Woodlots in the Tall Corn State

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By Russell E. Getty

Since the turn of the century those people in Iowa who have an interest in forestry have been attempting to show that planting trees, caring for them, and managing woodlots for useful products pays dividends. In the Tall Corn State where the woodland area is estimated to be 6.3% of the total land area, the income from woodlands is reported by the farmers themselves in the census records to be less than 1% of the total farm income. It is small wonder that interest in forestry sometimes lags.

A state such as Georgia with a high proportion of the land area best suited for the growing of wood crops has only recently awakened to the importance of practicing forestry in order to insure a measure of sustained prosperity for the state. Now, through legislation, appropriations and education, the people of Georgia are making great strides ahead in forestry.

The state of Washington, also with a large forest area in the state, in 1945 enacted a forest practices act designed "to maintain continuous growth of timber on all lands suitable for such purposes." Stringent enforcement provisions are contained in the legislation to accomplish the stated purpose of "keeping the forest land of this state continuously and fully productive".

It will probably be a long time before the people of Iowa will consider the collective woodland area of the state of such public importance that legislative control of the productivity of woodlands would be desired. Rather, Iowa, in this regard is included in the national picture presented by J. F. Preston in his recent book, Farm Wood Crops. He states, "The actual income from forest products, including home use, is very low on the average farm and represents not more than 2% of the total income. This is not surprising in view of the fact that this income is derived largely from neglected, uncared for, untended, and unappreciated wild land." In another place Preston states, "the non-farm holder of forest land generally recognizes his holding as a forest property and hence needs only to be convinced of the value of forest management and marketing practices. The farm owner, on the other hand, frequently is not ready to admit that he owns a small forest property. Part of his farmland is covered by a growth of trees, but in his mind and his plans this may be a temporary condition."

This situation would seem to be amply supported in the many discouraging cases which come to the attention of practicing
foresters in Iowa. In one recent case in the southern part of the state, timber on poor soil and rolling lands was offered for clearcutting with the understanding that the land would increase in value over $10 per acre without the timber.

In another instance in Johnson county, 2 years ago, a fine 200 acre tract of oak-hickory timber was sold twice within one year. The first sale price was considerably lower than the second wherein it was stipulated that all the timber which the seller could remove within 5 years was to be taken off the land. Incidentally the second sale has been exceptionally profitable for the seller who cut and sold a large volume of stumpage from the tract on a very good market.

Under circumstances where farmers place so little value on the timber in their woodlands, a practicing forester might well wonder whether forestry is losing ground in Iowa. Where should the emphasis be placed in most effectively showing farmers the advantages of good forest management on existing woodlots and the development of new ones?

In an effort to make good woodland management more attractive to farmers, foresters over the United States have recently been emphasizing the importance of higher prices for forest

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products through better markets and marketing methods. It is argued that if prices are high enough to be attractive desirable silvicultural and management practices will naturally follow.

It was with a view to exploring this line of reasoning that the Forestry Department at Iowa State College set up a research project in 1948 under the Agricultural Experiment Station. The project was entitled "Marketing Farm Forest Products in Iowa." It was to be an exhaustive project to produce detailed information on the character of the woodland resource as well as the character of the market and the particular marketing methods employed.

Several rather extensive surveys of the forest resources of Iowa have been made within the past 15 years. Nevertheless, it seemed desirable to have additional and more specific detailed information than had previously been gathered. To do this with limited funds it was necessary to cover only a fractional area of the state.

A granary on the Russel Lackender farm, providing storage for 5600 bushels of corn and 3600 bushels of small grain, was largely constructed with native lumber from a 5-acre woodlot.

Johnson County was selected as the study area, not because it was considered representative, but because it was not unrepresentative, in that it was neither the most heavily wooded county
An interior view of the granary on the Russel Lackender farm showing a portion of the 3" x 10" hardwood joists, 23 feet in length, obtained from the farm woodlot. Thirty-six of these joists were required.

in the state nor the one most devoid of woodlands. As it turned out the area in woodland in Johnson County is 6.7% of the total land area as compared with 6.3% for the state as a whole. By chance, then, Johnson County is fairly representative of the state from the standpoint of area in forest cover. Johnson County also was considered a good timber growing area. A farm forester has been located there for several years and there were a number of sawmills in operation which would be able to supply pertinent information.

The primary question was: "Can markets or marketing methods be found which will raise the price of Iowa farm forest products to the point where growing of timber crops will be more attractive to farm woodlot owners?"

In answering this question many others arose which had to be answered first. As several of these points of question were investigated it became evident that the home-use of forest products was of major importance. Perhaps in a state like Iowa where the area in forest is small more emphasis should be placed on making the home use of lumber and forest products attractive.

A study of the 38 sawmills of Johnson County revealed that most of the lumber produced was being used on farms within the

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county and only a fraction of it was entering industrial channels. Out of a total production of 2,200,000 board feet in 1947, 58% was custom sawing in the form of logs owned by farmers and hauled to the mills for sawing by the farmers themselves. Much of the remaining production of the mills was purchased by farmers who did not have woodlots. Only 2 sawmills out of 38 were producing lumber for industrial uses. Fully 1/2 of the sawmills in the county were originally purchased because of the inconvenience woodlot owners experienced in getting someone else to saw their logs into lumber. In brief, the sawmill phase of the study pointed out that the farmers interest in native lumber was strong even when the industrial market demand was at its peak.

In order to obtain information on the home use of forest products from the farmers themselves, a questionnaire was prepared and personal interviews were conducted on a random sample representing 10% of the 2340 farms in Johnson County.

| TABLE NO. 1 |
| FARM WOODLOT PRODUCTS USED ON THE FARM IN JOHNSON COUNTY IN 1948. |

<table>
<thead>
<tr>
<th>Product</th>
<th>Average per Farm</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuelwood</td>
<td>4</td>
<td>Cords</td>
</tr>
<tr>
<td>Posts</td>
<td>63</td>
<td>Number</td>
</tr>
<tr>
<td>Native Lumber from own Woodlot</td>
<td>575</td>
<td>Board feet</td>
</tr>
<tr>
<td>Native Lumber purchased</td>
<td>421</td>
<td>Board feet</td>
</tr>
<tr>
<td>Total Native Lumber Used</td>
<td>996</td>
<td>Board feet</td>
</tr>
</tbody>
</table>

In a county where 92.7% of the farms have electric power lines leading into their buildings and 89.7% have telephones in their homes, one wouldn't expect many wood-burning stoves and furnaces. Actually, however, 47% of the farms use wood for fuel, averaging 8.5 cords per farm per year for this purpose. Of the 1090 farms using fuel wood only 850 had their own woodlots and 240 obtained fuelwood from sawmills and neighbors. The total fuelwood consumption in Johnson County was 9270 cords or almost 4 cords per farm in the county.

Home grown wood posts are still in demand for fencing. The survey shows that 20.2% of the posts of Johnson County are steel, 74.5% are untreated wood posts and 5.3% are treated wood posts. With 977 rods of fence per average farm of 166 acres, 61 posts were purchased in 1948 and 63 were obtained from woodlots. Of the 61 posts per farm purchased 23.4% were steel, 26.2% were wood with a preservative treatment and 50.4% were untreated wood. Only 1 person among those interviewed had made any attempt to treat posts obtained from a native woodlot with a preservative.
The amount of lumber used on a farm is difficult to determine accurately since records of such use are not maintained and it is necessary to rely on the memory of the farm operator. After having heard the explanation of the purpose of Home-use of Lumber Survey the farmer being interviewed would often begin by saying he hadn't used any lumber in 1948 or that he had used so little that it wouldn't be important to the interrogator. Then as the interview progressed he would recall one small repair or construction project after another which in the aggregate amounted to a substantial volume of lumber used. Consequently, the estimate of lumber used in 1948 is expected to be low since some construction and repair work was, no doubt, forgotten.

Another factor contributing to a low figure on the use of lumber on the farm in 1948 was the general economic outlook at that time. Most farmers had more available cash than ever before and they also had accumulated a large backlog of building and repair projects which they were eager to start. However, with lumber prices unprecedentedly high and with much talk of an impending economic depression, many held up their building plans. To have a basis for evaluating the tabulated total home use of lumber each person interviewed was requested to compare the amount of lumber used in 1948 with that used during the preceding years he had occupied that particular farm. Considering the fact that the average tenure was 14 years some basis for comparison was available. Only 16% stated they had used more than the average amount whereas 47% considered their 1948 use of lumber below average and 37% stated it was about average. Another point of importance is that this estimate of lumber use on the farm did not include any new houses or large barns.

It is probable that the 1702 board feet of lumber used per farm in Johnson County in 1948 is lower than the actual average use. Although it was somewhat surprising to find that 60% of the lumber used on farms was native lumber, this indicates its rather general popularity.

A question arose relative to the size of native woodlots and their distribution in the county. Only 48.7% of the farms in Johnson County had woodlots. These averaged 21.07 acres per farm, which amounts to an average of 10.25 acres per farm for all farms in the county. Can this acreage supply more lumber than the local farm population will demand? It obviously can under good management produce more native lumber than is now being used. However, the demand for native lumber has great possibilities for expansion. It is significant to note that the total "lumber from own woodlots" and the total "native lumber purchased" as reported by farmers in 1948, table No. 2, exceeds Nineteen Fifty

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The farm home of Joseph Culcal in Johnson County. Most of the lumber used in this beautiful, brick-veneer house was produced from the owner’s woodlot. the total sawmill production for Johnson County for the preceding year.

**TABLE NO. 2**

**LUMBER USED PER FARM IN 1948 AS REPORTED BY THE FARM OPERATORS OF JOHNSON COUNTY.**

<table>
<thead>
<tr>
<th>Type of Use</th>
<th>Lumber Purchased from Lumber Yards (Board feet)</th>
<th>Lumber from Own Woodlot (Board feet)</th>
<th>Native Lumber Purchased (Board feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houses</td>
<td>339,920</td>
<td>2,000</td>
<td>231,250</td>
</tr>
<tr>
<td>Bovmés</td>
<td>54,600</td>
<td>102,000</td>
<td>250,750</td>
</tr>
<tr>
<td>Hog houses</td>
<td>147,700</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>Poultry houses</td>
<td>3,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain storage</td>
<td>415,060</td>
<td>577,640</td>
<td>301,900</td>
</tr>
<tr>
<td>Machine sheds</td>
<td>242,150</td>
<td>219,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Gates</td>
<td>76,450</td>
<td>26,500</td>
<td>32,500</td>
</tr>
<tr>
<td>Fences</td>
<td>84,000</td>
<td>172,150</td>
<td>91,500</td>
</tr>
<tr>
<td>General repairs</td>
<td>65,500</td>
<td>74,000</td>
<td>58,500</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>222,050</td>
<td>32,500</td>
<td>38,250</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>1,651,810</td>
<td>1,345,790</td>
<td>985,650</td>
</tr>
</tbody>
</table>

Average per farm in the county: 706 / 575 = 421
Percent: 41 / 34 = 25

There are several ways in which the home use of lumber might be made more attractive. For one thing the process of converting logs into lumber could be made more convenient by

*Ames Forester*
Except for the siding and shingles, this barn on the Joseph Coufal farm is constructed entirely with native lumber.

having a highly portable mill in an area such as Johnson County. Observations in this study indicate that a portable sawmill, which is highly mobile and will move into a farm woodlot for as little as 2,000 to 5,000 board feet, offers a great service to the woodlot owner. It would seem that the encouragement of such a portable sawmill should be considered by foresters attempting to make the management of small woodlots attractive to a farm owner. There are a number of portable sawmills throughout the county which serve as successful patterns of operation.

One such portable sawmill owner in a relatively woodless portion of the state is limiting the radius of operation to 30 miles and making a very satisfactory livelihood at a nominal sawing charge. That the woodland owners of the area consider this a service is evident by the fact that at the present time this mill is fully scheduled with sawing jobs one year in advance, and all jobs have come to the sawmill operator unsolicited during the past 6 years.

More publicity might be given to case histories within an area which will demonstrate the advantage of using native wood over other woods. For instance in Johnson County a double granary was built on the Russel Lackender farm south of Iowa City. The building plan specified 3” x 10” stringers 23 feet in
length which would support a 3600 bushel small grain bin. The Lackender farm had a 5 acre woodlot which had been retained for the specific purpose of building new farm buildings or replacing or repairing old ones as the need arose. Much better stringers of the sizes needed were obtained from the home woodlot than could be purchased any place.

Another case which was discovered during the course of the survey seems to have great possibilities for teaching woodlot owners the value of native lumber. Joseph Coufal, retired farmer and former sawmill operator in Johnson County maintains that if properly manufactured and processed Iowa lumber is better building material for farm home and building construction than any lumber on the market. This is no idle boast since his beautiful farm home, garage, barn, chicken house and other farm buildings, constructed almost entirely of native material, are monuments to the native woodlot.

Mr. Coufal's spacious, 8-room, brick-veneer farm home has native oak joists and studding. The sheathing and sub-flooring are all native lumber. Each of the 4 bed rooms has a large lighted closet with a built-in chest of oak drawers and shelves in natural finish. All rooms, halls, and closets are finished with clear oak flooring which came from the farm woodlot but was kiln dried and made into flooring by a local sash and door company.

Mr. Coufal's procedure for success in handling native lumber is well known but seldom so carefully followed. In the first place he sawed his lumber accurately. Then he piled it carefully to avoid staining and weathering and to dry it properly. All pieces selected for trim and finish or for places where shrinkage through further drying was undesirable were air dried in a barn loft for two years. Everything was run through a planer to insure uniformity in size. This included studding, floor joists, sub-flooring and sheathing. Finally an electric power drill was used in toe-nailing studdings to plates and wherever splitting was likely to occur. Even the barn and other buildings were built of well seasoned and dressed lumber from the native woodlot and the electric drill was used liberally.

There are many other cases of home use of native lumber throughout Johnson County and the state which could be effectively publicized to encourage greater use of native lumber at home.

As a final suggestion more information should be available to the woodlot owner, and the owner of land which is best suited for forest crops, on the actual return being realized from certain wooded areas similar to the average farm woodlot. Case histories covering a long period of time are needed for this purpose and
are beyond the scope of the current studies reported here. It is probable that if accurate records are kept it will be found that the woodlot, even as it now exists figures much more prominently in the modern farm operation than the owners themselves realize.

FACTS ABOUT THE AUTHOR

Mr. Getty graduated from Iowa State College in 1936. While in school he was a member of Alpha Zeta and had membership in the Society of American Foresters. It is interesting to note that during his freshman, sophomore and junior years he won first in the Lathrop Pack Prize Essay Award. Upon graduation Mr. Getty worked with the Indian Service. During the war years, he served in the Navy.

Mr. Getty is at present an assistant professor of forestry at Iowa State College and is in charge of research.