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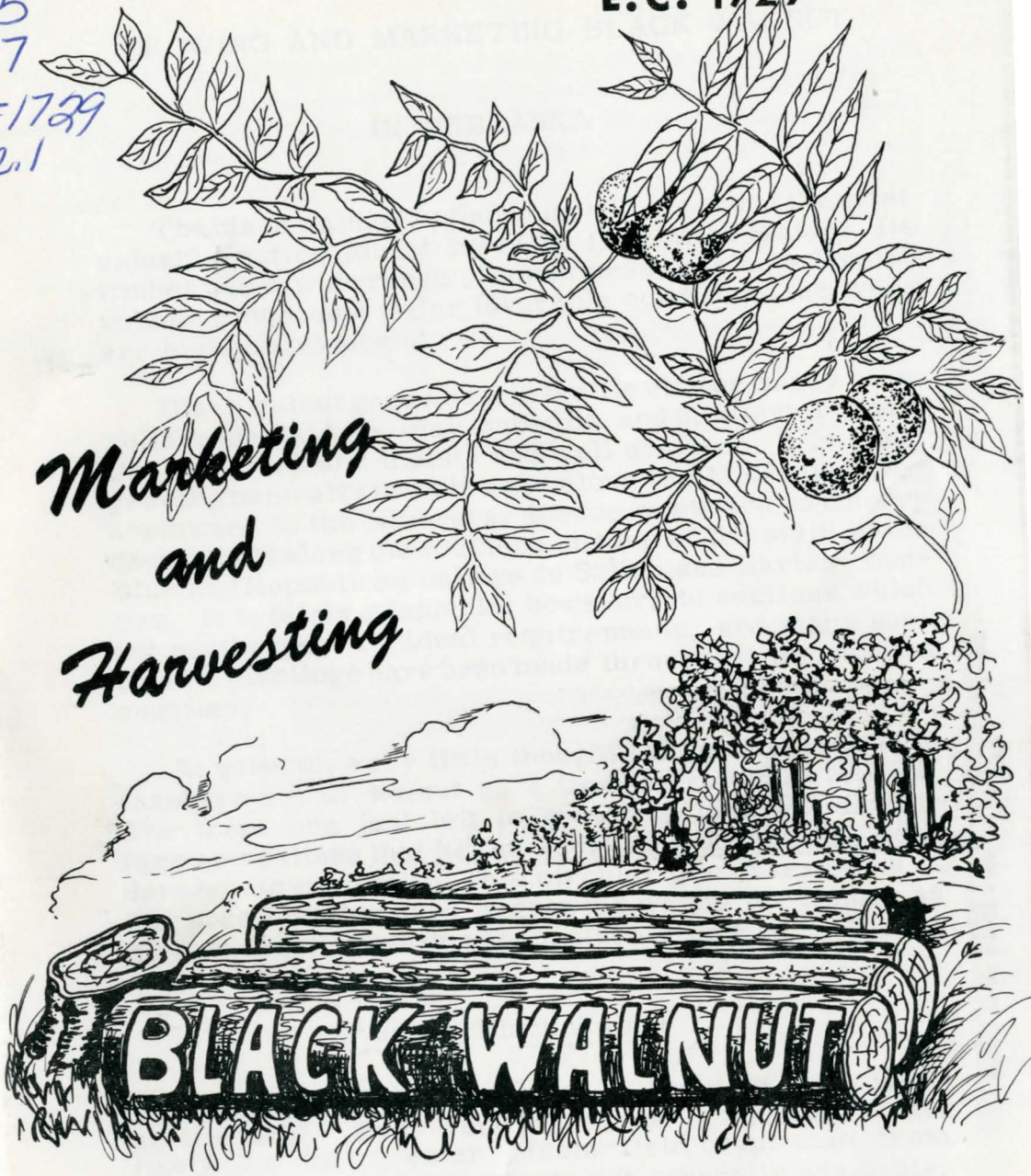
Marketing and Harvesting



In Nebraska

EXTENSION SERVICE UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE
AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING,
W. V. LAMBERT, DIRECTOR

GROWING AND MARKETING BLACK WALNUT IN NEBRASKA

The black walnut (Juglans nigra L.) is one of the most valuable native forest trees of the United States. Its timber has a wide range of usefulness, the nuts furnish valuable food, and under favorable conditions the trees are highly ornamental.

Black walnut grows best in fertile clay or sandy loam soils underlaid by clay subsoils, and in alluvial soils that are deep and moist, and well drained. It is found growing naturally in Nebraska along the Missouri river northward to the Niobrara, thence westward to Cherry county, and along the southern border of the state in the Blue and Republican valleys to Saline and Harlan counties. It is fairly adaptable, however, to sections which but partly meet its ideal requirements, and many successful plantings have been made throughout the eastern counties.

In general, very little thought has been given to the management of walnut as a timber crop in Nebraska. The trees are just left to grow and then one day the farmer realizes that he has something of value and wonders how to market it. This circular discusses some of the practices involved in growing walnut for timber as well as steps in selling the mature product.

Planting Black Walnut

Where to Plant -- Walnut requires a good agricultural soil, but because profits are likely to be greater from field crops than from timber, large plantations are not generally advisable. Black walnut may profitably be planted in unused or so-called "waste" places about the farm or in good sized openings in woodlots. Rough, hilly places, with good soil but otherwise not adapted to farming practices, ravines, stream banks, large pockets of good soil among rocky outcroppings in fields and pastures, and along fence rows are excellent places to grow walnut.

When to Plant -- Ordinarily the best time to plant seed walnuts is in the fall from the time they ripen until early winter. In the event of an exceptionally dry fall it may be advisable to wait until spring. In that case the nuts should be hulled and stored over winter, mixed or stratified in sand that is kept cool and moist. A pit in a well-drained sand bank, a ground cave, or a cool moist cellar is a good place to store walnuts.

The best time to plant seedlings is in the early spring before the buds begin to swell, usually the latter part of March or early April.

Planting Nuts or Seedlings -- When planting seed walnuts it is advisable to plant two nuts three or four inches apart in each hole, and cover them with about two inches of fresh soil, firmly packed with the foot. In wet or very loose soil the nuts can be planted by merely pushing them into the ground with the heel.

In planting seedlings, each tree should be set in a hole of ample size to accommodate the root system, and planted a little deeper than it grew in the nursery. After planting, the hole should be filled with fresh topsoil and firmly packed with the foot. When transplanting seedlings never allow the roots to become dry.

Spacing Distance -- Walnut trees require sunlight for optimum growth so they should not be planted as compact woodlots with close spacing. In order to give the crowns ample room for growth the trees should be spaced at least 30 feet each way.

A common practice in plantations of this type is the use of filler trees interplanted among the walnuts. Filler trees with heavier foliage are helpful in shading out the growth of weeds and grass, in stimulating a more rapid upward growth of the walnut, and in shading out the lower limbs of the walnut. Trees well adapted for interplanting are black locust and redcedar, which can be cut for fence posts after they have served their usefulness as filler trees. These trees may be interplanted at 10-foot intervals as shown in the diagram on the next page.

```
W ←10→ X    X    W        (W) - Walnut trees
↑
10'                       (X) - Filler trees
↓
X      X    X    X        Requires -

                          49 walnut and 386 filler
X      X    X    X        trees per acre.

W      X    X    W
```

Management

Protection -- Walnut, like any other tree, must be protected from grazing if it is to make good growth. This protection is particularly important while the trees are young, but grazing will also have a detrimental effect on the growth of older trees, so stock should be kept out of the planting at all times.

Cultivation -- Where a new plantation is being started, the trees should be cultivated for a few years until they are well established. This practice may not be applicable to interplantings in old woodlots or on rough, hilly land, but it should be done wherever possible.

Pruning -- When growing walnut for lumber, the trees should be pruned occasionally as a means of developing long, straight, clear logs. Pruning walnut trees is one of the most profitable investments that a farmer can make in his woodlot. Through proper pruning, a worthless tree can be changed to one of high potential value in a very short time.

Pruning should be done in the fall, beginning when the tree is about five years old and carried on gradually. Never remove more than one-fourth of the live crown at one time. Too much pruning seriously reduces the growth rate of the tree.

The pruning cut should always be made as close to the trunk of the tree as possible, thus reducing the chances for the formation of loose knots.

Selling Black Walnut

When the owner feels that he has walnut which is mature and ready for sale, it is advisable for him to sell his trees standing. Felling walnut and cutting the logs for the best return is a job which should not be attempted by the farmer.

The first step in selling the trees is to take inventory of the ones that meet the required specifications. Include only those trees that are over 12 inches in diameter at 4 1/2 feet above the ground and that will make a clear butt log at least six feet long. Prepare a statement concerning the walnut trees which includes the following information:

1. Either the circumference or diameter in inches of each tree at breast height (4 1/2 feet above ground).

2. Approximate height to the first limb, crook, or knot.

3. Location of trees, that is, whether in a fence row, in a grove of mixed timber, in a pasture, etc., also whether they are near buildings, overhead wires, etc.

4. Exact directions to the farm or timber.

This statement may be mailed to one or more walnut companies and if they are interested, they will send a buyer to look at the trees. Most companies will not be interested unless there is at least a truckload of logs available in a given area. A truckload can often be made up if two or more neighboring farmers offer their trees for sale at the same time.

Two large walnut concerns operating in this area depend on eastern Nebraska for a portion of their timber supply. They are: Midwest Walnut Company, Council Bluffs, Iowa; and Iowa-Missouri Walnut Company, St. Joseph, Missouri.

In addition there may be a number of independent buyers who may be contacted locally.

These companies are vitally interested in seeing a farmer get a fair deal and are ready to pay the maximum allowable price for walnut trees. This price will vary considerably since walnut logs are bought and sold on grade. That is why a little careful management of the growing trees can greatly increase the value of the mature log. An average price paid for standing trees during the past decade has been between $50 and $75 per thousand board feet.

The board-foot content of a tree can be estimated by measuring the diameter at breast height and the length of the merchantable portion of the tree. These measurements are then referred to the following table to determine the estimated volume in board feet.

Doyle Log Scale Volume Table

Tree diameter B.H. (4 1/2')	Length of merchantable log in feet					
	8	16	24	32	40	48
12	18	29	38	46	52	
14	28	49	66	79	90	104
16	42	71	98	121	142	162
18	60	99	134	165	196	224
20	80	130	177	220	260	297
22	101	170	230	284	336	383
24	129	215	292	360	428	486
26	160	265	355	436	518	594
28	192	320	428	520	620	708
30	228	377	507	626	738	840
32	266	440	591	732	862	988
34	305	508	681	849	999	1142