View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Purdue E-Pubs

Purdue University

Purdue e-Pubs

Historical Documents of the Purdue Cooperative Extension Service

Department of Agricultural Communication

6-1-1965

Home Grown Timber for Farm Construction

Edgar J. Lott

Roy C. Brundage

Follow this and additional works at: https://docs.lib.purdue.edu/agext

Notes on Forestry and Wood-use

Lott, Edgar J. and Brundage, Roy C., "Home Grown Timber for Farm Construction" (1965). *Historical Documents of the Purdue Cooperative Extension Service.* Paper 819.
https://docs.lib.purdue.edu/agext/819

For current publications, please contact the Education Store: https://mdc.itap.purdue.edu/
This document is provided for historical reference purposes only and should not be considered to be a practical reference or to contain information reflective of current understanding. For additional information, please contact the Department of Agricultural Communication at Purdue University, College of Agriculture: http://www.ag.purdue.edu/agcomm
This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.

Notes on Forestry and Wood-use

Purdue University
Cooperative Extension Service
Lafayette, Indiana

Mimeo F-1
June, 1965

HOME GROWN TIMBER FOR FARM CONSTRUCTION

Edgar J. Lott, Extension Forester and
Roy C. Brundage, Extension Specialist in Wood Utilization

Look to your own woods first for timber for your building needs. In fact, the chief aim of good woods management is to produce enough lumber for farm buildings and repairs. Although working or nailing the hardwoods is not as easy as with softwoods, the availability of hardwoods, their durability and lower cost will often compensate for the extra effort required to put them to use. Factors such as durability, strength, resistance to bending, and nail holding ability, make some species more suitable for certain uses than others. White oak, for example, is a strong durable wood that serves well as sills of buildings, skids under movable hog houses, corn cribs or poultry houses. Hickory has the desired strength for this use but its lack of durability gives it a low rating for such purposes.

Native timber has several other advantages over timber shipped in from distant areas:

1. It is usually cheaper because the long shipping cost is eliminated.
2. As a group, the hardwoods are much more durable and will produce structures that last longer than those built of softwoods.
3. It is more easily obtained locally in most instances.
4. A great variety of species provides wood to fit most any use.

Steps to Consider in Using Timber from Your Farm Woods

1. Determine your building needs and what is available in your woods. If you have more trees that should be removed than your present building plans call for, the surplus lumber will keep if properly piled. If trees are thrifty and in good condition, cut only what you need. Table 1 shows how many trees of different sizes are needed for 1000 board feet of lumber.

Table 1. Number of trees to cut for 1000 board feet of lumber

Diameter*	Short trees	Average trees	Tall trees
16	10	8	6
20	6	4	3
24	4	3	2
28	2 ½	2	1 ½

* At 4 ½ feet above ground.

Example: If you are planning a poultry house needing 2,500 board feet of lumber and your trees are of average height, you will need to cut about ten 20-inch trees (2.5 thousand x 4).

2. The best time to cut timber is during fall and winter months. Logs and lumber are less likely to check and are not subject to insect injury or rot.

History Document

3. Select the right kind of timber for right use. See diagram on the back page for recommendations. If your woods will not supply the right species or will not give you all the material that you need, investigate the possibility of obtaining native lumber from local sources.

4. Arrange for custom sawing and do as much of your own logging and hauling as possible to save on cost. Present rates for custom sawing run from about $15 to $25 per thousand board feet.

5. It is better to use seasoned lumber. See discussion below.

6. Cut only mature, over-mature trees or those that are defective or over topped by better trees.

Seasoned or Green Lumber

Seasoned lumber is better for farm buildings because it is stronger, holds nails better, provides tighter joints, will take and hold paint better and will absorb preservatives better. Seasoned hardwood lumber is a little more difficult to nail and will warp and twist unless it has been properly piled for seasoning. (See Mimeo F-37 in reference list).

If tight buildings are desired or if they are to be painted, seasoned lumber should be used, and the disadvantages can be minimized by these procedures:

1. Drill holes for nails, screws, or bolts.
2. Blunt nails slightly and dip in beeswax soap or oil before driving.
3. Use a heavy hammer for driving nails.
4. Use a wedge or shim under warped or twisted boards to take the "spring" out of the board until a nail is through it.

Preservative Treatment For Timber, Posts and Poles

If it is necessary to use non durable lumber for sills, skids or floors, longer service can be obtained by a preservative treatment. Full pressure treatment will provide the maximum in service life. In many localities this is available on a custom basis. Treatments (brush or spray) with Penta (pentachlorophenol) or creosote give some protection on seasoned lumber, but a cold soaking treatment is recommended. All framing, notching or other cutting should be done before the preservative is applied.

For information on treating see the Purdue Extension Publication "Preserve Your Posts with Penta." This bulletin deals with posts, but the methods described can be used with lumber.

Posts and Poles

Post timber fall into two classes. Those that are naturally durable and those that will give long service life if treated.

Durable without Treatment:

Osage-orange	White oak
Black locust	Catalpa
Red cedar	Mulberry
White cedar	

Durable if Treated:

Red oak	Honey locust
Black ash	Sassafras

Pole Construction

For buildings such as machinery sheds, storage sheds, or tramping sheds next to milking parlors, poles can be used for supports for the roof and as horizontal members for the sides. Peeled poles are less likely to

Historic Document

decay and when dry can be painted with creosote. If poles are to be used unpeeled, cut them during the winter, keep them off the ground to dry, and spray with a mixture of 1 part coal-tar creosote and 3 parts kerosene.

As mentioned above, poles should also be treated with preservative, either a pressure treatment or a cold soaking treatment in Penta for longer service life. Poles used for corner members or other supports in buildings should be placed on stone or concrete foundation.

References

Some Important Indiana Woods, Their Properties and Uses, E. J. Lott, Purdue Mimeo F-27.

Moisture Content of Dimension Lumber in Supply Yards, H. D. Angleton and D. H. Percival, Purdue Mimeo F-35.

How to Pile and Season Native Lumber, E. J. Lott, Purdue Mimeo F-37.

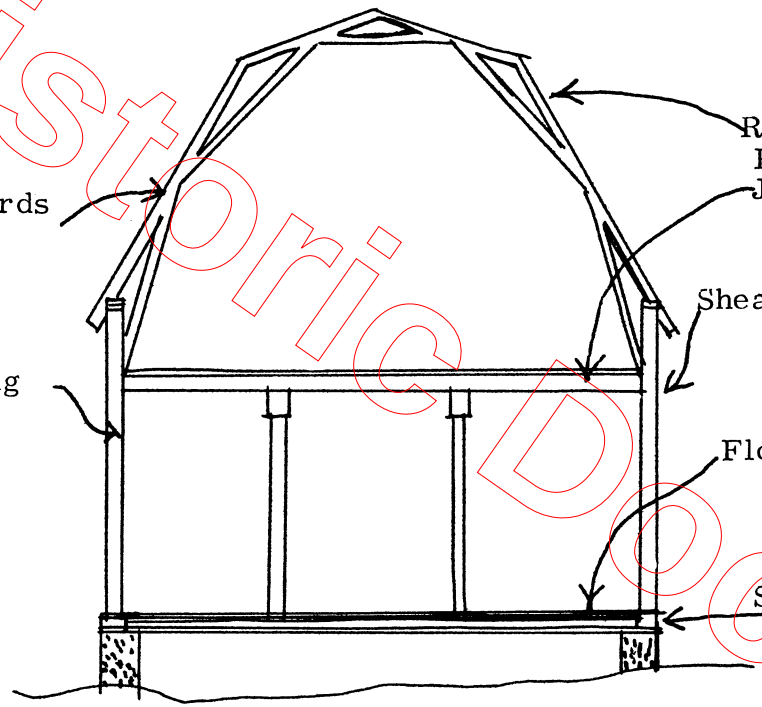
Treated Wood Products for Farm and Home Outdoor Use, M. O. Hunt and R. H. Perkins, Purdue Mimeo F-45.

Selecting Farm Framing Lumber for Strength, U.S.D.A. Leaflet 481. (Available from Supt. of Documents, U. S. Govt. Printing Office, Washington, D. C. 20402 for 5 cents).

Historic Document

USE OF HOME-GROWN WOOD

Adaptation of Native Lumber to Farm Building Construction



	Good	Fair
Roof Boards	Beech, Maple, Oak, Ash, Elm	Hackberry, Basswood, Cottonwood
Studding	Ash, Beech, Maple, Oak	Elm, Hackberry, Sycamore, Cottonwood

	Very Good	Good	Fair
Rafters, Plates, Joists	Ash, Beech, Maple, Oak	Sycamore, Hackberry, Elm	Cottonwood, Basswood
Sheathing	Y. Poplar, Basswood	Cottonwood, Aspen	Soft Maple, Red Oak
Flooring	Oak, H. Maple, Beech	Ash, Sycamore, S. Maple	Elm, Hackberry, Hickory
Sills	White Oak, Black locust		

Interior Trim - Black walnut, yellow poplar, oak, ash, honey locust, sycamore, wild cherry.
Furniture - Oak, wild cherry, sycamore, gum, walnut, ash, hard maple.
(Timber to be used for interior trim, furniture or flooring in homes must be kiln dried or air seasoned and then placed indoors until thoroughly dry before it is finally machined)

Further information, or additional copies of this mimeograph can be obtained through your County Agent or a forester, or the Department of Forestry and Conservation at Purdue University, Lafayette, Indiana.

Historic Document

Cooperative Extension Work in griculture and Home Economics, State of Indiana, Purdue University and U. S Department of Agriculture Cooperating. H. G slin, Director, Lafayette, Ind. Issued in furtherance of the Acts of May 8 a ie 30, 1914.