THE BLACK WALNUT STORY UP-TO-DATE

By
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Progress Report on Research in Black Walnut

Interest in walnut culture for timber and nut production is at an all time high. Never before in the 50-year history of the American Walnut Manufacturers' Association has high quality walnut been worth more per board foot. It is the Cadillac of all our native hardwood species and competition for walnut logs is very keen here and abroad.

The first part of my talk is based on a progress report which F. Bryan Clark, research forester from the Central States Forest Experiment Station at Carbondale, Illinois, today is presenting at the Northern Nut Growers Association annual meeting in Columbia, Missouri.

The important news that he and I have to report is that $150,000 per year has been budgeted by the Forest Service of the United States Department of Agriculture to help Mother Nature speed up the growth and quality of American black walnut at the Central States Experiment Station in Carbondale, Illinois. Another $300,000 has been budgeted for research in physiology, fertility and weed control at the Central States Experiment Station in Ames, Ia.

Study and experimentation under these grants supplement the efforts of the American Walnut Manufacturers' Association which for more than 35 years has been engaged in tree improvement programs. Southern Illinois University, various other universities, several State divisions of forestry and many private individuals also have been cooperating.

Now that federal budgeted funds are available, this important research work will be stepped up. At the Carbondale Experiment Station, for example, a 40-acre farm is being developed for use in genetics research. Greenhouse and field research, natural selections, hybridization and breeding are the prime bbjectives at this station. Work in soil and water relations to black walnut also will be undertaken.

By tradition forestry is conducted on extensive scale with little attention given to individual trees. Since walnut occurs singularly or in small groups and because log quality determines whether we have low grade lumber or highly valuable veneer, our goal must be to tend trees and not stands. Thousands of acres of walnut plantings have been made in the past that will never yield more than a few poor quality nuts, a little shade, a place to nail a fence or serve as a holding pen for hogs and cattle.

Systematic surveys of walnut plantings in at least three States came to the same conclusion: walnut planters simply are not doing a good job of site selection, planting and early care. Fortunately, there are enough good plantations in the Midwest to demonstrate dramatically what can be done.

It has been found, for instance, that for best survival and growth, one-year seedlings should be at least 1/4-inch in diameter one inch above the root collar. This means that forest nurseries need to lower their seedbed densities or alter present fertilization practices or grow bigger seedlings. Since much forest planting is done by machine planter or hand, it is necessary to prune the roots. Pruning roots shorter than 8 inches, however, reduces survival. Different planting techniques, including the use of tractor-mounted augers, also are being evaluated.

Direct seeding of walnut has been preferred to the planting of seedlings because it is cheaper and for a few years the tree from a seed grows a little faster than the transplanted seedling. However, pilferage has discouraged wide scale use of seed where squirrels or chipmunks are a problem. There are no known repellents that will work successfully on walnuts in the experiments conducted in Southern Indiana and elsewhere.

Research with established trees also is being done. In Kansas it was found that you could remove as much as three-fourths of the live crown of three-to-five-inch trees without seriously reducing growth. Planted trees tend to be too limby to produce high quality wood and it is necessary to remove the lower branches to grow defect-free wood. Unfortunately, the amount of pruning done at one time must be limited because extensive pruning induces sprouting on the cleared hole. In this same study it was found that the sprouts always came from dormant buds. Future work is needed to eliminate these buds chemically or to breed trees with only a few dormant buds.

In natural stands it was found that 50-year old slow-growing trees will respond to release. By giving the trees more room to grow, Central States foresters were able to double the growth rate in just four years. Before long they will be able to recommend how much growing space different aged trees can efficiently use without sacrificing tree quality. The effect of controlling understory weeds, grass and brush on walnut growth also is being evaluated.

With the help of many foresters, timber buyers and our association, Central States now has a collection of progeny from 40 trees that were growing in natural stands in 12 different states. The trees were selected for outstanding timber qualities. They range in size from 16 inches in diameter at breast height up to 40 inches. One tree had a clear length of more than 60 feet to the first branch. Seedling progeny of these mother trees have been planted in six different states to test their performance. In addition, the Division of Forestry in Ohio and Indiana and the Forest Service Nursery in Indiana have used surplus stock to establish seed orchards.

U.S. EXPORTS OF WALNUT LOGS, 1965
SOURCE -- U.S. DEPARTMENT OF COMMERCE

	January 1965		February 1965		March 1965		April 1965		May 1965		June 1965		Jan-June 1965	
	MBF	Value	MBF	Value	MBF	Value	MBF	Value	MBF	Value	MBF	Value	MBF	Value
Canada	45	37,745	107	96,667	112	92,898	179	131,728	258	233,333	215	153,720	916	746,091
Argentina	---	------	---	------	---	------	2	1,412	---	-------	---	-------	2	1,412
Sweden	---	------	---	------	6	2,766	----	-------	6	2,828	---	-------	12	5,594
Denmark	---	------	---	------	---	------	18	15,939	30	28,122	---	-------	48	44,061
United Kingdom	---	------	---	------	14	8,216	18	13,450	13	7,108	19	10,925	64	39,699
Norway	---	------	---	------	---	------	---	------	11	9,127	---	-------	11	9,127
Netherlands	---	------	6	6,330	44	53,553	46	57,967	65	70,398	16	15,104	177	203,352
Belgium-Lux	---	------	6	8,482	32	35,659	22	23,930	77	68,676	17	19,480	154	156,227
France	5	4,544	---	------	5	4,544	11	13,100	60	85,861	118	138,751	199	246,800
Germany, West	240	272,516	93	88,980	879	1,185,636	1,473	2,188,835	923	1,231,473	640	937,629	4,248	5,905,069
Austria	---	-------	---	------	---	-------	-----	-------	32	27,675	---	------	32	27,675
Switzerland	6	3,755	---	------	49	41,667	211	206,464	406	527,498	268	269,986	940	1,049,370
Italy	87	109,861	132	154,642	614	760,977	307	300,697	867	892,787	1,058	1,256,806	3,065	3,475,770
Spain	---	-----	---	------	---	------	---	------	6	5,337	3	2,154	9	7,491
Israel	---	-----	---	------	7	9,334	---	------	---	-----	---	------	7	9,334
Lebanon	---	-----	---	------	---	------	---	------	5	3,412	---	------	5	3,412
Japan	35	38,237	97	99,244	242	275,712	127	129,398	250	269,532	368	384,204	1,119	1,196,327
Korea	---	------	---	------	---	------	6	5,539	---	-----	---	------	6	5,539
TOTAL	418	466,658	441	454,345	2,004	2,470,962	2,420	3,088,459	3,009	3,463,167	2,722	3,188,759	11,014	13,132,350
AVERAGE PRICE	$1,116		$1,030		$1,233		$1,276		$1,150		$1,171		$1,192	
1964 TOTAL	1,247	1,179,036	1,463	1,250,225	1,527	818,351	1,205	1,507,506	1,095	951,272	813	906,315	7,350	6,612,705
AVERAGE PRICE	$945		$855		$535		$1,251		$869		$1,115		$900	

JANUARY - DECEMBER 1964
9,881 $10,653,076
$1,078

JANUARY - JUNE 1965
11,014 $13,132,350
$1,192

JANUARY-JUNE 1964
7,350 - $6,612,705
$900

This is just the beginning of the genetics program. The collection of natural selections will be expanded as quickly as possible. Also, it is planned to establish various hybrids and other species of Juglans. For these plantations we must depend on nurserymen like yourselves. If you will see me after the meeting or write F. Bryan Clark, Forest Service, USDA, Central States Forest Experiment Station, Carbondale, Illinois, you will be told how you can cooperate.

Now here are some slides of walnut plantations which show some of the results obtainable through cultivation, fertilization and release.

Walnut Industry's Flight to Restore Export Controls

In market after market for years black walnut has been the most popular wood for furniture and paneling in the United States. Walnut also is in sharp demand abroad and millions of board feet of logs have been shipped to foreign markets at an increasing rate during the past few years. Exports leveled off somewhat during 1964 as the result of a quota system imposed on export of walnut logs by the Department of Commerce.

An impressive reduction in walnut use was achieved during the period the control program was in effect. Total consumption was reduced to 37.8 million board feet in 1963 to 26.8 million feet in 1964. This was a reduction of nearly 30 percent. Moreover, the domestic voluntary controls program (whereby major producers reduced veneer thickness from the standard 1/28-inch to 1/36-inch) achieved 80 percent of its 5-million board feet reduction goal despite the 45-day transition period required to make the necessary changes in the thickness of the veneer cuttings. If there had been no controls during 1964, the projected consumption would have been 44-million board feet, or 40 percent more than the actual consumption of 26.8-million board feet. When the controls were lifted in February of this year, the board feet exported leaped from 444,000 to 2,004,000 in March, an increase of 500 percent.

For the last six months the American walnut industry has conducted a hard-hitting counter-attack against the Department of Commerce ruling which ended controls on walnut logs. A first round victory was achieved June 15th in the form of official action by the Senate Committee on Commerce. In a strongly worded letter to Commerce Secretary John T. Connor, the committee urged Connor to reconsider his February 12th decision which allowed controls to expire.

Chairman Warren G. Magnuson (D. Washington) and other committee members who signed the letter declared they "were" concerned over the serious situation caused by removal of export controls on walnut logs."

They pointed out that the committee had completed two days of hearings on reinstitution of controls, and that "over 40 witnesses testified at these hearings, including many members of Congress."

The hearings were held at the insistence of Senator Vance Hartke (D. Ind.) a member of the committee and chairman of a subcommittee on the walnut situation. He led the fight for walnut in Congress, enlisting the support of many senators and representatives. Largely as a result of Hartke's efforts and the Commerce Committee's request, Connor has consented to review the matter thoroughly, presumably with a view toward possibly rescinding his February 12th action.

The industry's position also was stated forcefully on June 16th in a hearing before the Senate Banking and Currency Committee, chaired by Senator A. Willis Robertson (D. Va.). The hearing was on an amendment, introduced by Hartke, to the Export Control Act. In effect the proposed amendment merely stated that the Act means what it *says* and that walnut export controls should be imposed under its terms. The amendment was not adopted, principally because Connor said the amendment was unnecessary because he has authority to impose embargoes or controls under the existing terminology of the Act.

The industry's case for controls was presented before the committee by J. Edward Day, former Postmaster General and presently legal counsel for the American Walnut Manufacturers' Association; B. F. Swain III, AWMA president and vice-president of National Veneer and Lumber Co., Seymour, Ind.; J. B. Petrus, Jr., President of Midwest Walnut Co., Council Bluffs, Ia.; and myself.

The testimony of these principals stressed the importance of the issue, which affects the furniture, plywood, piano, organ and gunstock industry.

Among organizations supporting the walnut industry's position are: The Architectural Woodwork Institute, National Sash & Door Jobbers Association, National Forest Products Association, National Wholesale Furniture Association, National Woodwork Manufacturers Association, National Wholesale Furniture Salesman's Association, Hardwood Plywood Manufacturers Association, Grand Rapids Manufacturers Association, International United Furniture Workers of America, National Piano Manufacturers Association, Fine Hardwoods Association and National Association of Electronic Organ Manufacturers.

From this quick review of our present situation, I hope you realize that we have only begun to fight. We figure we won the first round by getting the Senate Committee on Commerce to make the recommendations they did to Secretary Conner. Round two is coming up soon and we feel confident that the Commerce Department will realize that restoration of controls is vital to the continued existence of the nation's walnut industry.

But, this is not only an industry fight. It is also up to individuals like you nurserymen, lot owners and private citizens who are aware of what is happening to our woodlands, or who are interested in long-term investments.

Refer to "Plywood Magazine"

The Rape of Walnut in Our Woodlands

The third part of my talk is based on the wonderful statement an Iowa tree nurseryman made at the Senate Subcommittee for Commerce recently in Washington, D.C. "Ways must be found," he said, "to bring immediate relief from the rape of walnut in our woodlands."

The gentleman I just quoted is R. W. Daubendiek of Decorah, Ia. We met him four years ago and have admired him ever since for his dedication to spreading the gospel of walnut growing. In a story prepared by our public relations counsel in 1963 we referred to "Dauby" as the modern Johnny Appleseed - or to be more precise, Johnny Walnutseed. As a result he is now registered in Iowa as Johnny Walnutseed. His Decorah nursery is believed to be the nation's largest private tree nursery and the largest walnut tree nursery, private or otherwise.

A truly dedicated conservationist, "Dauby" has planted in excess of two million walnut trees starting the nursery in 1960. In each of the last five years he has traveled some 40,000 miles, mostly within Iowa, selecting tree planting sites, hauling equipment, doing the actual planting and checking on results. Each fall he and a crew of 30 workers harvest more than a million walnut seedlings on his farmland near New Hampton, 30 miles from Decorah. The seeds are planted as nuts in stratifying beds during the winter. The seeds or seedlings are re-planted permanently in the spring, a large percentage of them by "Dauby" on contract arrangements with farmers and other woodlot owners.

Growing walnut, as Daubendiek points out to anyone within earshot, can be a lucrative sideline. Walnut logs and trees consistently have brought higher returns per thousand feet than other species. Land-owners commonly receive several hundred dollars for a single walnut tree, the price depending upon the size and quality of the tree. The big payoff comes in the next generation, a factor which influences many landowners to plant walnut for the benefit of their children.

Just recently an insurance company executive in Chicago purchased a 320-acre farm in Patch Grove, Wisconsin, on which he has had Daubendiek plant 13,000 walnut tree seedlings and stratified walnuts. It is estimated that at maturity - 45 to 50 years from now - these trees will be worth many hundreds of times the cost of the seedlings and plantings. Eight years from now his walnut tree farm will be producing a cash income crop of walnuts. At current market prices these walnuts will pay for his original costs. This executive has three children, ranging in ages from 11 to 16. Thanks to the foresight of their father, they will be reaping handsome incomes from walnut before they reach retirement age.

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On some of the major aspects of walnut tree growing Daubendiek crosses swords with many of the experts. He contends that walnut will thrive in pure stands and that good hardy walnut seed such as the kind he uses, from northeast Iowa and southeast Minnesota, will grow in almost any climate. His seed trees have withstood temperatures of 40 to 50 degrees below zero and as high as 105 degrees in summer-times.

In support of his position Dauby points to some 68,000 walnut trees growing on 68 acres he owns adjacent to his seedling plantation near New Hampton. This is the largest pure stand of walnut in Iowa, he says. On land nearby another 72,000 walnut trees planted in 1962 are prospering in a mixture of 23,000 butternuts. A gentle, winding stream courses through both properties, giving proof to Dauby's prescription of "moist land, plus a lot of competition for sunlight."

Another favorite theory he has is that it is better to plant as late as mid-June, rather than too early in the spring. A wet spring is most advantageous, he says, since the planted nuts should remain wet until the weather warms up.

Supplying "Dauby" with walnuts is a profitable annual activity for boy scouts and many adults throughout the area. Gathered off the ground when they begin to drop from the trees in late summer and early autumn, the nuts bring the collectors $1.50 for a one and one-half bushel bag. Recently a man-and-wife team netted $90 for 60 bags gathered in a single day. The same amount of corn would net the gatherers only one-third as much.

Daubendiek's efforts have attracted the interest of the entire walnut lumber and veneer producing industry. Our association would welcome more Johnny Walnutseeds around the country. It is the responsibility of individual lot owners, nurserymen; log exporters, the lumber industry and our government to protect, manage, cultivate and replant black walnut, the "Cadillac of trees."

Simply stated, the problem is that walnut logs are being exported to foreign countries in a volume which, if left unchecked, would denude our land of veneer quality walnut in seven years or less. The situation demands additional voices of support from the lumber industry. It involves those individuals, companies and groups concerned with such species as cherry, white oak, elm and pecan. These people cannot afford to stand quietly and complacently aside while walnut fights for its life. The ruthless attack on walnut may be only the beginning. Other species could well fall victim of predatory exports after the extinction of walnut has been accomplished.

All our research and tree planting activities can be offset by the continuing unrestricted walnut exports such as those which have zoomed 1600 percent in the last 10 years. Other hardwood associations and individual lot owners would do well to initiate conservation programs against the day when serious shortage of timber may develop. That day will surely come if unrestricted exports of walnut continue and spread eventually to other desirable species.

For these reasons, the American Walnut Manufacturers'Association, the Forest Services and the universities which are leading the fight to save American black walnut ask your support. The job is clear. We must urge Commerce Secretary John T. Connor to reconsider his decision which allowed walnut export controls to expire last February. Then we must find ways quickly to establish fast growing, high quality producing black walnut plantations and we must develop treatments to step up the growth of existing immature trees.

Thank you. Now if time permits, I will be pleased to answer any questions my remarks suggest.