible to infestation by the twig-miner. Application of a fertilizer high in phosphate, to depleted soil, tends to give the planted seedling added vigor to overcome the twig-miner infestation.

Leaf Miners and Skeletonizer. The larvae of a small, black- and yellow beetle and of several species of moth burrow between the upper and lower surfaces of the leaves of the locust. Sometimes the foliage is almost entirely killed so that the trees look brown, as if dying. Successful control has not been worked out, but it is suggested to rake up and burn all fallen leaves and trash under the trees. Application of an arsenical spray, early in the season, may help.

TREATMENT OF BORER-INFESTED PLANTINGS

Plantings which are found to be so seriously infested with the borer that growth of the trees in height and diameter has stopped, may be renewed from sprout growth. All infested young trees should be cut off close to the ground and burned. If the soil is acid and low in phosphorus, the area should then be given an application of ground limestone at the rate of 2 tons per acre, and of 20-percent superphosphate at the rate of 400 pounds per acre, or an equivalent in some other phosphate. Then the area should be harrowed with a cutting harrow. This treatment should cause the stumps and roots of the old growth to sprout vigorously. After the sprouts have made a year's growth, the straightest and strongest should be selected, spaced as near as possible six feet apart each way, to remain, and the others should be destroyed or removed to another location.