Marketing Illinois Forest Products

By L. E. Sawyer

University of Illinois
College of Agriculture and Agricultural Experiment Station
Circular 361
The portable sawmill shown above was operating along Coffee Creek in Wabash county when this picture was taken. Mills such as this cut most of the timber sold from farm woodlands. When properly operated, they turn out high-grade material.
MARKETING ILLINOIS FOREST PRODUCTS

By L. E. Sawyer, Extension Forester,
Illinois Natural History Survey

THE OBJECT of this circular is to put into the hands of farm­
ers and timberland owners information that will be useful in
finding the best possible markets for their woodland products. Owners of timberland tracts, as a rule, are not familiar with the stand­
ard methods employed in marketing, and the consequence is that in far
too many cases the material cut from woodlands in Illinois is sold for
only a fraction of its real value.

In order that an owner may receive a fair price for his timber, he
should first secure an estimate of how much timber of each species he
has for sale.1 His next step is to get in touch with the consumers of
the different species and secure bids from as many of them as possible.

The timber market, like all others, has its periods of depression,
and the owner should avoid selling during a slump. While a large
part of the mature timber in Illinois should be marketed, it is usually
not depreciating so rapidly that it will have to be sold at once or be­
come a total loss. The owner, therefore, should not be influenced too
much by a buyer’s statement that his timber is “going back rapidly.”

Close Utilization Pays

The maximum returns can be secured only by utilizing timber to
the best advantage. In cutting sound trees, for example, if the height
of the stump exceeds one-half the diameter of the sound tree at
the point of cutting, too much of the most valuable material in the
tree will be left in the woods. Waste can be avoided also by utilizing
the material as far up into the top of the tree as possible.

A variety of products, it is always well to remember, will yield
higher returns than will one kind of product alone. For example, a


Additional information will be found in “Measuring and Marketing Farm Timber,” by W. R. Mattoon and W. B. Barrows, issued in 1930 as U.S.D.A. Farmers’ Bul. 1210, obtainable from the Superintendent of Documents, Washing­ton, D. C.; price ten cents, stamps not accepted.
white oak tree 30 inches in diameter at breast-height, having a clear length of 32 feet, will yield four cuts that will split out 80 posts worth 10 to 30 cents each, making an average return of $16. The same tree,

**FIG. 1.—HIGH STUMPS ARE WASTEFUL**

This black oak stump 20 inches in diameter was cut 27 inches high. If cut at the point indicated by the white line 10 inches above the ground, 24 additional board feet would have been secured from the tree. Cutting 42 trees in this way would cause a loss of 1,000 board feet of lumber.

if cut into cord wood, will make two cords of wood worth $2.50 to $12 a cord, yielding an average return of $14.50; or it will make two logs scaling 724 board feet of lumber worth $35 to $125 a thousand, yielding an average return of $58.

Cordwood, posts, ties, and mine props should be made from the tops, limbs, and parts of the tree too crooked or knotty to be utilized for saw timber.

**METHODS OF SELLING**

The four methods of sale commonly used are: (1) by lump, or lot, (2) by log scale, (3) by the piece, or count, and (4) by lumber tally. The choice of the method of selling depends on several factors: market conditions, kind of timber, the owner's knowledge of timber values, and his past experience. The products are usually sold in the
standing tree or in a more or less rough manufactured form, such as logs, piling, split posts, or crossties. A sample contract for timber sales is shown on pages 15-16.

**Selling by Lump or Lot**

Timber sold by the lump, or lot, usually includes all the timber within definite boundaries, and it is sold for a specified sum, either for the entire tract or on an acreage basis.

Selling by lump is usually favored by the buyer, for with his knowledge of values and yields he has a great advantage over the average woodland owner, who quite frequently has but little or no knowledge of timber values. The method, however, has certain advantages for the seller also, provided he takes the necessary precautions. He can secure a fair price for his timber, and also save himself work and worry, if he will first secure a reliable estimate of the amount, quality, and value of each product in his stand, then obtain competitive bids from as many buyers as possible, and finally sell by a contract that clearly specifies the amount to be cut, the diameter limit, the method of cutting, and the penalties for violation of the contract. (See sample contract on pages 15-16.)

Selling by the lump under contract relieves the owner of supervising the scaling of logs and the counting of pieces. It eliminates many of the misunderstandings that commonly occur in timber sales. If bids are secured under keen competition, the owner usually will receive a very fair price for his timber. The main disadvantage, on the other hand, is that the owner sacrifices profitable employment for himself and his teams in logging the area and hauling the logs to the mill or railroad siding. On the average farm this work can be done at a season of the year when the crops have been harvested and the teams and men are not otherwise employed. For this reason selling by lump is not generally recommended as a farm practice.

**Selling by Log Scale**

Timber marketed by log scale, estimated in the standing tree or measured in the log, is sold at a definite price per hundred or per thousand board feet, either in the woods or delivered at the mill or railway siding. If the owner undertakes to deliver the logs, the price should be high enough to repay him for the cost of cutting and hauling and to allow him a fair profit.

When selling timber by log scale, the owner has a choice of taking an average woods-run price or a price by separate species and grades.
The latter is more desirable and will often yield much higher returns than any other method of selling. Selling by log scale is especially advantageous to the man who has only a small amount of timber to

market, for it will furnish profitable employment for himself and his teams. Furthermore, the owner can personally select the trees that are to be cut, designate where they are to fall, and decide what lengths of logs or other products can be cut to the best advantage. This personal oversight alone is worth a great deal, for in this way the owner can confine the cutting to mature trees and others that should be removed. The young growth will be protected and close utilization will be secured.

The log scale in common use throughout Illinois is the Doyle Rule, commonly called "Doyle's Scale by Scribner." It is one of the oldest log scales in existence. Altho it was accurate enough for the large timber originally found in our forests, it is not a satisfactory or fair rule to use for the sizes of logs that are now being placed on the market. In the construction of the Doyle Rule 4 inches are subtracted from the measured diameter of the log to allow for slabbing and sawkerf. This is too much reduction for logs under 24 inches in diameter. The International Rule, constructed for saws cutting $\frac{1}{4}$ inch, and the Scribner Decimal C, constructed by diagram, are much more accurate and should be used instead of the Doyle Rule (see following table).
List of Markets for Illinois Forest Products

The following list of possible markets for Illinois forest products was compiled cooperatively with the concerns listed. Every effort was made to secure a complete list but there have undoubtedly been some omissions and we invite the cooperation of all who are interested to help us make our records complete.

**ILLINOIS**

**Adams County**
- Henry Knapheide Wagon Co., Quincy
  - White oak wagon stock

**Alexander County**
- F. H. Atwood Lumber Co., Cairo
  - Red and white oak lumber, 1st and 2nd, No. 1 and No. 2 common grades
- E. L. Bruce Co., Memphis, Tennessee (Factory at Cairo)
  - Oak and beech lumber
- Thos. McFarland Lumber Co., Cairo
  - Log-run hardwood lumber, all grades
- Peterson-Miller Box Co., Cairo
  - Cottonwood veneer logs
- Solomon Tie and Timber Co., Inc., Box #296, Cairo
  - Piling, crossties, switch ties, lumber, dimension oak, and pulp wood
- Vehicle Supply Co., Cairo
  - Oak and hickory wagon stock, implement stock, billets, and hardwood loading timbers
- Vick and Fletcher, Cairo
  - Oak, ash, elm, maple, cottonwood, sycamore, hickory, and birch logs
- R. J. Withrell Lumber Co., 1501 Washington Avenue, Cairo
  - Oak timbers, and log-run oak lumber

**Bond County**
- DeMoulin Brothers Co., Greenville
  - Red and white oak and walnut lumber

1/ There is no guarantee of the responsibility of the concerns listed.
American Lumber & Treating Corporation
332 South Michigan Avenue

Armour & Co.
Union Stock Yards

J. R. Beiersdorf & Brother
932 West 38th Place

Berger Brothers, Inc.
1186 Cherry Avenue

Busch Handle Co. Inc.
327 South LaSalle Street

Curry & Co.
407 South Dearborn Street

Hardwood Mills Lumber Co.
2652 South Damen Avenue

Hately Brothers Co.
141 West Jackson Boulevard

Heidler Hardwood Lumber Co.
2559 South Robey Street

Illinois Fuel & Mining Co.
529 South Franklin Street

W. O. King Lumber Co.
2701 South Damen Avenue

Lake Superior Piling Co.
2464 South Loomis Street

L. D. Leach and Co.
5 North Wabash Avenue

Libby, McNeil & Libby
Union Stock Yards

Deckert S. McDowell (Switch Track Supply Co.)
53 West Jackson Boulevard
(8-4835 S. Wallace)

R. M. Morris & Co.
332 South Michigan Avenue

National Box Co.
1101 West 38th Street

**Cook County**

**Chicago**

- **American Lumber & Treating Corporation**
  - 332 South Michigan Avenue

- **Armour & Co.**
  - Union Stock Yards

- **J. R. Beiersdorf & Brother**
  - 932 West 38th Place

- **Berger Brothers, Inc.**
  - 1186 Cherry Avenue

- **Busch Handle Co. Inc.**
  - 327 South LaSalle Street

- **Curry & Co.**
  - 407 South Dearborn Street

- **Hardwood Mills Lumber Co.**
  - 2652 South Damen Avenue

- **Hately Brothers Co.**
  - 141 West Jackson Boulevard

- **Heidler Hardwood Lumber Co.**
  - 2559 South Robey Street

- **Illinois Fuel & Mining Co.**
  - 529 South Franklin Street

- **W. O. King Lumber Co.**
  - 2701 South Damen Avenue

- **Lake Superior Piling Co.**
  - 2464 South Loomis Street

- **L. D. Leach and Co.**
  - 5 North Wabash Avenue

- **Libby, McNeil & Libby**
  - Union Stock Yards

- **Deckert S. McDowell (Switch Track Supply Co.)**
  - 53 West Jackson Boulevard
    (8-4835 S. Wallace)

- **R. M. Morris & Co.**
  - 332 South Michigan Avenue

- **National Box Co.**
  - 1101 West 38th Street

**Lumber**

- **American Lumber & Treating Corporation**

- **Armour & Co.**

- **J. R. Beiersdorf & Brother**

- **Berger Brothers, Inc.**

- **Busch Handle Co. Inc.**

- **Curry & Co.**

- **Hardwood Mills Lumber Co.**

- **Hately Brothers Co.**

- **Heidler Hardwood Lumber Co.**

- **Illinois Fuel & Mining Co.**

- **W. O. King Lumber Co.**

- **Lake Superior Piling Co.**

- **L. D. Leach and Co.**

- **Libby, McNeil & Libby**

- **Deckert S. McDowell (Switch Track Supply Co.)**

- **R. M. Morris & Co.**

- **National Box Co.**

**Box lumber, all species**

**Hardwood and softwood lumber and timbers**

**Oak and hardwood cordwood**

**Mixed oak and hickory cordwood**

**Cordwood of all kinds but willow; rejected railroad ties, free from iron**

**Second-growth hickory handle stock**

**Crossties, switch ties, crossing planks, car stock, and piling**

**Walnut, red and white oak and soft maple lumber, and oak bridge planks**

**Oak, birch, and maple cordwood**

**Hardwood lumber, all kinds**

**Oak, hickory, and hard maple cordwood**

**Hard maple, red and white oak lumber, 1st and 2nds.**

**Piling**

**Oak, elm, gum, hickory, beech, ash, and cottonwood piling**

**Oak cordwood**

**Oak crossties, switch ties, and crossing plank**

**Lumber**

**Box lumber, all species**
O'Brien Lumber Co.
2639 South Damen Avenue

Reliable Packing Co.
1440 West 47th Street

Swift & Co.
Union Stock Yards

C. L. Willey Co.
2558 South Damen Avenue

Elder County

Cummings Car and Coach Co.
Paris

T. A. Foley Lumber Co.
Paris

Effingham County

Feuerborn Manufacturing Co.
Effingham

Gallatin County

Adam Ward
Shawneetown

Hancock County

Utility Handle Co.
Dallas City

Jackson County

Merchants Basket and Box Co.
Grand Tower

Jersey County

Staunton Tie & Lumber Co.
202 East Pearl Street
Jerseyville

Johnson County

B. E. Moses
Cypress

Kane County

Appleton Manufacturing Co.
Batavia

Oak, basswood, oak, and maple lumber

Oak and hickory cordwood

Oak car stock; oak, hickory and maple cordwood

Walnut veneer logs

Hard maple, poplar, ash, cherry, and oak lumber - 1st and 2nds.

Native hardwood logs

White and red oak lumber, 1st and 2nds

Gum, elm, ash, sycamore, and hackberry logs

White oak butt cuts; 2nd-growth hickory, all white, and handle blanks

Gum, cottonwood, elm, sycamore, birch, and maple logs

Piling; mine timbers, switch ties, cross ties; posts; lumber; walnut, oak, and softwood logs

Hardwood cordwood

Oak and sap gum lumber
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Species and Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rinehimer Brothers Mfg. Co., Elgin</td>
<td>Walnut lumber</td>
</tr>
<tr>
<td>Wheeler Screen Co., Geneva</td>
<td>White and red oak, ash, hickory, beech, and sycamore lumber</td>
</tr>
<tr>
<td>LaSalle County</td>
<td></td>
</tr>
<tr>
<td>King Hamilton Co., Ottawa</td>
<td>Oak and cypress lumber</td>
</tr>
<tr>
<td>Northwestern Timber Co., Mendota</td>
<td>Black walnut logs</td>
</tr>
<tr>
<td>Owens-Illinois Glass Co., 965 Wall Street, Toledo, Ohio (Plants at Alton and Streator, Ill.)</td>
<td>Maple, elm, oak, sycamore, and cottonwood lumber</td>
</tr>
<tr>
<td>Peru Plow &amp; Wheel Co., Peru</td>
<td>Red and white oak and hickory wagon dimension stock</td>
</tr>
<tr>
<td>Westgate Walnut Co., Mendota</td>
<td>Walnut logs</td>
</tr>
<tr>
<td>Macon County</td>
<td></td>
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<tr>
<td>Danzeisen Packing Co., Decatur</td>
<td>Oak and hickory cordwood</td>
</tr>
<tr>
<td>Madison County</td>
<td></td>
</tr>
<tr>
<td>Equitable Powder Manufacturing Co., East Alton</td>
<td>Sound, green-cut maple cordwood</td>
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<tr>
<td>Owens-Illinois Glass Co., 965 Wall Street, Toledo, Ohio (Plants at Alton and Streator)</td>
<td>Maple, elm, oak, sycamore, and cottonwood lumber</td>
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<tr>
<td>Marion County</td>
<td></td>
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<tr>
<td>Fox Hardwood Lumber Co., Centralia</td>
<td>Red and white oak crossties</td>
</tr>
<tr>
<td>Wabash County</td>
<td></td>
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<tr>
<td>E. C. Artman Lumber Co., Metropolis</td>
<td>All species of timber in the log</td>
</tr>
<tr>
<td>Alfred Bennett Tie Co., Metropolis</td>
<td>Oak, elm, cypress, hickory, and beech crosstie</td>
</tr>
<tr>
<td>Roberts-Liggott Co., Metropolis</td>
<td>Gun, elm, sycamore, poplar, birch maple, basswood, cottonwood, cypress, and beech veneer logs</td>
</tr>
</tbody>
</table>
McDonough County

A. M. Logan
Macomb
Black walnut lumber, white oak, hickory, and cottonwood logs

McLean County

Paul O. Moratz
500 Bell Street
Bloomington
Quartered white oak lumber

Peoria County

Glasgow Box and Barrel Co.
715 Bond Street
Peoria
Cypress and tupelo gum lumber

Pike County

Imperial Handle Co.
Golconda
Hickory handle timber

Pulaski County

C. L. Bartlett
Mound City
Elm bending timber; tupelo gum, maple and sycamore logs

Main Brothers Box & Lumber Co.
Karnak
Tupelo gum, maple, elm, cypress, and other softwood lumber

The Swisshelm Veneer Co.
Mound City
Gum, tupelo, maple, poplar, white and red oak logs

Ullin Box and Lumber Co.
Ullin
Native timber logs for shipping crates

Rock Island County

John Deere Wagon Works
Moline
Hickory and oak wagon stock

Rock Island Sash and Door Works
2525 Fourth Avenue
Rock Island
Plain red oak lumber

St. Clair County

E. Goedde and Co.
2040 Illinois Avenue
East St. Louis
Oak lumber, timbers, and bridge planks

Swift and Company
National Stock Yards
Oak, maple, and yellow poplar lumber
<table>
<thead>
<tr>
<th>County</th>
<th>Company</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sangamon County</td>
<td>Castleman Brothers Timber Co.</td>
<td>Oak, soft and hard maple, and elm lumber; and dimension stock</td>
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<tr>
<td></td>
<td>610-611 Ferguson Building</td>
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<td>Springfield</td>
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<td>Stevenson County</td>
<td>Midland Lumber Co.</td>
<td>Oak cut to special dimensions</td>
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<td>Freeport</td>
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<tr>
<td>Union County</td>
<td>Fruit Growers Package Co.</td>
<td>Tulip poplar, sweet gum, cottonwood, soft maple, birch, elm, sycamore,</td>
</tr>
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<td></td>
<td>Jonesboro</td>
<td>black gum, tupelo gum, and basswood logs</td>
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<tr>
<td></td>
<td>E. A. DuBois &amp; Sons</td>
<td>Gum, sycamore, elm, cottonwood, soft maple, poplar,hackberry, basswood,</td>
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<td></td>
<td>Cobden</td>
<td>cucumber and willow logs</td>
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<tr>
<td>Vermilion County</td>
<td>Pierson-Hollowell Walnut Co. Inc.</td>
<td>Walnut and other native hardwood veneer logs</td>
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<td></td>
<td>Danville</td>
<td></td>
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<tr>
<td>White County</td>
<td>Abner Carey</td>
<td>Cottonwood, gum, maple, sycamore, poplar, and willow for egg cases and</td>
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<td>Grayville</td>
<td>small boxes</td>
</tr>
<tr>
<td>Whiteside County</td>
<td>Illinois Refrigerator Co.</td>
<td>Hackberry, ash, elm, and sap gum lumber</td>
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<td>Morrison</td>
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<td>Winnebago County</td>
<td>Illinois Veneer Co.</td>
<td>Walnut logs and stumps</td>
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<td></td>
<td>Rockford</td>
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<td></td>
<td>Rockford Furniture Co.</td>
<td>Oak and walnut lumber</td>
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<td></td>
<td>1009 West Jefferson</td>
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<td></td>
<td>Rockford</td>
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<td></td>
<td>Old Colony Chair Co.</td>
<td>Walnut, oak, poplar and elm lumber</td>
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<td>Rockford</td>
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<tr>
<td>Indiana</td>
<td>Biltwell Basket Co.</td>
<td>Maple, elm, basswood, and miscellaneous logs</td>
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<td></td>
<td>P. O. Box #586</td>
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<td></td>
<td>Warsaw</td>
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</tbody>
</table>
The Edgerton Manufacturing Co. 
Plymouth
Powell Roos Lumber Co. 
195 Larsen Street
LaPorte
W. C. Redman Sons & Co. 
Peru
South Bend Dowel Works 
South Bend
Unger-Kramer Co. 
Peru

Central Indiana

Abel Manufacturing Co. 
Terre Haute
Charles H. Barnaby 
Greencastle
Bloomington Basket Co. 
Bloomington
Central Veneer Co. 
Indianapolis
Columbus Creosoting Co. 
505 City Trust Building
Indianapolis
Decatur Cooperage Co. 
Decatur
Flora Saw Mill Co. 
Flora
Hoosier Veneer Co. 
3321 Massachusetts Avenue
Indianapolis
Indiana Excelsior Co. 
Indianapolis
Indiana Veneer and Lumber Co. 
Indianapolis
Indianapolis Manufacturing Co. 
1030 East Pratt Street
Indianapolis
Indianaoslis Timber and Mfg. Co. 
419 Board of Trade Building
Indianapolis

Elm and beech logs
Walnut logs
Hackberry, sugar maple and elm logs
Hard maple, beech and mixed oak lumber
Gum and basswood lumber

Poplar and elm lumber, No. 1 common and selects
Black walnut, white oak, and white ash logs
Beech, elm, gum, sycamore, and poplar logs
Walnut logs
Oak crossties, switch ties, piling, and bridge lumber
Elm logs
Black walnut and white ash logs
Clear black walnut logs

Cottonwood, willow, poplar, aspen, and basswood excelsior bolts
White oak veneer logs
Basswood and poplar logs

Cottonwood, willow, soft maple, box elder, buckeye and aspen pulpwood
Marion Basket Co.
Marion

Republic Creosoting Co.
1615 Merchants Bank Building
Indianapolis

Thiesing Veneer Co.
West McCarty Street
Indianapolis

Southern Indiana

Amos Thompson Corp.
Edinburg

Batesville Lumber and Veneer Co.
Lawrenceburg

G. E. Bauman Hardood Co.
Evansville

Columbus Handle & Tool Corp.
Columbus

Joseph I. Eckstein and Sons
Jasper

Evansville Basket and Crate Co.
Evansville

M. L. Farlow Lumber Co.
Paoli

Globe Bosse World Furniture Co.
Evansville

Indiana Veneer and Panel Co.
New Albany

G. W. Menefee
Vincennes

Jasper Veneer Mills
Jasper

Maley and Wertz Lumber Co.
900 East Columbia Street
Evansville

Elm, ash, and second-growth sugar maple logs

Crossties, and switch ties

Walnut logs

Walnut lumber, veneer logs, and stumps

Walnut logs

Red and white oak, ash, hickory, hard and soft maple, gum, and elm lumber

Ash, hickory, and maple logs

White and red oak, hickory, poplar, walnut, ash, maple, and beech logs

Maple, gum, beech, elm, hickberry, and sycamore logs

Hickory handle stock, logs or billets

Sap gum, poplar, and red oak lumber

Gum lumber, No. 1 common and select

Oak and maple lumber, ash logs, and oak car stock

Sweet gum logs

White oak and black walnut logs
New Albany Veneering Co.
New Albany

North Vernon Lumber Mills
North Vernon

Anderson Box and Basket Co.
Henderson

King Mill and Lumber Co.
Box 76
Paducah

Paducah Box and Basket Co.
Paducah

KENTUCKY

Elm lumber, log run

All hardwood lumber

Sweet gum, black gum, elm, maple, sycamore, beech, poplar, and birch logs

MISSOURI

St. Louis

American Timber Co.
1524 Arcade Building

Boeckeler Lumber Co.
5901 Easton Avenue

Central States Tie and Lumber Co. Inc.
1565 Arcade Building

Christmann Veneer and Lumber Co.
Hall and Buchanan Streets

Philip Gruner and Brothers Lumber Co.
4000 N. Broadway

Hafner Lumber Co.
110 Dock Street

Keller & Tamm Mfg. Co., Inc.
23 Victor Street

Manassa Timber Co.

T. J. Moss Tie Co.
700 Security Building

Mound City Box Factory
2000 Gratiot Street

Pickrel Walnut Co.

Oak, elm, and hickory piling, mine timbers, railroad ties, and lumber

White oak planking and timbers

Oak blocking, timbers, crossing plank, bridge plank, oak car stock, oak timbers, and hardwood lumber of all kinds

Lumber of all native species

White oak timbers and lumber

Soft maple, log run; oak, No. 1 common and better; walnut, select and better lumber

Hickory handle blanks

Oak and cypress piling

Crosties

Sap gum and tupelo gum lumber

Black walnut lumber and veneer logs

Sap gum lumber

Beech and oak lumber
Potosi Tie & Lumber Co.  
707 Liberty Central Building

Thomas E. Powe Lumber Co.  
St. Louis Box Factory  
721 South Second Street

John F. Scobee Lumber Co.  
156 St. Louis Avenue

Iowa Hardwood Basket Co.  
28th and Silver Streets  
Burlington

Keokuk Box Co.  
Keokuk

Leopold Co.  
Burlington

Wheeler Lumber Bridge and Supply Co.  
Hubbell Building  
Des Moines

IOWA

Second-growth white oak, cut to order

Cottonwood, elm, sycamore, willow, soft maple, ash, hackberry, birch, buckeye, oak, cherry, and walnut logs

Soft maple and walnut lumber

Piling, planking, and lumber

WISCONSIN

American Plywood Corp.  
New London

Leach Co.  
412 South Main Street  
Oshkosh

Paine Lumber Co. Ltd.  
Oshkosh

Phoenix Products Co.  
Prairie du Chien

Walnut, white oak, and basswood veneer logs on C. & N. W. R. R.

Ash and hickory planks

Black walnut, sycamore, cottonwood, ash, and gum lumber

Soft maple and birch logs

RAILROADS

The Baltimore and Ohio Railroad Co.  
Crossties  
Baltimore, Maryland

Chicago and Alton Railroad Co.  
Crossties  
340 West Harrison Street  
Chicago, Illinois

Chicago, Burlington & Quincy Railroad Co.  
Crossties and piling  
547 West Jackson Boulevard  
Chicago, Illinois
<table>
<thead>
<tr>
<th>Company</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago and Eastern Illinois Railway Co.</td>
<td>Crossties</td>
</tr>
<tr>
<td>801 McCormick Building</td>
<td></td>
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<tr>
<td>Chicago, Illinois</td>
<td></td>
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<tr>
<td>Chicago and Illinois Midland Railway Co.</td>
<td>Crossties</td>
</tr>
<tr>
<td>405 Myers Building</td>
<td></td>
</tr>
<tr>
<td>Springfield, Illinois</td>
<td></td>
</tr>
<tr>
<td>Chicago, Milwaukee, St. Paul and Pacific Railroad Co.</td>
<td>Crossties</td>
</tr>
<tr>
<td>Room 718 Union Station</td>
<td></td>
</tr>
<tr>
<td>Chicago, Illinois</td>
<td></td>
</tr>
<tr>
<td>Chicago, Springfield &amp; St. Louis Railway Co.</td>
<td>Red and white oak crossties and switch ties</td>
</tr>
<tr>
<td>Springfield, Illinois</td>
<td></td>
</tr>
<tr>
<td>Illinois Central System</td>
<td>Piling; white oak car stock</td>
</tr>
<tr>
<td>Chicago, Illinois</td>
<td></td>
</tr>
<tr>
<td>Missouri-Illinois Railroad</td>
<td>Crossties</td>
</tr>
<tr>
<td>St. Louis, Missouri</td>
<td></td>
</tr>
<tr>
<td>New York Central Railroad Co.</td>
<td>Crossties</td>
</tr>
<tr>
<td>465 Lexington Avenue</td>
<td></td>
</tr>
<tr>
<td>New York, N. Y.</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania Railroad Co.</td>
<td>Crossties and switch ties</td>
</tr>
<tr>
<td>Philadelphia, Pennsylvania</td>
<td></td>
</tr>
<tr>
<td>Toledo, Peoria and Western</td>
<td>Crossties and piling</td>
</tr>
<tr>
<td>Union Station</td>
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</tr>
<tr>
<td>Peoria, Illinois</td>
<td></td>
</tr>
<tr>
<td>Wabash Railway Co.</td>
<td>Crossties</td>
</tr>
<tr>
<td>Railway Exchange Building</td>
<td></td>
</tr>
<tr>
<td>St. Louis, Missouri</td>
<td></td>
</tr>
</tbody>
</table>

University of Illinois  
College of Agriculture  
1-31

6:30.7
I. to
Circular 361
### Board-foot Contents for Logs of Given Diameters and Lengths as Scaled by the International Rule (I) and by the Doyle Rule (D)

<table>
<thead>
<tr>
<th>Top diameter (inches)</th>
<th>Length of the log in feet</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
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<td>115</td>
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<td>32</td>
<td>135</td>
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<td>33</td>
<td>140</td>
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<td>34</td>
<td>145</td>
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<tr>
<td>35</td>
<td>150</td>
</tr>
<tr>
<td>36</td>
<td>155</td>
</tr>
</tbody>
</table>


### Selling by Count

Poles, posts, piling, crossties, mine timbers, handle stock, and cordwood are usually sold by count, definite prices being agreed upon for pieces or stacks of specified sizes and grades. Bolts and billets are stacked and sold by the cord. Selling by count is the best method when the timber is of such character as to permit the cutting of products that are sold in this way.

### Selling by Lumber Tally

In the selling of timber by lumber tally, the owner receives a specified price per hundred or per thousand feet of manufactured product. This is by far the most accurate and fair method of selling. Portable sawmills, if run at all economically, will cut from 15 to 30 percent more lumber from logs than the number of board feet indicated by the log scale in common use in Illinois.

When selling by lumber tally, the owner has a choice of two procedures. On the one hand, he may log and mill the material himself.
and sell the finished product. If successful in finding a market, he will thus secure the maximum amount of money for his timber. The average timber owner, however, does not have the experience necessary to operate a mill successfully, and therefore should not attempt to market his timber in this way. On the other hand, he may sell the timber to an operator for a specified sum per hundred or per thousand feet of manufactured lumber or, in the case of crossties, at a fixed price per tie, depending upon the grade. This second method of selling does not require the owner to take part in the logging of the timber or in the operation of the mill.

All products sold by lumber tally should be measured in the presence of the owner or his representative in order to avoid disputes.

**SUGGESTIONS ON SHIPPING**

**Direct Selling**

All methods of selling have their advantages and disadvantages, as explained above, but none of them will bring the owner the maximum returns if his timber has to go thru the hands of several middle-

![Fig. 3.—Logs, Pulpwood, and Mine Props Cut From Farm Woods and Piled Along Siding to Await Inspection](Photo by U. S. Forest Service)

Each owner may pile his timber products separate from those of the others or he may mark the ends with his individual mark. The inspector will then scale each man's material by itself. (Photo by U. S. Forest Service)

...men before reaching the consumer. Selling direct to the manufacturer or consumer will yield the owner the most money for his timber products. Direct selling may be accomplished by determining, first, what products are to be marketed, and then by getting in touch with the concerns handling those products or with their local buyers. If
the local buyer is employed on a commission basis, he should be able to pay as much for any product as the company itself.

It is always advisable to secure quotations from as many concerns as possible, and then market to the one offering the amount that will afford the largest net sum. If the prices quoted are f.o.b. the local siding, the highest price is the best to accept; but if f.o.b. the company’s plant, the freight rate per thousand board feet will have to be deducted from the amount offered per thousand to determine the net proceeds at the loading point.

Cooperative Marketing

Many woodland owners who do not have enough timber to allow them to ship logs or other products to manufacturers in carload lots are often unable to find a local market that will pay a satisfactory price. This difficulty can be overcome by marketing the products from one locality on a cooperative basis.

In the simplest form of cooperative marketing, the men who have timber products for sale haul their logs or other materials to the same siding, each man either piling his separate from those of the others or marking the ends of the pieces with his individual mark. Large consumers, when buying in carload lots, usually send an inspector to grade and scale the material before it is loaded. The inspector will scale each man’s material by itself, so that there should be no confusion about the payment for the various products.

By shipping in this way, several men with small lots for shipment
can go together and receive the same prices as they could if each had a carload lot.

**Carload Capacities**

Altho carload capacities depend upon the size of the car and the form of the product to be loaded, the average figures given below will be useful in estimating the amount that can be loaded on any one car.

<table>
<thead>
<tr>
<th>Logs, 4,000 to 7,000 board feet</th>
<th>Mine ties, 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cordwood or bolts, 12 to 18 cords</td>
<td>Posts, 4-inch top, 800</td>
</tr>
<tr>
<td>Poles or piling, 25 to 40 pieces</td>
<td>5-inch top, 650</td>
</tr>
<tr>
<td>Crossties, 7 x 9, 300</td>
<td>6-inch top, 500</td>
</tr>
<tr>
<td>6 x 8, 350</td>
<td></td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

**Logs**

Log grades are much more important in the sale of timber than the average owner realizes. Even tho grades are not mentioned in a purchase, every buyer must figure the grade of each log and set a definite price for it in his own mind. Specifications for the various grades of logs are not uniform, and it will therefore be impossible to give anything except a general description of them.

*Veneer logs* are the choice logs from which veneers are made.

---

"Taken from U.S.D.A. Farmers' Bul. 1210."
They are usually 8 to 16 feet long, 16 inches or over in diameter at the small end, straight, and free from all defects.

*No. 1 logs* will cut their scale in No. 1 lumber or better. Two small knots or their equivalent are usually allowed.

*No. 2 logs* must cut two-thirds of their scale in No. 1 lumber or better.

*No. 3 logs* must cut at least one-half of their scale in No. 2 lumber or better.

*Cull logs* are those which fail to come up to the specifications of any grade. They may be taken at a price below that of No. 3 logs, but are often rejected.

The defects referred to above consist of knots, wind shake, worm holes, rot, crook, splinter pull, frost cracks, lightning cracks, double heart, splits, and checks. In veneer-quality logs, extremely wide sapwood is often considered a defect.

**Crossties**

Crossties are sold by grade, depending upon the species and size. The following specifications taken from the price sheet of the Chicago, Burlington, and Quincy Railroad Company will illustrate the requirements. The specifications of other railroads differ but little, usually only in the species included in the various groups.
Group Kind of Wood
UA White oak, black locust, black walnut, cherry, mulberry, sassafras, catalpa
TA Red oak, honey locust, hard maple, hickory
TC Cypress, gum, birch, elm, beech
TD Ash, hackberry, poplar, sycamore, cottonwood, soft maple

Class U ties are those which may be used untreated; class T ties should be treated.

Piling

Piling is sold by the piece or linear foot and must meet certain definite requirements set up by the various concerns purchasing it, but in general the specifications are as follows: Trees must be cut above the root swell and shall be from 12 to 22 inches in diameter at the butt. Piles must be so straight that a line drawn from the center of the butt to the center of the top will fall entirely within the stick. The diameter of the top varies with the length; piles 20 to 30 feet long require a top diameter of 8 to 9 inches while those from 30 to 60 feet usually require a 6- or 7-inch top. All trees cut for piling must be alive and sound. No sharp or double crooks will be allowed.

Pulpwood and Excelsior Wood

Wood for pulp or excelsior generally is cut 54 inches long and is sold by the stack 4 feet high and 8 feet long, making a little over one standard cord. This wood must be straight, cut from live, sound trees, and have all bark removed. Knots are not allowed in excelsior wood but are acceptable in pulpwood if trimmed smooth.

Handle Stock

Handle stock is cut in lengths varying from 22 to 60 inches, depending on the length of handle to be made. Specifications of the companies buying this stock give the length of wood, species used, maximum and minimum diameters acceptable.

Cordwood

Any kind of wood cut in lengths from 12 inches up may be sold by the standard cord, which is represented by a stack of wood occupying a space 4 feet wide, 4 feet high, and 8 feet long. Wood ranked in a pile 4 feet high and 8 feet long constitutes a short cord if less than 4 feet wide, a long cord if the sticks are longer than 4 feet. The lengths are usually 12, 14, 16, 18, 24, and 48 inches when used for fuel wood. Specifications usually give the length of stick, species of wood, and percentage of limb wood that will be allowed.
MARKETING ILLINOIS FOREST PRODUCTS

Lumber and Other Sawed Material

Lumber and other sawed material is graded according to specifications laid down by the Hardwood Manufacturers' Association. These specifications differ for each species and are too voluminous to be included here but may be obtained from the office of the association in Chicago.

Mine Timbers

Specifications for mine props, bars, caps, and ties vary with the requirements of the mine and the depth of the coal seam. The requirements of local mines should be determined so that the timber can be cut to meet their specifications.

Caution in Cutting

Large amounts of material are often wasted by improper cutting and by cutting stock for which there is no market. This waste can be easily avoided if a few simple suggestions are followed. Before cutting any material, several concerns using the class of stock to be cut should be consulted and a definite order secured. After this has been done, all that is necessary is to cut the trees so that the material meets the specifications of the company to which it has been sold.

PRICES

The variation in quotations received from concerns in the market for Illinois forest products makes it impossible to give any figures for average values, but the high and low prices shown below will indicate the range of variation. In lumber and sawed material the price variation in a species is due to different grades, while in logs it is influenced both by diameter and grade.

<table>
<thead>
<tr>
<th>Species</th>
<th>Form of Product</th>
<th>High quotation per thousand</th>
<th>Low quotation per thousand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ash</td>
<td>Logs</td>
<td>$50</td>
<td>$20</td>
</tr>
<tr>
<td>Basswood</td>
<td>Lumber</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Logs</td>
<td>48</td>
<td>18</td>
</tr>
<tr>
<td>Beech</td>
<td>Lumber</td>
<td>38</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Logs</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>Birch</td>
<td>Logs</td>
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</tr>
<tr>
<td>Cottonwood</td>
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<td>Logs</td>
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</tr>
<tr>
<td>Elm</td>
<td>Lumber</td>
<td>47</td>
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<tr>
<td></td>
<td>Logs</td>
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</tr>
<tr>
<td>Gum</td>
<td>Lumber</td>
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<tr>
<td></td>
<td>Logs</td>
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<td>20</td>
</tr>
<tr>
<td>Tree</td>
<td>Handle stock (per cord)</td>
<td>Lumber</td>
<td>Logs</td>
</tr>
<tr>
<td>-----------------</td>
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<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Hackberry</td>
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<td>17</td>
</tr>
<tr>
<td>Hickory</td>
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<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Oak, red</td>
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<td>18</td>
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<tr>
<td>Sycamore</td>
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<td>17</td>
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<tr>
<td>Tulip Poplar</td>
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<td>125</td>
<td>35</td>
</tr>
<tr>
<td>Tupelo</td>
<td>65</td>
<td>65</td>
<td>18</td>
</tr>
<tr>
<td>Walnut, black</td>
<td>235</td>
<td>235</td>
<td>30</td>
</tr>
<tr>
<td>Willow</td>
<td>500</td>
<td>500</td>
<td>100</td>
</tr>
</tbody>
</table>

**TIMBER-SALE CONTRACTS**

The owner should draw up a written contract covering every sale of farm timber products. Even in small sales much trouble and financial loss have resulted from failure to put the terms of the sale in writing.

The primary aim of the seller should be to make absolutely clear the conditions under which he desires to dispose of his product. The essential conditions to be inserted in the complete form of timber-sale contract refer to: (1) description and location of the timber; (2) price and manner of payment; (3) conditions of cutting and removal; and (4) title and means of settling disputes. Under the third heading are put down the provisions regarding the duration of the contract, the marking of the timber, the diameter limits, the method of scaling, the definition of merchantability, the degree of utilization, and the protection against injury to reserved trees.

As an aid to those unfamiliar with such agreements, a sample contract is given, showing the more important provisions that should be included in a contract for the sale of marked trees to be scaled in the log. Substitute clauses are given for use in other kinds of sales. No single form of contract will suit all classes of sales, but owners of woodland timber should have no difficulty in adapting this contract to their use.

---

1Adapted from U.S.D.A. Farmers' Bul. 1210.
Sample Timber-Sale Contract

Agreement entered into this __________ day of _______ ____________, 193________, between ________________________, Illinois, hereinafter called
(name of seller) (name of town)
and ________________________, Illinois, hereinafter called
(name of buyer) (name of town)
the seller, and ________________________, Illinois, herein- 
after called the purchaser.

Witnesseth:

Article 1. The seller agrees to sell to the purchaser, upon the terms and conditions hereinafter stated, all the living timber marked or designated by the seller 
and all merchantable dead timber, standing or down, estimated to be ____________ board feet, more or less, on a certain tract of land situated in the Township of
_________________________, County of _____________, State of Illinois, and located 
on the farm belonging to the seller, and about ____________ ____________ ____________ of his
(farmhouse)

Article 2. The purchaser agrees to pay the seller the sum of ____________ dollars ($__________ ____________), more or less, as may be determined by the actual scale, 
at the rate of ____________ dollars ($__________ ____________) per thousand board feet 
for white oak and white ash, ____________ dollars ($__________ ____________) for red oak 
and hickory, ____________ dollars ($__________ ____________) for sugar maple and beech, 
and ____________ dollars ($__________ ____________) for black gum, blue beech, and iron-
wood, payable prior to the date of removal of material, in installments of
___________ dollars ($__________ ____________) each.

Article 3. The purchaser further agrees to cut and remove said timber in 
strict accordance with the following conditions:

1. Unless extension of time is granted, all timber shall be cut, paid for, 
and removed on or before ____________ ____________ ____________
(date)

2. Saw timber shall be scaled by the ____________ log rule, and measured 
at the small end along the average diameter inside the bark to the nearest inch.

3. The maximum scaling length of logs shall be 16 feet; greater lengths 
shall be scaled as two or more logs. Upon all logs an additional length of 4 
inches shall be allowed for trimming. Logs overrunning this allowance shall 
be scaled not to exceed the next foot in length.

4. No unmarked timber of any kind shall be cut except black gum, blue 
beech, and ironwood.

5. Stumps shall be cut so as to cause the least possible waste: stumps of 
trees up to 24 inches in diameter not higher than 12 inches above the ground, 
and those of trees above this size at a distance above the ground not greater 
than three-fourths of their diameter.

6. All trees shall be utilized in their tops to the lowest possible diameter 
for commercially salable material.

7. Young trees shall be protected against unnecessary injury; only dead 
trees and the less valuable kinds may be used for construction purposes in con-
nection with lumbering operations.

8. Care shall be exercised at all times by the purchaser and his employees 
against the starting and spread of fire.

Article 4. It is mutually understood and agreed by and between the parties 
hereto as follows:
1. All timber included in this agreement shall remain the property of the seller until paid for in full.

2. In case of dispute over the terms of this contract, final decision shall rest with a reputable person to be mutually agreed upon by the parties to this contract; and in case of further disagreement, with an arbitration board of three persons, one to be selected by each party to this contract and a third to be a forester employed by the state or federal government or his chosen representative.

In witness whereof the parties hereto have hereunto set their hands and seals this __________ day of ___________________ , 193________.

Witnesses:

________________________________________  __________________________________________

________________________________________  __________________________________________

Substitute Clauses for Other Methods of Sale

The following are specimens of clauses that should be substituted in the contract when other methods of sale are used.

In lump-sum sales substitute in Article 1 a descriptive clause modeled on this one:

* * * all merchantable living trees, except black walnut, oak, yellow poplar, white ash, and basswood, which measure 16 inches and below in diameter at breast-height (a height of 4½ feet above the ground).

This provision will reserve the basis for a second crop consisting of the more valuable and rapid-growing kinds of trees, and remove all of the inferior and slower-growing trees.

In a sale to a diameter limit the clause should read somewhat as follows:

* * * all merchantable living trees, 16 inches and over, measured at breast-height above the ground.

The payment clause in lump-sum sales should be varied to read something like this:

* * * the sum of ___________________________dollars ($___________) for said timber, payable prior to the cutting of the material, in installments of ___________________________ dollars ($___________) each, payable on or before___________________________.

Other clauses which might be included are those requiring that the timber shall be scaled in the presence of the seller or his authorized agent; that the log lengths shall be varied so as best to utilize the timber; that unmarked trees, if cut, shall be paid for at double the regular price; that tops left in logging shall remain on the tract for the use of the seller (or, if desired, shall be utilized by the purchaser).

In selling by lump, the other essential change is the omission of the provisions, or parts of them, referring to scaling, measuring, and unit prices. The total amount to be paid is very important, while the total estimated quantity of timber is optional.