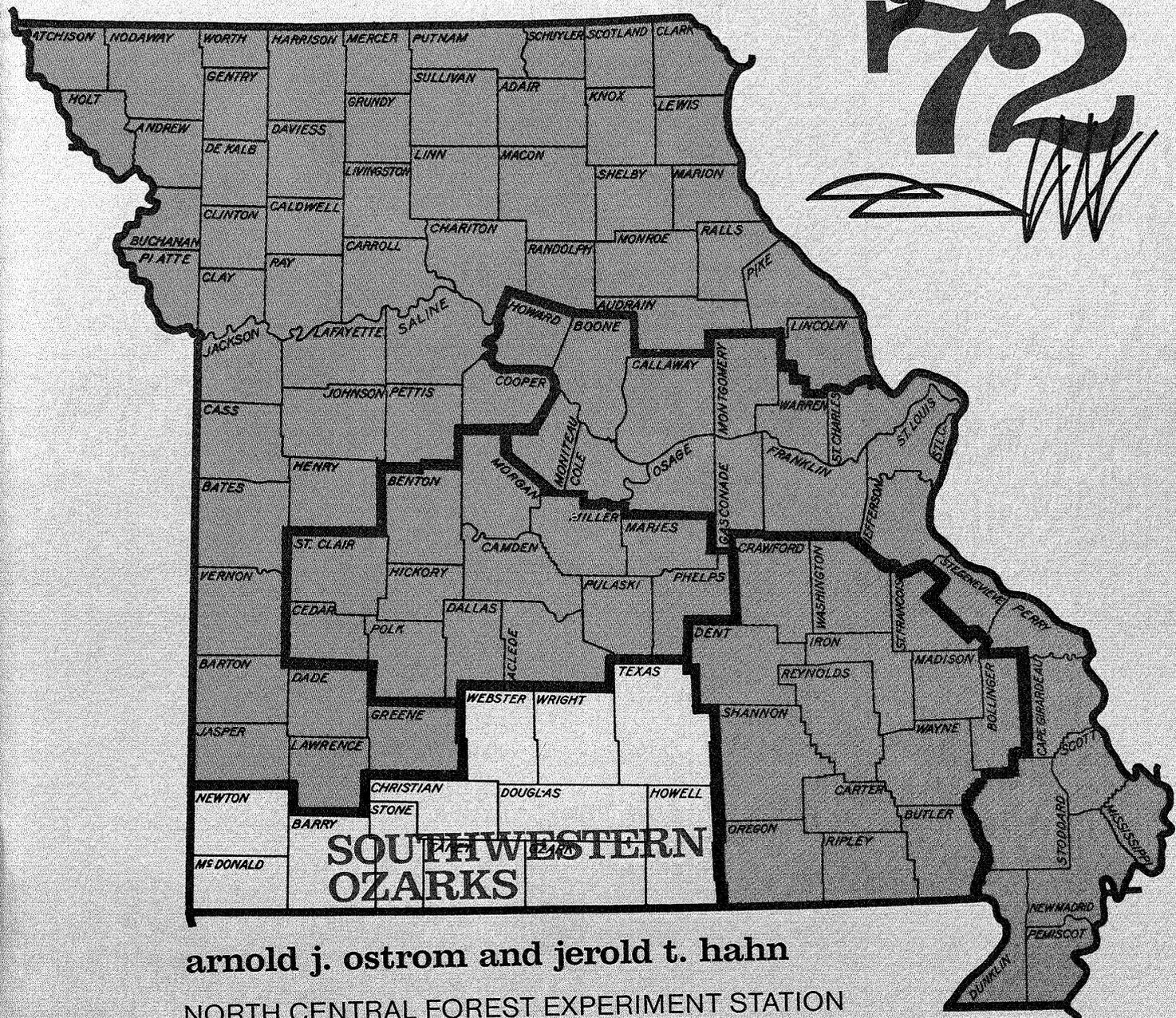
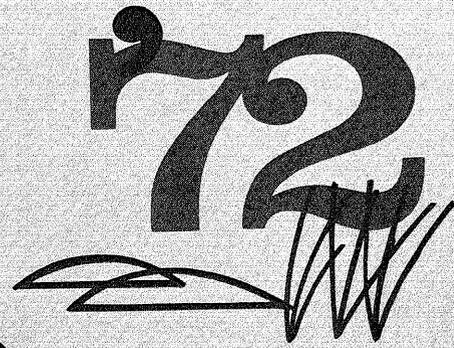


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# TIMBER RESOURCE OF MISSOURI'S southwestern ozarks



arnold j. ostrom and jerold t. hahn  
NORTH CENTRAL FOREST EXPERIMENT STATION  
FOREST SERVICE • U.S. DEPARTMENT OF AGRICULTURE

Some Recent Forest Survey Reports Published by  
the North Central Forest Experiment Station

- Primary forest products industry and industrial roundwood production, Michigan, 1969, by James E. Blyth and Allen H. Boelter. USDA For. Serv. Resour. Bull. NC-12, 12 p., illus. 1971.
- Kansas saw-log production jumps 38 percent from 1964 to 1969, by James E. Blyth and Leonard K. Gould. USDA For. Serv. Res. Note NC-128, 2 p., illus. 1971.
- Wisconsin's 1968 timber resource--a perspective, by John S. Spencer, Jr. and Harry W. Thorne. USDA For. Serv. Resour. Bull. NC-15, 80 p., illus. 1972.
- Missouri's primary forest products output and industries, 1969, by James E. Blyth and Robert Massengale. USDA For. Serv. Resour. Bull. NC-16, 15 p., illus. 1972.
- Forest area in Wisconsin counties, 1968, by Burton L. Essex. USDA For. Serv. Res. Note NC-135, 4 p., illus. 1972.
- Iowa saw-log production and sawmill industry, 1969, by James E. Blyth and William A. Farris. USDA For. Serv. Res. Note NC-136, 4 p., illus. 1972.
- Timber volume in Wisconsin counties, by Arnold J. Ostrom. USDA For. Serv. Res. Note NC-145, 4 p., illus. 1972.
- Pulpwood production in the North Central Region by county, 1971, by James E. Blyth. USDA For. Serv. Resour. Bull. NC-17, 21 p., illus. 1973.
- Pulpwood production in the North Central Region by county, 1972, by James E. Blyth. USDA For. Serv. Resour. Bull. NC-18, 16 p., illus. 1973.
- Lake States pulpwood production dips to 4 million cords in 1971, by James E. Blyth. USDA For. Serv. Res. Note NC-148, 3 p. 1973.
- Local net timber volume equations for Wisconsin, by Jerold T. Hahn. USDA For. Serv. Res. Note NC-149, 4 p., illus. 1973.
- Pulpwood production in the Lake States by county, 1972, by James E. Blyth. USDA For. Serv. Res. Note NC-152, 4 p. 1973.

Ostrom, Arnold J., and Jerold T. Hahn.  
1974. Timber resource of Missouri's Southwestern Ozarks, 1972.  
North Cent. For. Exp. Stn., St. Paul, Minn. 60 p. (USDA  
For. Serv. Resour. Bull. NC-21)

The third timber inventory of Missouri's Southwestern Ozarks Forest Survey Unit shows a substantial decline in the volumes of both growing stock and sawtimber between 1959 and 1972. Commercial forest area also declined substantially during the same period. Presented are highlights and statistics on forest area and timber volume, growth, mortality, ownership, and use.

OXFORD: 524.1:905.2(778). KEY WORDS: timber volume, growth, utilization, forest areas.

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## FOREWORD

Forest Survey is a continuing endeavor as mandated by the McSweeney-McNary Forest Research Act of 1928. Its objective is to inventory periodically the Nation's forest lands to determine their extent, condition, and volumes of timber, growth, and depletions. This kind of up-to-date information is essential to frame intelligent forest policies and programs. USDA Forest Service regional experiment stations are charged with the responsibility for conducting these inventories and publishing summary reports for individual States. The North Central Forest Experiment Station is responsible for Forest Survey work done in Michigan, Wisconsin, Minnesota, North Dakota, eastern South Dakota, Nebraska, Iowa, Illinois, Indiana, Missouri, and Kansas.

Fieldwork for the 1972 Missouri Forest Survey was started in January 1970 and was completed in May 1973. Reports on the two previous surveys of Missouri's timber resource are dated 1947 and 1959. These earlier reports provide a basis for comparison with the information in this report for those interested in trends that have developed over the past quarter century.

Similar Resource Bulletins reporting statistical highlights and detailed tables on the timber resource of the other Survey Units in Missouri (see cover) are available or are in preparation. These will provide the basis for a comprehensive analysis of the timber resource of the entire State which will be published as a separate report.

A higher degree of accuracy of survey information was obtained during the 1972 survey than otherwise would have been feasible because of intensified field sampling made possible by extra funding provided the North Central Station by the State Legislature through the Missouri Department of Conservation. The Department also conducted a canvass of primary wood-using plants in the State, which was used to help in estimating the quantity of timber products harvested in Missouri.

Personnel from the National Forests in Missouri installed sample plots on national forest lands, which were used to inventory those lands. The USDA Agricultural Stabilization and Conservation Service and the State Historical Society of Missouri furnished aerial photos used in the survey.

## N O T E

References to information concerning growth, mortality, and removals are dated 1971, but information concerning forest area and timber inventory incorporates changes that occurred during calendar year 1971; therefore, they represent conditions as of January 1, 1972 and are dated 1972.

Many of the terms used in this Resource Bulletin have specialized meanings, which are defined in "Glossary of Terms used in Resource Bulletins Reporting Missouri's 1972 Timber Resource." Copies of this Glossary can be obtained from the North Central Forest Experiment Station.

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GLOSSARY OF TERMS  
Used in Resource Bulletins Reporting

MISSOURI'S 1972 TIMBER RESOURCE

NORTH CENTRAL FOREST EXPERIMENT STATION  
FOREST SERVICE  
UNITED STATES DEPARTMENT OF AGRICULTURE

## Land-Use Classes

*Gross area.*--The entire area of land and water as determined by the Bureau of Census, 1960.

*Land area.*--The area of dry land and land temporarily or partially covered by water such as marshes, swamps, flood plains, streams, sloughs, and estuaries. Canals less than 1/8-mile wide, and lakes, reservoirs, and ponds smaller than 40 acres are included as land area. These figures are from the Bureau of Census, 1960.

*Forest land.*--Land at least 16.7 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest use. Includes afforested areas. The minimum forest area classified was 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, and clearings in forest areas were classed as forest if less than 120 feet in width.

*Commercial forest land.*--Forest land that is producing or is capable of producing crops of industrial wood and that is not withdrawn from timber utilization by statute or administrative regulation. This includes areas suitable for management to grow crops of industrial wood generally of a site quality capable of producing in excess of 20 cubic feet per acre of annual growth. This includes both inaccessible and inoperable areas.

*Noncommercial forest land.*--(a) Unproductive--forest land incapable of yielding crops of industrial wood because of adverse site conditions, (b) Productive--forest land withdrawn from commercial timber use through statute or administrative regulation, or exclusively used for Christmas tree production.

*Nonforest land.*--Land that has never supported forests, and land formerly forested where forest use is precluded by development for nonforest uses, such as cropland, improved pasture, residential areas, and city parks. Also includes improved roads and adjoining rights-of-way, powerline clearings, and certain areas of water classified by the Bureau

of Census as land. Unimproved roads, streams, canals, and nonforest strips in forest areas must be more than 120 feet wide, and clearings in forest areas must be more than 1 acre in size, to qualify as nonforest land.

## Ownership Classes

*National forest.*--Federal lands that have been designated by executive order or statute as national forests or purchase units, and other lands under the administration of the USDA Forest Service.

*Other Federal.*--Federal lands other than national forest.

*State, county, and municipal.*--Lands owned by States, counties, or local public agencies, or lands leased by them for more than 50 years.

*Forest industry.*--Lands owned by companies or individuals operating primary wood-using plants.

*Farmer-owned.*--Lands owned by operators of farms. A farm must include 10 or more acres from which the sale of agricultural products totals \$50 or more annually, or if less than 10 acres, the yield must be at least \$250 annually.

*Miscellaneous private.*--Privately owned lands other than forest industry--or farmer-owned.

## Tree Classes

*All live trees.*--Growing-stock, rough and rotten trees 1 inch d.b.h. and larger.

*Growing-stock trees.*--All live trees of commercial species except rough and rotten trees.

*Desirable trees.*--Growing-stock trees having no serious defects in quality limiting present or prospective use, and of relatively high vigor and containing no pathogens that may result in death or serious deterioration before rotation age. These are trees that would be favored by forest managers in silvicultural operations.

*Acceptable trees.*--Trees meeting the standards for growing stock but not qualifying as desirable trees.

*Sawtimber trees.*--Growing-stock trees of commercial species containing at least a 12-foot saw log or two noncontiguous saw logs, each 8 feet or longer. At least 33 percent of the gross volume of the tree must be sound wood. Softwoods must be at least 9.0 inches d.b.h. and hardwoods at least 11.0 inches.

*Poletimber trees.*--Growing-stock trees of commercial species at least 5.0 inches d.b.h. but smaller than sawtimber size, and of good form and vigor.

*Saplings.*--Live trees of commercial species 1.0 to 5.0 inches d.b.h. and of good form and vigor.

*Seedlings.*--Live trees of commercial species less than 1.0 inch d.b.h. that are expected to survive according to regional standards. (Examples of seedlings not expected to survive are those that are diseased or heavily damaged by logging, browsing, or fire). Only softwood seedlings over 6 inches and hardwood seedlings over 1 foot in height are counted.

*Rotten trees.*--Live trees (any size) of commercial species that do not contain a merchantable 12-foot saw log or two noncontiguous 8-foot or longer saw logs, now or prospectively, because of rot (that is, when more than 50 percent of the cull volume of the tree is rotten).

*Rough trees.*--Live trees that do not contain at least one merchantable 12-foot saw log or two noncontiguous 8-foot or longer saw logs, now or prospectively, because of roughness and poor form, as well as all live noncommercial species.

*Short-log (rough trees).*--Sawtimber-sized trees of commercial species that contain at least one merchantable 8- to 11-foot saw log but not a 12-foot saw log.

## Stocking

The degree of utilization of land by trees as measured in terms of basal area and/or the number of trees in a stand compared to the basal area and/or number

of trees required to utilize fully the growth potential of the land.

A stocking percent of 100 indicates full utilization of the site and is equivalent to 80 square feet of basal area per acre in trees 5 inches d.b.h. and larger. In a stand of trees less than 5 inches d.b.h., a stocking percent of 100 would indicate that the present number of trees is sufficient to produce 80 square feet of basal area per acre when the trees do reach 5 inches d.b.h.

Stocking of all live trees, growing-stock trees, and desirable trees are recorded separately and stands are grouped into the following stocking classes.

## Stocking Classes

*Overstocked stands.*--Stands in which stocking of trees is 133 percent or more.

*Fully stocked stands.*--Stands in which stocking of trees is from 100 to 133 percent.

*Medium-stocked stands.*--Stands in which stocking of trees is from 60 to 100 percent.

*Poorly stocked stands.*--Stands in which stocking of trees is from 16.7 to 60 percent.

*Nonstocked areas.*--Commercial forest land on which stocking of trees is less than 16.7 percent.

## Area-Condition Classes

*Class 10.*--Areas fully stocked with desirable trees but not overstocked.

*Class 20.*--Areas fully stocked with desirable trees, but overstocked with all live trees.

*Class 30.*--Areas medium to fully stocked with desirable trees, and with less than 30 percent of the area controlled by other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

*Class 40.*--Areas medium to fully stocked with desirable trees and with 30 percent or more of the area controlled by other trees and/or conditions that ordinarily prevent occupancy by desirable trees.

*Class 50.*--Areas poorly stocked with desirable trees, but fully stocked with growing-stock trees.

*Class 60.*--Areas poorly stocked with desirable trees, but with medium to full stocking of growing-stock trees.

*Class 70.*--Areas poorly stocked with desirable trees, and poorly stocked with growing-stock trees.

### Stand-Size Classes

*Stand.*--A growth of trees on a minimum of 1 acre of forest land that is stocked by forest trees of any size.

*Sawtimber stands.*--Stands at least 16.7 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees and with sawtimber stocking at least equal to poletimber stocking.

*Poletimber stands.*--Stands at least 16.7 percent stocked with growing-stock trees, and with half or more of this stocking in sawtimber and/or poletimber trees and with poletimber stocking exceeding that of sawtimber.

*Sapling-seedling stands.*--Stands at least 16.7 percent stocked with growing-stock trees and with saplings and/or seedlings comprising more than half of this stocking.

*Nonstocked areas.*--Commercial forest land on which stocking of growing-stock trees is less than 16.7 percent.

### Other Classifications

*Site index.*--An expression of forest site quality based on the height of a free-growing dominant or codominant tree of a representative species in the forest type at age 50.

*Site classes.*--A classification of forest land in terms of inherent capacity to grow crops of industrial wood expressed in cubic-foot growth per acre per year.

*Stand-age.*--Age of the main stand. Main stand refers to trees of the dominant forest type and stand-size class.

*Basal area.*--The area in square feet of the cross section at breast height of a single tree. When the basal area of all the trees in a stand are summed, the result is usually expressed as square feet of basal area per acre.

### Forest Types

A classification of forest land based upon the species forming a plurality of live-tree stocking. Major forest types in Missouri are:

*Shortleaf pine.*--Forests in which shortleaf pine comprises a plurality of the stocking. (Common associates include oak, hickory, and gum.)

*Eastern redcedar.*--Forests in which eastern redcedar comprises a plurality of the stocking. (Common associates include oak and hickory.)

*Eastern redcedar-hardwood.*--Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking but in which eastern redcedar comprises 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar.)

*Shortleaf pine-oak.*--Forests in which upland oaks comprise a plurality of the stocking, but in which shortleaf pine comprises 25 to 50 percent of the stocking.

*Post-blackjack oak.*--Forests in which post oak or blackjack oak, singly or in combination, comprises a plurality of the stocking except where shortleaf pine or redcedar comprises 25 to 50 percent.

*Black-scarlet oak.*--Forests in which upland oaks or hickory, singly or in combination, comprises a plurality of the stocking except where shortleaf pine or redcedar comprises 25 to 50 percent, or where white oak or post and blackjack oak

comprise a plurality. (Common associates include yellow-poplar, elm, maple, and black walnut.)

*White oak.*--Forests in which white oak and other white oak species, singly or in combination, comprise a plurality of the stocking except where shortleaf pine or redcedar comprises 25 to 50 percent.

*Oak-gum-cypress.*--Bottomland forests in which bottomland oaks such as pin, swamp white, and shingle oaks, along with tupelo, blackgum, sweetgum, and cypress, singly or in combination, comprise a plurality of the stocking. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple.)

*Elm-ash-cottonwood.*--Forests in which elm, ash, or cottonwood, singly or in combination, comprises a plurality of the stocking. (Common associates include willow, sycamore, beech, and maple.)

*Cottonwood.*--Forests in which cottonwood comprises a plurality of the stocking.

*Maple-beech.*--Forests in which hard maple or beech, singly or in combination, comprises a plurality of the stocking. (Common associates include elm and basswood.)

## Timber Volume

*Volume of growing stock.*--The volume of sound wood in the bole of growing-stock trees 5.0 inches d.b.h. and over, from a 1-foot stump to a minimum of 4.0-inch top diameter outside bark, or to the point where the central stem breaks into limbs. Growing-stock volumes are shown in cubic feet and cords. Conversion from one unit of measure to another may be accomplished by a factor of 79 cubic feet per solid wood cord.

*Volume of sawtimber.*--Net volume of the saw log portion of live sawtimber trees in board feet, International 1/4-inch rule, from stump to a minimum 7 inches top diameter outside bark for softwoods and 9 inches for hardwoods.

*Upper stem portion.*--That part of the bole of sawtimber trees above the merchantable sawtimber top to a minimum top diameter

of 4.0 inches outside bark or to the point where the central stem breaks into limbs.

## Growth and Mortality

*Net annual growth of growing stock.*--Net annual growth of growing stock is the change in volume of sound wood that occurred during 1971 in growing-stock trees that were 5.0 inches d.b.h. or larger at the beginning of the year,

plus

the volume of sound wood in growing-stock trees smaller than 5.0 inches d.b.h. at the beginning of the year that grew sufficiently during the year to be reclassified into the 5.0-inch-or-larger d.b.h. classes (ingrowth),

plus

the volume of sound wood in trees that had been classified either as rough or rotten trees at the beginning of the year but were reclassified during the year as growing-stock trees,

plus

the annual change in volume of sound wood that occurred during the year on growing-stock trees that died during the year,

plus

the annual change in volume of sound wood that occurred in growing-stock trees included among timber removals for the year (See glossary for timber removals from growing stock, p. 5),

plus

the annual change in volume of sound wood in trees that had been classified as growing stock at the beginning of the year but were reclassified during the year as rough or rotten trees. Only the volume change that occurred during the portion of the years the trees were classified as growing stock was included,

minus

the volume of sound wood in growing-stock trees that died from natural causes during the year, and

minus

the volume of sound wood in trees that had been classified as growing stock at the beginning of the year, but were reclassified during the year as rough or rotten trees.

*Net annual growth of sawtimber.--*

Net annual growth of sawtimber is the change in volume of sound wood that occurred during 1971 in trees that were sawtimber size at the beginning of the year,

plus

the volume of sound wood in growing-stock trees smaller than sawtimber size at the beginning of the year that grew sufficiently during the year to be reclassified as sawtimber trees (ingrowth),

plus

the volume of sound wood in trees that had been classified either as rough or rotten trees at the beginning of the year, but were reclassified during the year as sawtimber trees,

plus

the annual change in volume of sound wood that occurred during the year on sawtimber trees that died during the year,

plus

the annual change in volume of sound wood that occurred in sawtimber trees included among timber removals for the year (see glossary for timber removals from sawtimber, p. 5),

plus

the annual change in volume of sound wood in trees that had been classified as sawtimber trees at the beginning of the year, but were reclassified during the year as rough or rotten trees. Only the volume change that occurred during the portion of the year the trees were classified as sawtimber was included,

minus

the volume of sound wood in sawtimber trees that died from natural causes during the year, and

minus

the volume of sound wood in trees that had been classified as sawtimber trees at the beginning of the year, but were reclassified during the year as rough or rotten trees.

*Mortality of growing stock.--*The volume of sound wood in growing-stock trees dying annually from natural causes. Natural causes include fire, insects, disease, animal damage, weather, and suppression.

*Mortality of sawtimber.--*The net board-foot volume of sawtimber trees dying annually from natural causes.

### Timber Removals

*Timber removals from growing stock.--*The volume of sound wood in growing-stock trees removed annually for forest products (including roundwood products and logging residues) and for other removals (see glossary for volume of growing stock, p. 4). Roundwood products are logs, bolts, or other round sections cut and used from trees. Logging residues are the unused portions of cut trees plus unused trees killed by logging. Other removals are growing-stock trees removed but not utilized for products or trees left standing but "removed" from the commercial forest land classification by land use change--examples are removals from cultural operations such as timber stand improvement work, land clearing, and changes in land use.

*Timber removals from sawtimber.--*The net board-foot volume of live sawtimber trees removed for forest products annually (including roundwood products and logging residues) and for other removals (see glossary for volume of sawtimber, p. 4).

*Timber products output.--*All timber products cut from roundwood, and byproducts of wood manufacturing plants. Roundwood products include logs, bolts, or other round sections cut from growing-stock trees,

cull trees, salvable dead trees, trees on nonforest land, noncommercial species, sapling-size trees, and limbwood. Byproducts from primary manufacturing plants include slabs, edgings, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and screenings of pulpmills that are used as pulp chips or other products.

*Plant byproducts.*--Wood products, such as pulpwood chips, obtained incidental to production of other manufactured products.

*Plant residues.*--Wood materials from manufacturing plants not utilized for some product.

# TIMBER RESOURCE OF MISSOURI'S SOUTHWESTERN OZARKS, 1972

Arnold J. Ostrom and Jerold T. Hahn

## HIGHLIGHTS<sup>1/</sup>

### Forest Area

Forest land covers 2.4 million acres, 45 percent of the Unit's land area. In 1959 the area was 3.0 million acres, 53 percent of the land area.

Commercial forests occupy 2.3 million acres compared with 2.8 million acres in 1959.

Texas County contains the largest area of commercial forest in the Unit (374 thousand acres), followed by Howell County (271 thousand acres) and Douglas County (246 thousand acres).

Poletimber stands (32 percent of the commercial forest area), sawtimber stands (31 percent), and sapling and seedling stands (30 percent) are almost equal in area. Nonstocked areas make up the remaining 7 percent.

The black-scarlet oak type (910 thousand acres) embraces the largest area of commercial forest of all forest types, followed by the post-blackjack oak type (724 thousand acres).

Farmers, private individuals, and corporations not directly engaged in timber processing own 83 percent of the commercial forest.

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<sup>1/</sup> Published 1959 statistics have been adjusted to be comparable with 1972 data because of changed definitions and procedures used during the two surveys.

## Timber Volume

Growing-stock volume on commercial forest land is 851 million cubic feet (10.8 million cords), as compared to 958 million cubic feet (12.1 million cords) in 1959.

Sawtimber volume is 2.1 billion board feet, as compared to 2.2 billion board feet in 1959.

The oaks account for three-fourths of the 1972 growing-stock volume.

Average volume per acre of growing stock is 368 cubic feet (4.7 cords), compared to 340 cubic feet (4.3 cords) in 1959.

Farmers, private individuals, and corporations not directly engaged in timber processing own 81 percent of the growing-stock volume.

The volume of rough and rotten trees that are alive on commercial forest land is 557 million cubic feet (7.0 million cords), equal to two-thirds of the growing-stock volume.

## Stand Conditions

Net annual growth on growing-stock trees was 25 million cubic feet (321 thousand cords) in 1971.

The net annual growth rate of growing stock was 3.0 percent of inventory volume.

Mortality of growing-stock trees in 1971 amounted to 1.9 million cubic feet (24

thousand cords), and was attributed chiefly to disease and the effects of weather.

Two-thirds of the commercial forest is capable of accruing less than 50 cubic feet of growth per acre per year.

Sixty-three percent of the commercial forest is composed of stands younger than 50 years old.

Seventy-one percent of the commercial forest is capable of growing trees 50 feet and taller at age 50, but only 18 percent is capable of growing trees 70 feet and taller at the same age.

Seventy percent of the commercial forest is poorly stocked with growing-stock trees. Only 8 percent is nonstocked with these trees. (See glossary for nonstocked areas, page 2.)

#### Timber Use

Timber removals from growing stock amounted to 32 million cubic feet (406 thousand cords) in 1971, compared to a net annual growth on growing-stock trees of 25 million cubic feet (321 thousand cords). (See glossary for timber removals, page 5.)

Half of the volume of timber removals was derived from "other" removals; therefore, it was not utilized. (See glossary for timber removals, page 5.)

Timber products output in 1969 totaled 26 million cubic feet, of which 13.4 million was in growing stock.

Volume of residues from primary plants in 1969 was 6.5 million cubic feet, of which 4.1 million cubic feet were unused.<sup>2/</sup>

#### Allowable Cut

For the period 1972-1981, the annual allowable cut from growing stock was estimated to average 23 million cubic feet (287 thousand cords)--20 million cubic feet from harvest cuttings and 3 million cubic feet from thinnings.

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<sup>2/</sup> Primary plants are those using logs and bolts or chips, shavings, etc., from logs and bolts.

For the same period an additional annual allowable cut from rough and rotten (nongrowing-stock) trees was estimated to average 14 million cubic feet (172 thousand cords).

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43. Average annual allowable cut of growing stock for 1972-1981 from harvest cuttings and thinnings on commercial forest land, by species and forest type.

44. Average annual allowable cut of growing stock for 1972-1981 from harvest cuttings and thinnings on commercial forest land, by species and stand-volume class.

45. Average annual allowable cut for 1972-1981, by harvest cuttings of growing stock on commercial forest land, by species and stand-volume class.

46. Average annual allowable cut for 1972-1981, by thinnings of growing stock on commercial forest land, by species and stand-volume class.

47. Average annual allowable cut of sawtimber for 1972-1981 from harvest cuttings and thinnings on commercial forest land, by species and forest type.

48. Average annual allowable cut of sawtimber for 1972-1981 from harvest cuttings and thinnings on commercial forest land, by species and stand-volume class.

49. Average annual allowable cut for 1972-1981, by harvest cuttings of sawtimber on commercial forest land, by species and stand-volume class.

50. Average annual allowable cut for 1972-1981, by thinnings of sawtimber on commercial forest land, by species and stand-volume class.

51. Area of allowable cut for 1972-1981, by harvest cuttings on commercial forest land, by forest type and stand-age class.

52. Area of allowable cut by thinnings on commercial forest land for 1972-1981, by forest type and stand-age class.

Text Tables:

53. Sampling errors for estimates smaller than unit totals of volume, net growth, and removals, and of area of commercial forest land.

54. Forest type, site index, and rotation age by management objective used in calculation of annual allowable cut, Missouri.

Table 1.--Area of land by land class, Southwestern Ozarks, Missouri, 1959 and 1972

(Thousand acres)

| Land class                     | 1959 <sup>1/</sup> | 1972            |
|--------------------------------|--------------------|-----------------|
| Commercial forest land:        |                    |                 |
| Shortleaf pine type            | 45.49              | 17.80           |
| Eastern redcedar type          | 63.75              | 12.60           |
| Eastern redcedar-hardwood type | 83.65              | 85.10           |
| Shortleaf pine-oak type        | 114.91             | 65.10           |
| Post-blackjack oak type        | 437.62             | 723.80          |
| Black-scarlet oak type         | 1,044.44           | 910.30          |
| White oak type                 | 176.52             | 287.50          |
| Elm-ash-cottonwood type        | 51.15              | 29.50           |
| Maple-beech type               | --                 | 13.70           |
| Nonstocked                     | 797.84             | 166.00          |
| Subtotal                       | <u>2,815.37</u>    | <u>2,311.40</u> |
| Noncommercial forest land:     |                    |                 |
| Unproductive                   | 121.23             | 109.30          |
| Productive-reserved            | 17.60              | 22.60           |
| Subtotal                       | <u>138.83</u>      | <u>131.90</u>   |
| Nonforest land                 | 2,573.52           | 2,997.00        |
| Total                          | 5,527.72           | 5,440.30        |

<sup>1/</sup> Published 1959 areas have been adjusted to be comparable with 1972 areas.

Table 2.--Area of land and forest land, by county, Southwestern Ozarks, Missouri, 1972

| County       | Land area | Forest land |               |            | Commercial forest as a percent of land area |
|--------------|-----------|-------------|---------------|------------|---|
|              |           | All forest  | Noncommercial | Commercial |   |
| Barry        | 501.0     | 197.1       | 14.5          | 182.6      | 36  |
| Christian    | 362.9     | 136.7       | 8.3           | 128.4      | 35  |
| Douglas      | 517.6     | 254.4       | 8.3           | 246.1      | 48  |
| Howell       | 588.8     | 277.3       | 6.7           | 270.6      | 46  |
| McDonald     | 345.6     | 170.6       | 3.7           | 166.9      | 48  |
| Newton       | 402.5     | 105.9       | 2.3           | 103.6      | 26  |
| Ozark        | 468.1     | 259.1       | 22.8          | 236.3      | 50  |
| Stone        | 287.5     | 131.9       | 7.8           | 124.1      | 43  |
| Taney        | 393.9     | 235.7       | 38.2          | 197.5      | 50  |
| Texas        | 757.1     | 384.3       | 10.7          | 373.6      | 49  |
| Webster      | 377.6     | 123.4       | 3.2           | 120.2      | 32  |
| Wright       | 437.7     | 166.9       | 5.4           | 161.5      | 37  |
| All counties | 5,440.3   | 2,443.3     | 131.9         | 2,311.4    | 42  |

Table 3.--Area of commercial forest land for Missouri's Southwestern Ozarks Survey Unit and for individual counties within Unit, by forest type and stand-size class, 1972

(Thousand acres)

| ALL COUNTIES              |            |                  |                   |                             |                  |
|---------------------------|------------|------------------|-------------------|-----------------------------|------------------|
| Forest type               | All stands | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
| Shortleaf pine            | 17.8       | 8.2              | 9.6               | --                          | --               |
| Eastern redcedar          | 12.6       | --               | --                | 12.6                        | --               |
| Eastern redcedar-hardwood | 85.1       | 9.0              | 14.1              | 62.0                        | --               |
| Shortleaf pine-oak        | 65.1       | 30.1             | 22.1              | 12.9                        | --               |
| Post-blackjack oak        | 723.8      | 177.1            | 258.9             | 287.8                       | --               |
| Black-scarlet oak         | 910.3      | 331.6            | 306.1             | 272.6                       | --               |
| White oak                 | 287.5      | 128.9            | 116.4             | 42.2                        | --               |
| Elm-ash-cottonwood        | 29.5       | 13.7             | 7.0               | 8.8                         | --               |
| Maple-beech               | 13.7       | 6.7              | 7.0               | --                          | --               |
| Nonstocked <u>1/</u>      | 166.0      | --               | --                | --                          | 166.0            |
| All forest types          | 2,311.4    | 705.3            | 741.2             | 698.9                       | 166.0            |
| BARRY COUNTY              |            |                  |                   |                             |                  |
| Shortleaf pine            | 2.0        | --               | 2.0               | --                          | --               |
| Eastern redcedar          | 1.4        | --               | --                | 1.4                         | --               |
| Eastern redcedar-hardwood | 11.0       | 1.4              | 1.1               | 8.5                         | --               |
| Shortleaf pine-oak        | 6.6        | 3.4              | 2.3               | .9                          | --               |
| Post-blackjack oak        | 53.6       | 12.9             | 19.4              | 21.3                        | --               |
| Black-scarlet oak         | 71.3       | 26.6             | 22.7              | 22.0                        | --               |
| White oak                 | 22.2       | 11.0             | 8.5               | 2.7                         | --               |
| Elm-ash-cottonwood        | 1.8        | .9               | .5                | .4                          | --               |
| Maple-beech               | .8         | .3               | .5                | --                          | --               |
| Nonstocked <u>1/</u>      | 11.9       | --               | --                | --                          | 11.9             |
| All forest types          | 182.6      | 56.5             | 57.0              | 57.2                        | 11.9             |
| CHRISTIAN COUNTY          |            |                  |                   |                             |                  |
| Shortleaf pine            | 1.1        | .5               | .6                | --                          | --               |
| Eastern redcedar          | .7         | --               | --                | .7                          | --               |
| Eastern redcedar-hardwood | 6.5        | .4               | 1.0               | 5.1                         | --               |
| Shortleaf pine-oak        | 3.7        | 1.7              | 1.2               | .8                          | --               |
| Post-blackjack oak        | 38.3       | 8.9              | 14.0              | 15.4                        | --               |
| Black-scarlet oak         | 48.5       | 17.0             | 16.6              | 14.9                        | --               |
| White oak                 | 16.5       | 7.4              | 6.9               | 2.2                         | --               |
| Elm-ash-cottonwood        | 2.7        | 1.5              | .5                | .7                          | --               |
| Maple-beech               | .7         | .3               | .4                | --                          | --               |
| Nonstocked <u>1/</u>      | 9.7        | --               | --                | --                          | 9.7              |
| All forest types          | 128.4      | 37.7             | 41.2              | 39.8                        | 9.7              |
| DOUGLAS COUNTY            |            |                  |                   |                             |                  |
| Shortleaf pine            | 3.3        | 1.8              | 1.5               | --                          | --               |
| Eastern redcedar          | .7         | --               | --                | .7                          | --               |
| Eastern redcedar-hardwood | 3.6        | --               | 1.4               | 2.2                         | --               |
| Shortleaf pine-oak        | 8.9        | 3.7              | 3.2               | 2.0                         | --               |
| Post-blackjack oak        | 78.4       | 18.9             | 26.4              | 33.1                        | --               |
| Black-scarlet oak         | 97.8       | 33.9             | 33.2              | 30.7                        | --               |
| White oak                 | 30.3       | 13.6             | 12.1              | 4.6                         | --               |
| Elm-ash-cottonwood        | 2.4        | 1.3              | .7                | .4                          | --               |
| Maple-beech               | 1.8        | .9               | .9                | --                          | --               |
| Nonstocked <u>1/</u>      | 18.9       | --               | --                | --                          | 18.9             |
| All forest types          | 246.1      | 74.1             | 79.4              | 73.7                        | 18.9             |

1/ See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

(Table 3 cont.)

## HOWELL COUNTY

| Forest type                   | All stands | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
|-------------------------------|------------|------------------|-------------------|-----------------------------|------------------|
| Shortleaf pine                | 3.2        | 1.3              | 1.9               | --                          | --               |
| Eastern redcedar              | .6         | --               | --                | .6                          | --               |
| Eastern redcedar-<br>hardwood | 3.4        | --               | 1.3               | 2.1                         | --               |
| Shortleaf pine-oak            | 8.3        | 4.1              | 2.8               | 1.4                         | --               |
| Post-blackjack oak            | 86.7       | 22.7             | 30.1              | 33.9                        | --               |
| Black-scarlet oak             | 113.1      | 45.8             | 34.5              | 32.8                        | --               |
| White oak                     | 32.5       | 15.4             | 12.7              | 4.4                         | --               |
| Elm-ash-cottonwood            | 2.0        | .8               | .5                | .7                          | --               |
| Maple-beech                   | 1.7        | .9               | .8                | --                          | --               |
| Nonstocked <u>1/</u>          | 19.1       | --               | --                | --                          | 19.1             |
| All forest types              | 270.6      | 91.0             | 84.6              | 75.9                        | 19.1             |
| MC DONALD COUNTY              |            |                  |                   |                             |                  |
| Eastern redcedar              | .2         | --               | --                | .2                          | --               |
| Eastern redcedar-<br>hardwood | 2.0        | --               | .8                | 1.2                         | --               |
| Shortleaf pine-oak            | 3.5        | 1.7              | 1.2               | .6                          | --               |
| Post-blackjack oak            | 54.8       | 14.6             | 21.7              | 18.5                        | --               |
| Black-scarlet oak             | 71.0       | 27.3             | 25.2              | 18.5                        | --               |
| White oak                     | 21.7       | 9.7              | 8.9               | 3.1                         | --               |
| Elm-ash-cottonwood            | 1.9        | .9               | .6                | .4                          | --               |
| Maple-beech                   | .9         | .5               | .4                | --                          | --               |
| Nonstocked <u>1/</u>          | 10.9       | --               | --                | --                          | 10.9             |
| All forest types              | 166.9      | 54.7             | 58.8              | 42.5                        | 10.9             |
| NEWTON COUNTY                 |            |                  |                   |                             |                  |
| Eastern redcedar              | .1         | --               | --                | .1                          | --               |
| Eastern redcedar-<br>hardwood | 1.2        | --               | .5                | .7                          | --               |
| Shortleaf pine-oak            | 2.1        | 1.1              | .7                | .3                          | --               |
| Post-blackjack oak            | 33.7       | 9.3              | 12.4              | 12.0                        | --               |
| Black-scarlet oak             | 42.4       | 17.8             | 13.2              | 11.4                        | --               |
| White oak                     | 13.0       | 6.3              | 5.3               | 1.4                         | --               |
| Elm-ash-cottonwood            | 2.5        | .9               | .3                | 1.3                         | --               |
| Maple-beech                   | .5         | .3               | .2                | --                          | --               |
| Nonstocked <u>1/</u>          | 8.1        | --               | --                | --                          | 8.1              |
| All forest types              | 103.6      | 35.7             | 32.6              | 27.2                        | 8.1              |
| OZARK COUNTY                  |            |                  |                   |                             |                  |
| Shortleaf pine                | .9         | .1               | .8                | --                          | --               |
| Eastern redcedar              | 1.6        | --               | --                | 1.6                         | --               |
| Eastern redcedar-<br>hardwood | 10.7       | 2.6              | 1.7               | 6.4                         | --               |
| Shortleaf pine-oak            | 6.4        | 3.3              | 1.8               | 1.3                         | --               |
| Post-blackjack oak            | 73.6       | 18.4             | 25.6              | 29.6                        | --               |
| Black-scarlet oak             | 92.5       | 35.3             | 30.8              | 26.4                        | --               |
| White oak                     | 29.1       | 14.0             | 11.4              | 3.7                         | --               |
| Elm-ash-cottonwood            | 3.5        | 2.1              | .9                | .5                          | --               |
| Maple-beech                   | 1.2        | .6               | .6                | --                          | --               |
| Nonstocked <u>1/</u>          | 16.8       | --               | --                | --                          | 16.8             |
| All forest types              | 236.3      | 76.4             | 73.6              | 69.5                        | 16.8             |

1/ See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

(Table 3 cont.)

## STONE COUNTY

| Forest type               | All stands | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
|---------------------------|------------|------------------|-------------------|-----------------------------|------------------|
| Shortleaf pine            | .3         | .1               | .2                | --                          | --               |
| Eastern redcedar          | .9         | --               | --                | .9                          | --               |
| Eastern redcedar-hardwood | 9.4        | .7               | .7                | 8.0                         | --               |
| Shortleaf pine-oak        | 2.9        | 1.4              | .9                | .6                          | --               |
| Post-blackjack oak        | 36.8       | 8.8              | 14.2              | 13.8                        | --               |
| Black-scarlet oak         | 45.7       | 16.4             | 16.3              | 13.0                        | --               |
| White oak                 | 16.9       | 6.8              | 7.0               | 3.1                         | --               |
| Elm-ash-cottonwood        | 2.0        | .9               | .4                | .7                          | --               |
| Maple-beech               | .6         | .3               | .3                | --                          | --               |
| Nonstocked <u>1/</u>      | 8.6        | --               | --                | --                          | 8.6              |
| All forest types          | 124.1      | 35.4             | 40.0              | 40.1                        | 8.6              |
| TANEY COUNTY              |            |                  |                   |                             |                  |
| Eastern redcedar          | 4.3        | --               | --                | 4.3                         | --               |
| Eastern redcedar-hardwood | 28.1       | 3.9              | 2.2               | 22.0                        | --               |
| Shortleaf pine-oak        | 3.4        | 1.1              | 1.0               | 1.3                         | --               |
| Post-blackjack oak        | 58.4       | 11.4             | 18.4              | 28.6                        | --               |
| Black-scarlet oak         | 62.9       | 18.5             | 20.0              | 24.4                        | --               |
| White oak                 | 22.9       | 9.7              | 9.8               | 3.4                         | --               |
| Elm-ash-cottonwood        | .9         | .4               | .3                | .2                          | --               |
| Maple-beech               | 1.3        | .6               | .7                | --                          | --               |
| Nonstocked <u>1/</u>      | 15.3       | --               | --                | --                          | 15.3             |
| All forest types          | 197.5      | 45.6             | 52.4              | 84.2                        | 15.3             |
| TEXAS COUNTY              |            |                  |                   |                             |                  |
| Shortleaf pine            | 6.8        | 4.4              | 2.4               | --                          | --               |
| Eastern redcedar          | 1.4        | --               | --                | 1.4                         | --               |
| Eastern redcedar-hardwood | 4.6        | --               | 1.9               | 2.7                         | --               |
| Shortleaf pine-oak        | 12.9       | 5.5              | 5.0               | 2.4                         | --               |
| Post-blackjack oak        | 118.8      | 28.2             | 43.2              | 47.4                        | --               |
| Black-scarlet oak         | 151.3      | 50.9             | 54.5              | 45.9                        | --               |
| White oak                 | 46.9       | 19.3             | 19.3              | 8.3                         | --               |
| Elm-ash-cottonwood        | 2.7        | 1.1              | 1.1               | .5                          | --               |
| Maple-beech               | 2.4        | 1.1              | 1.3               | --                          | --               |
| Nonstocked <u>1/</u>      | 25.8       | --               | --                | --                          | 25.8             |
| All forest types          | 373.6      | 110.5            | 128.7             | 108.6                       | 25.8             |
| WEBSTER COUNTY            |            |                  |                   |                             |                  |
| Eastern redcedar          | .1         | --               | --                | .1                          | --               |
| Eastern redcedar-hardwood | 2.1        | --               | .6                | 1.5                         | --               |
| Shortleaf pine-oak        | 2.5        | 1.3              | .8                | .4                          | --               |
| Post-blackjack oak        | 38.7       | 10.5             | 14.5              | 13.7                        | --               |
| Black-scarlet oak         | 50.1       | 20.6             | 16.0              | 13.5                        | --               |
| White oak                 | 15.2       | 7.2              | 6.1               | 1.9                         | --               |
| Elm-ash-cottonwood        | 2.5        | .8               | .4                | 1.3                         | --               |
| Maple-beech               | .6         | .3               | .3                | --                          | --               |
| Nonstocked <u>1/</u>      | 8.4        | --               | --                | --                          | 8.4              |
| All forest types          | 120.2      | 40.7             | 38.7              | 32.4                        | 8.4              |

1/ See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

(Table 3 cont.)

## WRIGHT COUNTY

| Forest type               | All stands | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
|---------------------------|------------|------------------|-------------------|-----------------------------|------------------|
| Shortleaf pine            | .2         | --               | .2                | --                          | --               |
| Eastern redcedar          | .6         | --               | --                | .6                          | --               |
| Eastern redcedar-hardwood | 2.5        | --               | .9                | 1.6                         | --               |
| Shortleaf pine-oak        | 3.9        | 1.8              | 1.2               | .9                          | --               |
| Post-blackjack oak        | 52.0       | 12.5             | 19.0              | 20.5                        | --               |
| Black-scarlet oak         | 63.7       | 21.5             | 23.1              | 19.1                        | --               |
| White oak                 | 20.3       | 8.5              | 8.4               | 3.4                         | --               |
| Elm-ash-cottonwood        | 4.6        | 2.1              | .8                | 1.7                         | --               |
| Maple-beech               | 1.2        | .6               | .6                | --                          | --               |
| Nonstocked <sup>1/</sup>  | 12.5       | --               | --                | --                          | 12.5             |
| All forest types          | 161.5      | 47.0             | 54.2              | 47.8                        | 12.5             |

<sup>1/</sup> See glossary for stand-size classes (page 3)

(Table 3 cont. on next page)

Table 4.--Area of commercial forest land, by county and ownership class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| County       | All ownerships | National Forest | Other federal | State, county and municipal | Forest industry | Farmer and miscellaneous private |
|--------------|----------------|-----------------|---------------|-----------------------------|-----------------|----------------------------------|
| Barry        | 182.6          | 47.5            | --            | .2                          | --              | 134.9                            |
| Christian    | 128.4          | 46.0            | --            | --                          | --              | 82.4                             |
| Douglas      | 246.1          | 37.8            | --            | .2                          | .3              | 207.8                            |
| Howell       | 270.6          | 47.1            | --            | .2                          | 6.0             | 217.3                            |
| McDonald     | 166.9          | --              | --            | 2.1                         | --              | 164.8                            |
| Newton       | 103.6          | --              | 3.0           | 1.3                         | --              | 99.3                             |
| Ozark        | 236.3          | 34.6            | --            | 5.2                         | 6.0             | 190.5                            |
| Stone        | 124.1          | 12.6            | --            | .1                          | --              | 111.4                            |
| Taney        | 197.5          | 52.2            | --            | .1                          | --              | 145.2                            |
| Texas        | 373.6          | 43.8            | --            | .4                          | 27.2            | 302.2                            |
| Webster      | 120.2          | --              | --            | .7                          | --              | 119.5                            |
| Wright       | 161.5          | 6.9             | --            | --                          | --              | 154.6                            |
| All counties | 2,311.4        | 328.5           | 3.0           | 10.5                        | 39.5            | 1,929.9                          |

Table 5.--Area of commercial forest land, by stand-volume and ownership class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Stand volume per acre (board feet) <sup>1/</sup> | All ownerships | National Forest | Other federal | State, county and municipal | Forest industry | Farmer and miscellaneous private |
|--|----------------|-----------------|---------------|-----------------------------|-----------------|----------------------------------|
| Less than 1,500                                  | 1,830.7        | 210.4           | 1.4           | 8.8                         | 31.7            | 1,578.4                          |
| 1,500 to 5,000                                   | 465.2          | 115.4           | 1.6           | 1.7                         | 7.6             | 338.9                            |
| More than 5,000                                  | 15.5           | 2.7             | --            | --                          | .2              | 12.6                             |
| All classes                                      | 2,311.4        | 328.5           | 3.0           | 10.5                        | 39.5            | 1,929.9                          |

<sup>1/</sup> International 1/4-inch rule.

Table 6.--Area of commercial forest land, by area-condition and ownership class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Area-condition class <sup>1/</sup> | All :<br>ownerships | National :<br>Forest | Other :<br>federal | State, county :<br>and<br>municipal; | Forest :<br>industry | Farmer and<br>miscellaneous<br>private |
|------------------------------------|---------------------|----------------------|--------------------|--------------------------------------|----------------------|--|
| 50                                 | 50.0                | 25.3                 | --                 | --                                   | 3.0                  | 21.7                                   |
| 60                                 | 486.7               | 164.2                | --                 | --                                   | 19.8                 | 302.7                                  |
| 70                                 | 1,774.7             | 139.0                | 3.0                | 10.5                                 | 16.7                 | 1,605.5                                |
| All classes                        | 2,311.4             | 328.5                | 3.0                | 10.5                                 | 39.5                 | 1,929.9                                |

<sup>1/</sup> See glossary for area-condition classes (page 2).

Table 7.--Area of commercial forest land, by site and ownership class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Site class<br>(cubic feet of growth<br>per acre per year) | All :<br>ownerships | National :<br>Forest | Other :<br>federal | State, county :<br>and<br>municipal | Forest :<br>industry | Farmer and<br>miscellaneous<br>private |
|---|---------------------|----------------------|--------------------|-------------------------------------|----------------------|--|
| 85-119  | 80.6                | 11.4                 | --                 | --                                  | 1.4                  | 67.8                                   |
| 50-84   | 643.8               | 46.7                 | 3.0                | 1.6                                 | 5.6                  | 586.9                                  |
| Less than 50  | 1,587.0             | 270.4                | --                 | 8.9                                 | 32.5                 | 1,275.2                                |
| All classes   | 2,311.4             | 328.5                | 3.0                | 10.5                                | 39.5                 | 1,929.9                                |

Table 8.--Area of commercial forest land, by forest type and ownership class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Forest type                   | All :<br>ownerships | National :<br>Forest <sup>1/</sup> | Other :<br>federal | State, county :<br>and<br>municipal | Forest :<br>industry | Farmer and<br>miscellaneous<br>private |
|-------------------------------|---------------------|------------------------------------|--------------------|-------------------------------------|----------------------|--|
| Shortleaf pine                | 17.8                | 17.6                               | --                 | --                                  | --                   | .2                                     |
| Eastern redcedar              | 12.6                | 8.9                                | --                 | --                                  | --                   | 3.7                                    |
| Eastern redcedar-<br>hardwood | 85.1                | 61.3                               | --                 | --                                  | --                   | 23.8                                   |
| Shortleaf pine-oak            | 65.1                | 36.9                               | --                 | --                                  | --                   | 28.2                                   |
| Post-blackjack oak            | 723.8               | 26.2                               | 3.0                | 1.8                                 | 14.0                 | 678.8                                  |
| Black-scarlet oak             | 910.3               | 134.0                              | --                 | 5.3                                 | 16.6                 | 754.4                                  |
| White oak                     | 287.5               | 39.1                               | --                 | --                                  | 5.4                  | 243.0                                  |
| Elm-ash-cottonwood            | 29.5                | .9                                 | --                 | --                                  | --                   | 28.6                                   |
| Maple-beech                   | 13.7                | --                                 | --                 | 1.6                                 | --                   | 12.1                                   |
| Nonstocked <sup>2/</sup>      | 166.0               | 3.6                                | --                 | 1.8                                 | 3.5                  | 157.1                                  |
| All forest types              | 2,311.4             | 328.5                              | 3.0                | 10.5                                | 39.5                 | 1,929.9                                |

<sup>1/</sup> Estimates of area of some forest types for National Forest owner differ from those shown in current timber management plans for the National Forests in Missouri.

<sup>2/</sup> See glossary for stand-size classes (page 3).

Table 9.---Area of commercial forest land, by forest type and stand-age class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Forest type               | All ages | Stand-age class (years) |       |       |       |       |       |       |       |       |       |         |      |      |     |
|---------------------------|----------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|------|------|-----|
|                           |          | 0-9                     | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-119 | 120+ |      |     |
| Shortleaf pine            | 17.8     | --                      | 4.8   | 2.4   | 2.4   | --    | 2.1   | 6.1   | --    | --    | --    | --      | --   | --   | --  |
| Eastern redcedar          | 12.6     | --                      | 3.2   | 3.1   | 6.3   | --    | --    | --    | --    | --    | --    | --      | --   | --   | --  |
| Eastern redcedar-hardwood | 85.1     | 2.7                     | 26.9  | 16.2  | 14.3  | 11.1  | 7.1   | 2.3   | --    | 2.2   | --    | --      | 2.3  | --   | --  |
| Shortleaf pine-oak        | 65.1     | 9.6                     | --    | 6.8   | 5.7   | 6.2   | 23.4  | 9.8   | 3.6   | --    | --    | --      | --   | --   | --  |
| Post-blackjack oak        | 723.8    | 105.3                   | 160.8 | 57.3  | 80.3  | 81.0  | 70.2  | 47.0  | 51.0  | 15.8  | 11.8  | 15.8    | 23.7 | 19.6 | 8.0 |
| Black-scarlet oak         | 910.3    | 132.6                   | 124.9 | 66.2  | 133.5 | 114.9 | 99.0  | 107.3 | 60.0  | 15.8  | 28.1  | 15.8    | 20.0 | 8.0  | --  |
| White oak                 | 287.5    | 21.1                    | 14.1  | 19.9  | 10.4  | 57.7  | 47.2  | 62.3  | 18.2  | 7.5   | 14.6  | 7.5     | 14.6 | --   | --  |
| Elm-ash-cottonwood        | 29.5     | 4.4                     | 4.4   | 3.5   | 3.5   | 2.8   | 8.2   | 2.7   | --    | --    | --    | --      | --   | --   | --  |
| Maple-beech               | 13.7     | --                      | --    | --    | 3.5   | 6.8   | --    | --    | --    | 3.4   | --    | --      | --   | --   | --  |
| Nonstocked <u>1/</u>      | 166.0    | 43.6                    | 40.3  | 19.4  | 7.6   | 17.6  | 7.4   | 7.6   | 11.5  | --    | 3.8   | --      | --   | 7.2  | --  |
| All forest types          | 2,311.4  | 319.3                   | 379.4 | 194.8 | 267.5 | 298.1 | 264.6 | 245.1 | 144.3 | 44.7  | 58.3  | 60.5    | 60.5 | 34.8 | --  |

1/ See glossary for stand-size classes (page 3).

Table 10.---Area of commercial forest land, by forest type and site-index class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Forest type               | All classes | Site-index class (height in feet at 50 years) |       |       |       |       |       |       |     |    |    |    |    |
|---------------------------|-------------|---|-------|-------|-------|-------|-------|-------|-----|----|----|----|----|
|                           |             | 20-29   | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90+ |    |    |    |    |
| Shortleaf pine            | 17.8        | --  | --    | --    | 6.9   | 6.5   | 4.4   | --    | --  | -- | -- | -- | -- |
| Eastern redcedar          | 12.6        | 6.3   | 6.3   | --    | --    | --    | --    | --    | --  | -- | -- | -- | -- |
| Eastern redcedar-hardwood | 85.1        | 2.7   | 42.6  | 26.9  | 6.7   | 3.5   | --    | 2.7   | --  | -- | -- | -- | -- |
| Shortleaf pine-oak        | 65.1        | --  | --    | 16.8  | 22.0  | 19.1  | 7.2   | --    | --  | -- | -- | -- | -- |
| Post-blackjack oak        | 723.8       | 19.0  | 93.8  | 209.1 | 200.5 | 110.0 | 72.9  | 18.5  | --  | -- | -- | -- | -- |
| Black-scarlet oak         | 910.3       | 3.6   | 8.1   | 115.1 | 356.4 | 182.2 | 174.7 | 66.2  | 4.0 | -- | -- | -- | -- |
| White oak                 | 287.5       | --  | 7.0   | 47.2  | 151.0 | 58.2  | 17.4  | 6.7   | --  | -- | -- | -- | -- |
| Elm-ash-cottonwood        | 29.5        | --  | --    | --    | 2.8   | 16.1  | 6.2   | --    | 4.4 | -- | -- | -- | -- |
| Maple-beech               | 13.7        | --  | --    | --    | 7.0   | 3.4   | 3.3   | --    | --  | -- | -- | -- | -- |
| Nonstocked <u>1/</u>      | 166.0       | 10.9  | 25.7  | 29.6  | 60.4  | 7.6   | 20.6  | 11.2  | --  | -- | -- | -- | -- |
| All forest types          | 2,311.4     | 42.5  | 183.5 | 451.6 | 813.3 | 404.5 | 302.3 | 105.3 | 8.4 | -- | -- | -- | -- |

1/ See glossary for stand-size classes (page 3).

Table 11.--Area of commercial forest land, by forest type and basal-area class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Forest type                   | All     | Basal area class (square feet per acre) |       |       |       |       |         |         |
|-------------------------------|---------|---|-------|-------|-------|-------|---------|---------|
|                               | classes | 0-19                                    | 20-39 | 40-59 | 60-79 | 80-99 | 100-119 | 120-139 |
| Shortleaf pine                | 17.8    | --                                      | --    | 4.1   | 2.4   | 4.4   | 6.9     | --      |
| Eastern redcedar              | 12.6    | --                                      | 6.3   | 3.2   | --    | 3.1   | --      | --      |
| Eastern redcedar-<br>hardwood | 85.1    | 5.4                                     | 5.7   | 27.3  | 24.3  | 16.6  | 5.8     | --      |
| Shortleaf pine-oak            | 65.1    | --                                      | --    | 29.8  | 14.0  | 11.0  | 7.7     | 2.6     |
| Post-blackjack oak            | 723.8   | 18.1                                    | 123.4 | 210.7 | 224.5 | 92.8  | 54.3    | --      |
| Black-scarlet oak             | 910.3   | 44.7                                    | 79.4  | 318.0 | 231.0 | 189.5 | 47.7    | --      |
| White oak                     | 287.5   | --                                      | 31.7  | 77.6  | 105.5 | 61.9  | 7.2     | 3.6     |
| Elm-ash-cottonwood            | 29.5    | --                                      | 14.3  | 5.5   | 7.0   | 2.7   | --      | --      |
| Maple-beech                   | 13.7    | --                                      | --    | 7.0   | 6.7   | --    | --      | --      |
| Nonstocked <u>1/</u>          | 166.0   | 14.9                                    | 58.0  | 70.7  | 18.7  | 3.7   | --      | --      |
| All forest types              | 2,311.4 | 83.1                                    | 318.8 | 753.9 | 634.1 | 385.7 | 129.6   | 6.2     |

1/ See glossary for stand-size classes (page 3).

Table 12.--Area of commercial forest land, by forest type, stand-size, and site class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Forest type and stand-size class | : All site : 85 to 120 : 50 to 85 : Less than : classes : cu. ft. : cu. ft. : 50 cu. ft. |      |       |         |
|----------------------------------|--|------|-------|---------|
| Shortleaf pine                   |  |      |       |         |
| Sawtimber                        | 8.2  | --   | 6.2   | 2.0     |
| Poletimber                       | 9.6  | --   | 4.8   | 4.8     |
| Sapling and seedling             | --   | --   | --    | --      |
| All stands                       | 17.8   | --   | 11.0  | 6.8     |
| Eastern redcedar                 |  |      |       |         |
| Sawtimber                        | --   | --   | --    | --      |
| Poletimber                       | --   | --   | --    | --      |
| Sapling and seedling             | 12.6   | --   | --    | 12.6    |
| All stands                       | 12.6   | --   | --    | 12.6    |
| Eastern redcedar-hardwood        |  |      |       |         |
| Sawtimber                        | 9.0  | --   | --    | 9.0     |
| Poletimber                       | 14.1   | --   | 3.5   | 10.6    |
| Sapling and seedling             | 62.0   | --   | 2.7   | 59.3    |
| All stands                       | 85.1   | --   | 6.2   | 78.9    |
| Shortleaf pine-oak               |  |      |       |         |
| Sawtimber                        | 30.1   | --   | 10.8  | 19.3    |
| Poletimber                       | 22.1   | --   | 7.7   | 14.4    |
| Sapling and seedling             | 12.9   | --   | 6.5   | 6.4     |
| All stands                       | 65.1   | --   | 25.0  | 40.1    |
| Post-blackjack oak               |  |      |       |         |
| Sawtimber                        | 177.1  | --   | 35.6  | 141.5   |
| Poletimber                       | 258.9  | 3.8  | 77.2  | 177.9   |
| Sapling and seedling             | 287.8  | 7.2  | 54.7  | 225.9   |
| All stands                       | 723.8  | 11.0 | 167.5 | 545.3   |
| Black-scarlet oak                |  |      |       |         |
| Sawtimber                        | 331.6  | 23.8 | 95.9  | 211.9   |
| Poletimber                       | 306.1  | 19.7 | 161.1 | 125.3   |
| Sapling and seedling             | 272.6  | 14.6 | 65.9  | 192.1   |
| All stands                       | 910.3  | 58.1 | 322.9 | 529.3   |
| White oak                        |  |      |       |         |
| Sawtimber                        | 128.9  | 3.6  | 29.5  | 95.8    |
| Poletimber                       | 116.4  | --   | 20.2  | 96.2    |
| Sapling and seedling             | 42.2   | --   | 7.0   | 35.2    |
| All stands                       | 287.5  | 3.6  | 56.7  | 227.2   |
| Elm-ash-cottonwood               |  |      |       |         |
| Sawtimber                        | 13.7   | --   | 8.2   | 5.5     |
| Poletimber                       | 7.0  | --   | 7.0   | --      |
| Sapling and seedling             | 8.8  | 4.4  | 4.4   | --      |
| All stands                       | 29.5   | 4.4  | 19.6  | 5.5     |
| Maple-beech                      |  |      |       |         |
| Sawtimber                        | 6.7  | --   | 6.7   | --      |
| Poletimber                       | 7.0  | --   | --    | 7.0     |
| Sapling and seedling             | --   | --   | --    | --      |
| All stands                       | 13.7   | --   | 6.7   | 7.0     |
| Nonstocked <sup>1/</sup>         | 166.0  | 3.5  | 28.2  | 134.3   |
| Total all types                  | 2,311.4  | 80.6 | 643.8 | 1,587.0 |

<sup>1/</sup> See glossary for stand-size classes (page 3).

Table 13.--Area of commercial forest land, by stocking class based on selected stand components, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Stocking percentage | Stocking classified in terms of |                     |                |                |                        |                       |
|---------------------|---------------------------------|---------------------|----------------|----------------|------------------------|-----------------------|
|                     | All trees                       | Growing-stock trees |                |                | Rough and rotten trees | Inhibiting vegetation |
|                     | Total                           | Desirable           | Acceptable     |                |                        |                       |
| 140+                | 18.2                            | --                  | --             | --             | --                     | --                    |
| 130-139             | 18.1                            | --                  | --             | --             | --                     | --                    |
| 120-129             | 155.0                           | 2.4                 | --             | 2.4            | --                     | --                    |
| 110-119             | 344.6                           | 11.2                | --             | 4.1            | --                     | --                    |
| 100-109             | 420.1                           | 28.2                | --             | 23.2           | 3.6                    | --                    |
| 90-99               | 565.5                           | 32.8                | --             | 32.8           | 60.3                   | --                    |
| 80-89               | 358.3                           | 67.3                | --             | 50.0           | 124.0                  | --                    |
| 70-79               | 255.3                           | 137.2               | --             | 128.7          | 189.8                  | --                    |
| 60-69               | 122.3                           | 224.8               | --             | 204.6          | 368.1                  | --                    |
| 50-59               | 41.8                            | 324.8               | --             | 307.3          | 426.2                  | --                    |
| 40-49               | 12.2                            | 400.0               | --             | 438.0          | 465.1                  | --                    |
| 30-39               | --                              | 425.9               | --             | 456.2          | 367.3                  | --                    |
| 20-29               | --                              | 372.5               | 15.7           | 364.8          | 191.3                  | --                    |
| 10-19               | --                              | 211.2               | 41.4           | 222.6          | 92.8                   | --                    |
| 0-9                 | --                              | 73.1                | 2,254.3        | 76.7           | 22.9                   | 2,311.4               |
| <b>Total</b>        | <b>2,311.4</b>                  | <b>2,311.4</b>      | <b>2,311.4</b> | <b>2,311.4</b> | <b>2,311.4</b>         | <b>2,311.4</b>        |

Table 14.--Area of commercial forest land, by stocking class of growing-stock trees and stand-size class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Stocking percentage | All stands     | Growing-stock trees |                   |                             | Nonstocked areas <sup>1/</sup> |
|---------------------|----------------|---------------------|-------------------|-----------------------------|--------------------------------|
|                     |                | Sawtimber stands    | Poletimber stands | Sapling and seedling stands |                                |
| 101 to 133          | 41.9           | 11.7                | 13.9              | 16.3                        | --                             |
| 61 to 100           | 462.1          | 161.2               | 182.7             | 118.2                       | --                             |
| 17 to 60            | 1,622.6        | 532.4               | 533.4             | 556.8                       | --                             |
| Less than 17        | 184.8          | --                  | 11.2              | 7.6                         | 166.0                          |
| <b>All classes</b>  | <b>2,311.4</b> | <b>705.3</b>        | <b>741.2</b>      | <b>698.9</b>                | <b>166.0</b>                   |

<sup>1/</sup> See glossary for stand-size classes (page 3).

Table 15.--Area of noncommercial forest land, by ownership class, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Ownership class                     | : All :<br>: areas : | Productive :<br>: reserved :<br>: areas : | Unproductive :<br>: areas : |
|-------------------------------------|----------------------|---|-----------------------------|
| National Forest                     | 13.3                 | --  | 13.3                        |
| Other public                        | 22.6                 | 22.6                                      | --                          |
| Farmer and<br>miscellaneous private | 96.0                 | --  | 96.0                        |
| All ownerships                      | 131.9                | 22.6                                      | 109.3                       |

Table 16.--Area of noncommercial forest land, by forest type, Southwestern Ozarks, Missouri, 1972

(Thousand acres)

| Forest type                   | : All :<br>: areas : | Productive :<br>: reserved :<br>: areas : | Unproductive :<br>: areas : |
|-------------------------------|----------------------|---|-----------------------------|
| Shortleaf pine                | .1                   | .1  | --                          |
| Eastern redcedar              | 25.4                 | 1.0                                       | 24.4                        |
| Eastern redcedar-<br>hardwood | 39.6                 | .3  | 39.3                        |
| Shortleaf pine-oak            | .7                   | .7  | --                          |
| Post-blackjack oak            | 53.1                 | 7.5                                       | 45.6                        |
| Black-scarlet oak             | 9.5                  | 9.5                                       | --                          |
| White oak                     | 3.0                  | 3.0                                       | --                          |
| Elm-ash-cottonwood            | .5                   | .5  | --                          |
| All forest types              | 131.9                | 22.6                                      | 109.3                       |



Table 18.--Number of growing-stock trees on commercial forest land, by species and diameter class, Southwestern Ozarks, Missouri, 1972

(Thousand trees)

| Species                | Diameter class (inches at breast height) |                |                |               |               |               |               |              |              |              |              |              |              |              |              |           |
|------------------------|--|----------------|----------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|
|                        | All classes                              | 1.0- : 2.9     | 3.0- : 4.9     | 5.0- : 6.9    | 7.0- : 8.9    | 9.0- : 10.9   | 11.0- : 12.9  | 13.0- : 14.9 | 15.0- : 16.9 | 17.0- : 18.9 | 19.0- : 20.9 | 21.0- : 22.9 | 23.0- : 24.9 | 25.0- : 26.9 | 27.0- : 28.9 | 29.0+     |
| <b>Softwoods:</b>      |  |                |                |               |               |               |               |              |              |              |              |              |              |              |              |           |
| Shortleaf pine         | 27,815                                   | 10,679         | 7,742          | 4,084         | 2,631         | 1,547         | 814           | 267          | 20           | 24           | 7            | --           | --           | --           | --           | --        |
| Eastern redcedar       | 52,936                                   | 36,684         | 13,064         | 2,357         | 627           | 103           | 101           | --           | --           | --           | --           | --           | --           | --           | --           | --        |
| <b>Total softwoods</b> | <b>80,751</b>                            | <b>47,363</b>  | <b>20,806</b>  | <b>6,441</b>  | <b>3,258</b>  | <b>1,650</b>  | <b>915</b>    | <b>267</b>   | <b>20</b>    | <b>24</b>    | <b>7</b>     | <b>--</b>    | <b>--</b>    | <b>--</b>    | <b>--</b>    | <b>--</b> |
| <b>Hardwoods:</b>      |  |                |                |               |               |               |               |              |              |              |              |              |              |              |              |           |
| Select white oaks      | 71,993                                   | 32,722         | 17,530         | 9,142         | 5,278         | 3,242         | 1,935         | 1,402        | 506          | 136          | 66           | 12           | 22           | --           | --           | --        |
| Other white oaks       | 79,038                                   | 33,834         | 20,651         | 12,258        | 5,269         | 3,043         | 2,190         | 1,131        | 519          | 98           | 39           | 6            | --           | --           | --           | --        |
| Select red oaks        | 12,936                                   | 5,710          | 2,602          | 1,117         | 1,148         | 1,006         | 530           | 503          | 118          | 80           | 43           | 34           | 42           | 3            | --           | --        |
| Red oaks               | 149,024                                  | 81,319         | 29,166         | 14,961        | 9,830         | 5,851         | 3,905         | 2,160        | 1,008        | 420          | 212          | 95           | 86           | 11           | --           | --        |
| Other red oaks         | 25,286                                   | 15,256         | 5,159          | 2,964         | 823           | 489           | 277           | 181          | 108          | 17           | 7            | --           | --           | --           | --           | --        |
| Hickory A              | 21,885                                   | 12,633         | 4,596          | 2,069         | 1,149         | 791           | 324           | 260          | --           | 50           | 13           | --           | --           | --           | --           | --        |
| Hickory B              | 58,306                                   | 33,752         | 14,571         | 5,571         | 2,326         | 1,186         | 526           | 219          | 136          | 12           | 7            | --           | --           | --           | --           | --        |
| Hard maple             | 4,036                                    | 1,474          | 1,728          | 628           | 98            | --            | 74            | --           | 13           | --           | --           | --           | --           | --           | --           | --        |
| Soft maple             | 2,325                                    | 2,318          | --             | --            | --            | --            | --            | --           | --           | --           | --           | --           | --           | --           | --           | --        |
| Tupelo and blackgum    | 4,667                                    | 2,544          | 919            | 760           | 281           | 28            | 32            | 13           | 64           | 15           | --           | 11           | --           | --           | --           | --        |
| Ash                    | 3,466                                    | 1,510          | 761            | 304           | 381           | 264           | 104           | 67           | 10           | 42           | 12           | 4            | 5            | 2            | --           | --        |
| Sycamore               | 1,055                                    | 366            | --             | 261           | 145           | 96            | 66            | 23           | 54           | 15           | 18           | 11           | --           | --           | --           | --        |
| <b>Basswood</b>        | 403                                      | 350            | --             | --            | --            | 53            | --            | --           | --           | --           | --           | --           | --           | --           | --           | --        |
| Black walnut           | 4,056                                    | 354            | 1,642          | 844           | 591           | 301           | 173           | 97           | 22           | 18           | 14           | --           | --           | --           | --           | --        |
| Black cherry           | 503                                      | 353            | 108            | --            | --            | 24            | 14            | --           | --           | --           | --           | --           | --           | --           | --           | --        |
| Elm                    | 8,757                                    | 3,745          | 3,384          | 847           | 544           | 137           | 52            | 25           | --           | 18           | --           | --           | 5            | --           | --           | --        |
| Other hardwoods        | 14,932                                   | 11,406         | 2,791          | 402           | 124           | 70            | 81            | 26           | 27           | 5            | --           | --           | --           | --           | --           | --        |
| <b>Total hardwoods</b> | <b>462,668</b>                           | <b>239,646</b> | <b>105,608</b> | <b>52,128</b> | <b>27,987</b> | <b>16,581</b> | <b>10,283</b> | <b>6,120</b> | <b>2,600</b> | <b>926</b>   | <b>431</b>   | <b>178</b>   | <b>164</b>   | <b>16</b>    | <b>164</b>   | <b>16</b> |
| <b>All species</b>     | <b>543,419</b>                           | <b>287,009</b> | <b>126,414</b> | <b>58,569</b> | <b>31,245</b> | <b>18,231</b> | <b>11,198</b> | <b>6,387</b> | <b>2,620</b> | <b>950</b>   | <b>438</b>   | <b>178</b>   | <b>164</b>   | <b>16</b>    | <b>164</b>   | <b>16</b> |

Table 19.--Number of short-log trees on commercial forest land, by species and diameter class, Southwestern Ozarks, Missouri, 1972

(Thousand trees)

| Species             | : All :<br>: classes | Diameter class (inches at breast height) |                     |                     |                     |                     |                     |                     |                     |         |
|---------------------|----------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
|                     |                      | : 9.0- :<br>: 10.9                       | : 11.0- :<br>: 12.9 | : 13.0- :<br>: 14.9 | : 15.0- :<br>: 16.9 | : 17.0- :<br>: 18.9 | : 19.0- :<br>: 20.9 | : 21.0- :<br>: 22.9 | : 23.0- :<br>: 28.9 | : 29.0+ |
| Softwoods:          |                      |  |                     |                     |                     |                     |                     |                     |                     |         |
| Eastern redcedar    | 132                  | 112                                      | --                  | 20                  | --                  | --                  | --                  | --                  | --                  | --      |
| Total softwoods     | 132                  | 112                                      | --                  | 20                  | --                  | --                  | --                  | --                  | --                  | --      |
| Hardwoods:          |                      |  |                     |                     |                     |                     |                     |                     |                     |         |
| Select white oaks   | 1,595                | --                                       | 630                 | 496                 | 272                 | 123                 | 44                  | --                  | 24                  | 6       |
| Other white oaks    | 1,498                | --                                       | 840                 | 413                 | 143                 | 71                  | 19                  | --                  | 9                   | 3       |
| Select red oaks     | 133                  | --                                       | 87                  | 12                  | 11                  | --                  | 7                   | 10                  | 6                   | --      |
| Red oaks            | 1,222                | --                                       | 428                 | 297                 | 344                 | 58                  | 14                  | 37                  | 39                  | 5       |
| Other red oaks      | 200                  | --                                       | 121                 | 43                  | 23                  | 9                   | --                  | --                  | 4                   | --      |
| Hickory A           | 71                   | --                                       | 21                  | 42                  | --                  | 8                   | --                  | --                  | --                  | --      |
| Hickory B           | 147                  | --                                       | 107                 | 29                  | 11                  | --                  | --                  | --                  | --                  | --      |
| Hard maple          | 30                   | --                                       | 18                  | --                  | 12                  | --                  | --                  | --                  | --                  | --      |
| Soft maple          | 24                   | --                                       | 15                  | 9                   | --                  | --                  | --                  | --                  | --                  | --      |
| Tupelo and blackgum | 18                   | --                                       | --                  | 14                  | --                  | --                  | --                  | --                  | 4                   | --      |
| Ash                 | 103                  | --                                       | 55                  | 48                  | --                  | --                  | --                  | --                  | --                  | --      |
| Basswood            | 3                    | --                                       | --                  | --                  | --                  | --                  | --                  | --                  | --                  | 3       |
| Black walnut        | 58                   | --                                       | 17                  | 34                  | --                  | 7                   | --                  | --                  | --                  | --      |
| Elm                 | 78                   | --                                       | 52                  | 15                  | 11                  | --                  | --                  | --                  | --                  | --      |
| Other hardwoods     | 23                   | --                                       | 12                  | 11                  | --                  | --                  | --                  | --                  | --                  | --      |
| Total hardwoods     | 5,203                | --                                       | 2,403               | 1,463               | 827                 | 276                 | 84                  | 47                  | 86                  | 17      |
| All species         | 5,335                | 112                                      | 2,403               | 1,483               | 827                 | 276                 | 84                  | 47                  | 86                  | 17      |

Table 20.--Net volume of growing stock and sawtimber on commercial forest land, by species, Southwestern Ozarks, Missouri, 1959 and 1972

| Species                | Growing stock      |              | Sawtimber                        |                |
|------------------------|--------------------|--------------|----------------------------------|----------------|
|                        | 1959 <sup>1/</sup> | 1972         | 1959 <sup>1/</sup>               | 1972           |
|                        | Million cubic feet |              | Million board feet <sup>2/</sup> |                |
| <b>Softwoods:</b>      |                    |              |                                  |                |
| Shortleaf pine         | 91.2               | 54.3         | 206.9                            | 186.7          |
| Eastern redcedar       | 5.3                | 9.5          | 15.3                             | 10.5           |
| <b>Total softwoods</b> | <b>96.5</b>        | <b>63.8</b>  | <b>222.2</b>                     | <b>197.2</b>   |
| <b>Hardwoods:</b>      |                    |              |                                  |                |
| Select white oaks      | 140.3              | 150.6        | 382.0                            | 379.6          |
| Other white oaks       | 214.1              | 138.9        | 535.0                            | 297.7          |
| Select red oaks        | 50.2               | 49.2         | 169.6                            | 164.6          |
| Red oaks               | 299.4              | 297.3        | 699.1                            | 749.2          |
| Other red oaks         | 11.9               | 22.6         | 27.1                             | 48.6           |
| Hickory A              | 53.9               | 28.1         | 28.2                             | 53.4           |
| Hickory B              | 43.3               | 46.3         | 48.6                             | 71.0           |
| Hard maple             | 3.2                | 3.9          | 3.0                              | 8.4            |
| Soft maple             | --                 | .3           | --                               | 1.3            |
| Tupelo and blackgum    | 3.8                | 6.0          | 15.5                             | 13.7           |
| Ash                    | 8.0                | 10.8         | 26.7                             | 25.9           |
| Sycamore               | 2.4                | 8.1          | 5.1                              | 26.0           |
| Basswood               | .1                 | .4           | --                               | --             |
| Black walnut           | 8.3                | 13.3         | 16.4                             | 26.2           |
| Black cherry           | 4.9                | .7           | 1.9                              | 2.7            |
| Elm                    | 11.9               | 6.9          | 27.9                             | 10.1           |
| Other hardwoods        | 5.7                | 3.9          | 8.5                              | 9.6            |
| <b>Total hardwoods</b> | <b>861.4</b>       | <b>787.3</b> | <b>1,994.6</b>                   | <b>1,888.0</b> |
| <b>All species</b>     | <b>957.9</b>       | <b>851.1</b> | <b>2,216.8</b>                   | <b>2,085.2</b> |

<sup>1/</sup> Figures have been adjusted from those published previously for 1959 to conform to 1972 volumes because of changes in survey definitions and procedures.

<sup>2/</sup> International 1/4-inch rule.

Table 21.--Net volume on commercial forest land for Missouri's Southwestern Ozarks Survey Unit and for individual counties within Unit, by species and kind of material, 1972

ALL COUNTIES

| Species                | Growing stock   |                  |                 | Sawtimber                        |                     |              | Rough and rotten trees |
|------------------------|-----------------|------------------|-----------------|----------------------------------|---------------------|--------------|------------------------|
|                        | Total           | Poletimber trees | Sawtimber trees | Total                            | In sawtimber stands | Other stands |                        |
|                        | Thousand cords  |                  |                 | Million board feet <sup>1/</sup> |                     |              | Thousand cords         |
| <b>Softwoods:</b>      |                 |                  |                 |                                  |                     |              |                        |
| Shortleaf pine         | 687.8           | 274.8            | 413.0           | 186.7                            | 111.9               | 74.8         | 10.1                   |
| Eastern redcedar       | 120.2           | 95.3             | 24.9            | 10.5                             | 1.7                 | 8.8          | 81.7                   |
| <b>Total softwoods</b> | <b>808.0</b>    | <b>370.1</b>     | <b>437.9</b>    | <b>197.2</b>                     | <b>113.6</b>        | <b>83.6</b>  | <b>91.8</b>            |
| <b>Hardwoods:</b>      |                 |                  |                 |                                  |                     |              |                        |
| Select white oaks      | 1,906.3         | 942.6            | 963.7           | 379.6                            | 269.5               | 110.1        | 1,296.3                |
| Other white oaks       | 1,758.2         | 999.5            | 758.7           | 297.7                            | 193.1               | 104.6        | 1,690.3                |
| Select red oaks        | 622.8           | 213.4            | 409.4           | 164.6                            | 112.1               | 52.5         | 230.6                  |
| Red oaks               | 3,763.3         | 1,856.5          | 1,906.8         | 749.2                            | 437.0               | 312.2        | 1,825.0                |
| Other red oaks         | 286.2           | 169.2            | 117.0           | 48.6                             | 29.5                | 19.1         | 779.2                  |
| Hickory A              | 355.7           | 215.7            | 140.0           | 53.4                             | 21.8                | 31.6         | 215.9                  |
| Hickory B              | 585.6           | 398.2            | 187.4           | 71.0                             | 34.7                | 36.3         | 309.6                  |
| Hard maple             | 48.9            | 22.8             | 26.1            | 8.4                              | 7.0                 | 1.4          | 37.8                   |
| Soft maple             | 3.3             | --               | 3.3             | 1.3                              | 1.3                 | --           | 16.5                   |
| Sweetgum               | --              | --               | --              | --                               | --                  | --           | 1.7                    |
| Tupelo and blackgum    | 75.6            | 38.4             | 37.2            | 13.7                             | 9.0                 | 4.7          | 36.2                   |
| Ash                    | 137.1           | 65.0             | 72.1            | 25.9                             | 19.4                | 6.5          | 130.9                  |
| Sycamore               | 102.8           | 33.5             | 69.3            | 26.0                             | 16.9                | 9.1          | 23.5                   |
| Basswood               | 5.4             | 5.4              | --              | --                               | --                  | --           | 5.2                    |
| Black walnut           | 167.2           | 93.3             | 73.9            | 26.2                             | 12.5                | 13.7         | 92.0                   |
| Black cherry           | 9.2             | 3.2              | 6.0             | 2.7                              | .9                  | 1.8          | 30.5                   |
| Elm                    | 87.3            | 61.6             | 25.7            | 10.1                             | 5.5                 | 4.6          | 122.7                  |
| Other hardwoods        | 50.0            | 23.1             | 26.9            | 9.6                              | 7.1                 | 2.5          | 93.4                   |
| Noncommercial species  | --              | --               | --              | --                               | --                  | --           | 17.4                   |
| <b>Total hardwoods</b> | <b>9,964.9</b>  | <b>5,141.4</b>   | <b>4,823.5</b>  | <b>1,888.0</b>                   | <b>1,177.3</b>      | <b>710.7</b> | <b>6,954.7</b>         |
| <b>All species</b>     | <b>10,772.9</b> | <b>5,511.5</b>   | <b>5,261.4</b>  | <b>2,085.2</b>                   | <b>1,290.9</b>      | <b>794.3</b> | <b>7,046.5</b>         |

BARRY COUNTY

|                        |              |              |              |              |              |             |              |
|------------------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|
| <b>Softwoods:</b>      |              |              |              |              |              |             |              |
| Shortleaf pine         | 66.8         | 31.7         | 35.1         | 16.3         | 8.3          | 8.0         | .7           |
| Eastern redcedar       | 11.9         | 9.5          | 2.4          | 1.0          | .3           | .7          | 8.3          |
| <b>Total softwoods</b> | <b>78.7</b>  | <b>41.2</b>  | <b>37.5</b>  | <b>17.3</b>  | <b>8.6</b>   | <b>8.7</b>  | <b>9.0</b>   |
| <b>Hardwoods</b>       |              |              |              |              |              |             |              |
| Select white oaks      | 151.2        | 74.0         | 77.2         | 30.4         | 22.0         | 8.4         | 102.2        |
| Other white oaks       | 136.9        | 77.5         | 59.4         | 23.4         | 14.9         | 8.5         | 128.1        |
| Select red oaks        | 50.7         | 18.5         | 32.2         | 12.9         | 8.9          | 4.0         | 19.0         |
| Red oaks               | 297.3        | 144.6        | 152.7        | 60.0         | 36.0         | 24.0        | 141.9        |
| Other red oaks         | 21.8         | 12.9         | 8.9          | 3.7          | 2.2          | 1.5         | 57.7         |
| Hickory A              | 27.8         | 17.0         | 10.8         | 4.1          | 1.7          | 2.4         | 16.8         |
| Hickory B              | 45.1         | 30.6         | 14.5         | 5.5          | 2.7          | 2.8         | 23.6         |
| Hard maple             | 3.7          | 1.7          | 2.0          | .6           | .5           | .1          | 3.1          |
| Soft maple             | .2           | --           | .2           | .1           | .1           | --          | 1.1          |
| Sweetgum               | --           | --           | --           | --           | --           | --          | .1           |
| Tupelo and blackgum    | 5.9          | 3.1          | 2.8          | 1.0          | .7           | .3          | 2.7          |
| Ash                    | 11.0         | 5.0          | 6.0          | 2.1          | 1.6          | .5          | 10.9         |
| Sycamore               | 7.6          | 2.6          | 5.0          | 1.9          | 1.2          | .7          | 1.7          |
| Basswood               | .4           | .4           | --           | --           | --           | --          | .3           |
| Black walnut           | 13.1         | 7.4          | 5.7          | 2.0          | 1.0          | 1.0         | 6.6          |
| Black cherry           | .7           | .2           | .5           | .2           | .1           | .1          | 2.1          |
| Elm                    | 7.1          | 5.3          | 1.8          | .7           | .3           | .4          | 9.9          |
| Other hardwoods        | 4.4          | 1.8          | 2.6          | .9           | .7           | .2          | 7.0          |
| Noncommercial species  | --           | --           | --           | --           | --           | --          | 1.3          |
| <b>Total hardwoods</b> | <b>784.9</b> | <b>402.6</b> | <b>382.3</b> | <b>149.5</b> | <b>94.6</b>  | <b>54.9</b> | <b>536.1</b> |
| <b>All species</b>     | <b>863.6</b> | <b>443.8</b> | <b>419.8</b> | <b>166.8</b> | <b>103.2</b> | <b>63.6</b> | <b>545.1</b> |

(Table 21 cont.)

## CHRISTIAN COUNTY

| Species               | Growing stock  |            |           | Sawtimber                        |              |        | Rough and rotten trees |
|-----------------------|----------------|------------|-----------|----------------------------------|--------------|--------|------------------------|
|                       | Total          | Poletimber | Sawtimber | Total                            | In sawtimber | Other  |                        |
|                       | trees          | trees      | trees     | stands                           | stands       | stands |                        |
|                       | Thousand cords |            |           | Million board feet <sup>1/</sup> |              |        | Thousand cords         |
| <b>Softwoods:</b>     |                |            |           |                                  |              |        |                        |
| Shortleaf pine        | 39.7           | 15.7       | 24.0      | 10.8                             | 6.4          | 4.4    | .6                     |
| Eastern redcedar      | 7.8            | 6.2        | 1.6       | .6                               | .1           | .5     | 5.1                    |
| Total softwoods       | 47.5           | 21.9       | 25.6      | 11.4                             | 6.5          | 4.9    | 5.7                    |
| <b>Hardwoods</b>      |                |            |           |                                  |              |        |                        |
| Select white oaks     | 105.9          | 53.2       | 52.7      | 20.8                             | 14.6         | 6.2    | 72.5                   |
| Other white oaks      | 94.7           | 54.3       | 40.4      | 15.8                             | 9.9          | 5.9    | 91.0                   |
| Select red oaks       | 33.8           | 12.1       | 21.7      | 8.8                              | 5.8          | 3.0    | 12.6                   |
| Red oaks              | 203.6          | 101.9      | 101.7     | 39.9                             | 22.6         | 17.3   | 98.6                   |
| Other red oaks        | 15.3           | 9.1        | 6.2       | 2.6                              | 1.5          | 1.1    | 41.6                   |
| Hickory A             | 19.8           | 12.1       | 7.7       | 3.0                              | 1.2          | 1.8    | 11.9                   |
| Hickory B             | 31.9           | 21.8       | 10.1      | 3.8                              | 1.8          | 2.0    | 16.9                   |
| Hard maple            | 2.7            | 1.3        | 1.4       | .5                               | .4           | .1     | 2.2                    |
| Soft maple            | .4             | --         | .4        | .1                               | .1           | --     | 1.5                    |
| Sweetgum              | --             | --         | --        | --                               | --           | --     | .1                     |
| Tupelo and blackgum   | 4.1            | 2.1        | 2.0       | .7                               | .5           | .2     | 1.9                    |
| Ash                   | 8.5            | 4.1        | 4.4       | 1.6                              | 1.2          | .4     | 8.1                    |
| Sycamore              | 6.9            | 2.1        | 4.8       | 1.8                              | 1.2          | .6     | 1.8                    |
| Basswood              | .3             | .3         | --        | --                               | --           | --     | .3                     |
| Black walnut          | 9.4            | 5.4        | 4.0       | 1.4                              | .6           | .8     | 5.0                    |
| Black cherry          | .6             | .2         | .4        | .2                               | .1           | .1     | 1.8                    |
| Elm                   | 4.9            | 3.5        | 1.4       | .5                               | .3           | .2     | 7.3                    |
| Other hardwoods       | 3.0            | 1.4        | 1.6       | .6                               | .4           | .2     | 5.7                    |
| Noncommercial species | --             | --         | --        | --                               | --           | --     | 1.0                    |
| Total hardwoods       | 545.8          | 284.9      | 260.9     | 102.1                            | 62.2         | 39.9   | 381.8                  |
| All species           | 593.3          | 306.8      | 286.5     | 113.5                            | 68.7         | 44.8   | 387.5                  |

## DOUGLAS COUNTY

|                       |         |       |       |       |       |      |       |
|-----------------------|---------|-------|-------|-------|-------|------|-------|
| <b>Softwoods:</b>     |         |       |       |       |       |      |       |
| Shortleaf pine        | 96.8    | 37.6  | 59.2  | 26.5  | 16.2  | 10.3 | 1.3   |
| Eastern redcedar      | 8.8     | 6.7   | 2.1   | .9    | --    | .9   | 5.8   |
| Total softwoods       | 105.6   | 44.3  | 61.3  | 27.4  | 16.2  | 11.2 | 7.1   |
| <b>Hardwoods:</b>     |         |       |       |       |       |      |       |
| Select white oaks     | 202.8   | 100.0 | 102.8 | 40.5  | 28.6  | 11.9 | 136.8 |
| Other white oaks      | 184.2   | 105.0 | 79.2  | 31.1  | 20.3  | 10.8 | 180.8 |
| Select red oaks       | 65.8    | 23.2  | 42.6  | 17.1  | 11.5  | 5.6  | 23.5  |
| Red oaks              | 399.6   | 197.7 | 201.9 | 79.4  | 46.2  | 33.2 | 194.2 |
| Other red oaks        | 30.3    | 18.0  | 12.3  | 5.1   | 3.1   | 2.0  | 84.7  |
| Hickory A             | 37.9    | 23.1  | 14.8  | 5.6   | 2.3   | 3.3  | 23.0  |
| Hickory B             | 61.9    | 41.7  | 20.2  | 7.6   | 3.7   | 3.9  | 33.5  |
| Hard maple            | 5.3     | 2.5   | 2.8   | .9    | .7    | .2   | 3.8   |
| Soft maple            | .3      | --    | .3    | .1    | .1    | --   | 1.6   |
| Sweetgum              | --      | --    | --    | --    | --    | --   | .2    |
| Tupelo and blackgum   | 8.2     | 4.3   | 3.9   | 1.5   | 1.0   | .5   | 3.9   |
| Ash                   | 13.6    | 6.7   | 6.9   | 2.5   | 1.9   | .6   | 12.4  |
| Sycamore              | 10.4    | 3.4   | 7.0   | 2.6   | 1.7   | .9   | 2.3   |
| Basswood              | .6      | .6    | --    | --    | --    | --   | .6    |
| Black walnut          | 17.2    | 9.6   | 7.6   | 2.7   | 1.3   | 1.4  | 10.6  |
| Black cherry          | .9      | .3    | .6    | .3    | .1    | .2   | 2.9   |
| Elm                   | 8.6     | 5.7   | 2.9   | 1.1   | .6    | .5   | 12.1  |
| Other hardwoods       | 4.6     | 2.4   | 2.2   | .9    | .6    | .3   | 9.6   |
| Noncommercial species | --      | --    | --    | --    | --    | --   | 1.9   |
| Total hardwoods       | 1,052.2 | 544.2 | 508.0 | 199.0 | 123.7 | 75.3 | 738.4 |
| All species           | 1,157.8 | 588.5 | 569.3 | 226.4 | 139.9 | 86.5 | 745.5 |

<sup>1/</sup> International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

## HOWELL COUNTY

| Species                | Growing stock  |                  |                 | Sawtimber                        |                     |              | Rough and rotten trees |
|------------------------|----------------|------------------|-----------------|----------------------------------|---------------------|--------------|------------------------|
|                        | Total          | Poletimber trees | Sawtimber trees | Total                            | In sawtimber stands | Other stands |                        |
|                        | Thousand cords |                  |                 | Million board feet <sup>1/</sup> |                     |              | Thousand cords         |
| <b>Softwoods:</b>      |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine         | 94.7           | 39.9             | 54.8            | 24.8                             | 15.3                | 9.5          | 1.3                    |
| Eastern redcedar       | 9.6            | 7.5              | 2.1             | .9                               | --                  | .9           | 5.8                    |
| <b>Total softwoods</b> | <b>104.3</b>   | <b>47.4</b>      | <b>56.9</b>     | <b>25.7</b>                      | <b>15.3</b>         | <b>10.4</b>  | <b>7.1</b>             |
| <b>Hardwoods</b>       |                |                  |                 |                                  |                     |              |                        |
| Select white oaks      | 228.6          | 109.7            | 118.9           | 46.9                             | 34.5                | 12.4         | 152.5                  |
| Other white oaks       | 212.1          | 118.8            | 93.3            | 36.7                             | 25.2                | 11.5         | 200.9                  |
| Select red oaks        | 76.1           | 24.5             | 51.6            | 20.7                             | 14.8                | 5.9          | 26.6                   |
| Red oaks               | 461.3          | 218.2            | 243.1           | 95.6                             | 60.1                | 35.5         | 223.0                  |
| Other red oaks         | 34.5           | 20.0             | 14.5            | 6.0                              | 3.8                 | 2.2          | 93.1                   |
| Hickory A              | 42.5           | 25.5             | 17.0            | 6.4                              | 2.8                 | 3.6          | 26.1                   |
| Hickory B              | 69.2           | 46.2             | 23.0            | 8.7                              | 4.5                 | 4.2          | 37.3                   |
| Hard maple             | 5.9            | 2.6              | 3.3             | 1.1                              | .9                  | .2           | 4.3                    |
| Soft maple             | .2             | --               | .2              | .1                               | .1                  | --           | 1.2                    |
| Sweetgum               | --             | --               | --              | --                               | --                  | --           | .2                     |
| Tupelo and blackgum    | 9.3            | 4.8              | 4.5             | 1.7                              | 1.2                 | .5           | 4.5                    |
| Ash                    | 14.8           | 6.8              | 8.0             | 2.9                              | 2.3                 | .6           | 13.0                   |
| Sycamore               | 9.8            | 3.1              | 6.7             | 2.5                              | 1.8                 | .7           | 2.0                    |
| Basswood               | .6             | .6               | --              | --                               | --                  | --           | .5                     |
| Black walnut           | 18.5           | 9.9              | 8.6             | 3.1                              | 1.6                 | 1.5          | 10.8                   |
| Black cherry           | .9             | .3               | .6              | .3                               | .1                  | .2           | 3.3                    |
| Elm                    | 9.6            | 6.4              | 3.2             | 1.3                              | .7                  | .6           | 13.0                   |
| Other hardwood         | 5.0            | 2.4              | 2.6             | .9                               | .7                  | .2           | 10.2                   |
| Noncommercial species  | --             | --               | --              | --                               | --                  | --           | 2.0                    |
| <b>Total hardwoods</b> | <b>1,198.9</b> | <b>599.8</b>     | <b>599.1</b>    | <b>234.9</b>                     | <b>155.1</b>        | <b>79.8</b>  | <b>824.5</b>           |
| <b>All species</b>     | <b>1,303.2</b> | <b>647.2</b>     | <b>656.0</b>    | <b>260.6</b>                     | <b>170.4</b>        | <b>90.2</b>  | <b>831.6</b>           |

## MC DONALD COUNTY

|                        |              |              |              |              |             |             |              |
|------------------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|
| <b>Softwoods:</b>      |              |              |              |              |             |             |              |
| Shortleaf pine         | 33.1         | 12.7         | 20.4         | 9.3          | 5.4         | 3.9         | .6           |
| Eastern redcedar       | 6.0          | 4.7          | 1.3          | .6           | --          | .6          | 3.3          |
| <b>Total softwoods</b> | <b>39.1</b>  | <b>17.4</b>  | <b>21.7</b>  | <b>9.9</b>   | <b>5.4</b>  | <b>4.5</b>  | <b>3.9</b>   |
| <b>Hardwoods</b>       |              |              |              |              |             |             |              |
| Select white oaks      | 146.8        | 72.3         | 74.5         | 29.3         | 21.0        | 8.3         | 95.5         |
| Other white oaks       | 137.1        | 78.8         | 58.3         | 22.9         | 15.5        | 7.4         | 126.5        |
| Select red oaks        | 48.0         | 15.4         | 32.6         | 13.1         | 9.0         | 4.1         | 16.8         |
| Red oaks               | 298.8        | 147.8        | 151.0        | 59.4         | 34.7        | 24.7        | 141.1        |
| Other red oaks         | 22.9         | 13.5         | 9.4          | 3.9          | 2.4         | 1.5         | 59.4         |
| Hickory A              | 28.0         | 16.8         | 11.2         | 4.3          | 1.7         | 2.6         | 16.3         |
| Hickory B              | 45.7         | 31.1         | 14.6         | 5.6          | 2.8         | 2.8         | 23.2         |
| Hard maple             | 3.7          | 1.7          | 2.0          | .6           | .5          | .1          | 2.8          |
| Soft maple             | .2           | --           | .2           | .1           | .1          | --          | 1.1          |
| Sweetgum               | --           | --           | --           | --           | --          | --          | .2           |
| Tupelo and blackgum    | 5.9          | 3.0          | 2.9          | 1.1          | .7          | .4          | 2.8          |
| Ash                    | 10.0         | 4.8          | 5.2          | 1.9          | 1.5         | .4          | 8.7          |
| Sycamore               | 8.0          | 2.6          | 5.4          | 2.0          | 1.2         | .8          | 1.6          |
| Basswood               | .4           | .4           | --           | --           | --          | --          | .4           |
| Black walnut           | 12.3         | 6.5          | 5.8          | 2.1          | 1.0         | 1.1         | 6.7          |
| Black cherry           | .7           | .3           | .4           | .2           | .1          | .1          | 2.2          |
| Elm                    | 6.2          | 4.2          | 2.0          | .8           | .4          | .4          | 8.3          |
| Other hardwoods        | 3.4          | 1.7          | 1.7          | .6           | .4          | .2          | 6.8          |
| Noncommercial species  | --           | --           | --           | --           | --          | --          | 1.2          |
| <b>Total hardwoods</b> | <b>778.1</b> | <b>400.9</b> | <b>377.2</b> | <b>147.9</b> | <b>93.0</b> | <b>54.9</b> | <b>521.6</b> |
| <b>All species</b>     | <b>817.2</b> | <b>418.3</b> | <b>398.9</b> | <b>157.8</b> | <b>98.4</b> | <b>59.4</b> | <b>525.5</b> |

<sup>1/</sup> International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

## NEWTON COUNTY

| Species               | Growing stock  |                  |                 | Sawtimber                        |                     |              | Rough and rotten trees |
|-----------------------|----------------|------------------|-----------------|----------------------------------|---------------------|--------------|------------------------|
|                       | Total          | Poletimber trees | Sawtimber trees | Total                            | In sawtimber stands | Other stands |                        |
|                       | Thousand cords |                  |                 | Million board feet <sup>1/</sup> |                     |              | Thousand cords         |
| <b>Softwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine        | 19.9           | 7.8              | 12.1            | 5.6                              | 3.3                 | 2.3          | .4                     |
| Eastern redcedar      | 4.3            | 3.5              | .8              | .3                               | --                  | .3           | 2.2                    |
| Total softwoods       | 24.2           | 11.3             | 12.9            | 5.9                              | 3.3                 | 2.6          | 2.6                    |
| <b>Hardwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Select white oaks     | 89.9           | 43.9             | 46.0            | 18.1                             | 13.5                | 4.6          | 59.9                   |
| Other white oaks      | 82.1           | 46.0             | 36.1            | 14.2                             | 9.9                 | 4.3          | 77.7                   |
| Select red oaks       | 28.9           | 8.8              | 20.1            | 8.0                              | 5.8                 | 2.2          | 10.1                   |
| Red oaks              | 175.5          | 83.8             | 91.7            | 36.0                             | 22.4                | 13.6         | 86.0                   |
| Other red oaks        | 13.5           | 7.7              | 5.8             | 2.4                              | 1.6                 | .8           | 36.3                   |
| Hickory A             | 16.8           | 10.0             | 6.8             | 2.6                              | 1.2                 | 1.4          | 10.1                   |
| Hickory B             | 26.7           | 17.8             | 8.9             | 3.4                              | 1.8                 | 1.6          | 14.5                   |
| Hard maple            | 2.2            | 1.0              | 1.2             | .4                               | .4                  | --           | 1.7                    |
| Soft maple            | .2             | --               | .2              | .1                               | .1                  | --           | 1.0                    |
| Sweetgum              | --             | --               | --              | --                               | --                  | --           | .1                     |
| Tupelo and blackgum   | 3.5            | 1.7              | 1.8             | .6                               | .4                  | .2           | 1.7                    |
| Ash                   | 6.5            | 3.0              | 3.5             | 1.3                              | 1.0                 | .3           | 5.5                    |
| Sycamore              | 4.8            | 1.3              | 3.5             | 1.3                              | .9                  | .4           | 1.2                    |
| Basswood              | .2             | .2               | --              | --                               | --                  | --           | .2                     |
| Black walnut          | 7.4            | 3.9              | 3.5             | 1.3                              | .6                  | .7           | 4.1                    |
| Black cherry          | .4             | .1               | .3              | .1                               | --                  | .1           | 2.0                    |
| Elm                   | 3.8            | 2.6              | 1.2             | .5                               | .3                  | .2           | 6.1                    |
| Other hardwoods       | 2.2            | 1.2              | 1.0             | .4                               | .3                  | .1           | 5.1                    |
| Noncommercial species | --             | --               | --              | --                               | --                  | --           | .9                     |
| Total hardwoods       | 464.6          | 233.0            | 231.6           | 90.7                             | 60.2                | 30.5         | 324.2                  |
| All species           | 488.8          | 244.3            | 244.5           | 96.6                             | 63.5                | 33.1         | 326.8                  |
| <b>OZARK COUNTY</b>   |                |                  |                 |                                  |                     |              |                        |
| <b>Softwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine        | 60.1           | 24.3             | 35.8            | 16.4                             | 9.6                 | 6.8          | 1.0                    |
| Eastern redcedar      | 13.6           | 10.3             | 3.3             | 1.4                              | .5                  | .9           | 9.9                    |
| Total softwoods       | 73.7           | 34.6             | 39.1            | 17.8                             | 10.1                | 7.7          | 10.9                   |
| <b>Hardwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Select white oaks     | 197.6          | 96.3             | 101.3           | 39.9                             | 29.0                | 10.9         | 133.1                  |
| Other white oaks      | 178.9          | 100.5            | 78.4            | 30.8                             | 20.5                | 10.3         | 172.6                  |
| Select red oaks       | 64.2           | 21.1             | 43.1            | 17.3                             | 12.2                | 5.1          | 25.3                   |
| Red oaks              | 381.9          | 185.5            | 196.4           | 77.1                             | 46.4                | 30.7         | 186.4                  |
| Other red oaks        | 29.0           | 17.0             | 12.0            | 5.0                              | 3.1                 | 1.9          | 79.6                   |
| Hickory A             | 36.5           | 22.1             | 14.4            | 5.5                              | 2.4                 | 3.1          | 22.1                   |
| Hickory B             | 59.0           | 40.0             | 19.0            | 7.2                              | 3.7                 | 3.5          | 31.1                   |
| Hard maple            | 4.8            | 2.1              | 2.7             | .9                               | .8                  | .1           | 3.9                    |
| Soft maple            | .5             | --               | .5              | .2                               | .2                  | --           | 2.1                    |
| Sweetgum              | --             | --               | --              | --                               | --                  | --           | .2                     |
| Tupelo and blackgum   | 7.6            | 3.8              | 3.8             | 1.4                              | .9                  | .5           | 3.8                    |
| Ash                   | 15.4           | 7.2              | 8.2             | 3.0                              | 2.3                 | .7           | 14.9                   |
| Sycamore              | 12.1           | 3.8              | 8.3             | 3.1                              | 2.0                 | 1.1          | 3.0                    |
| Basswood              | .5             | .5               | --              | --                               | --                  | --           | .6                     |
| Black walnut          | 18.0           | 10.2             | 7.8             | 2.8                              | 1.4                 | 1.4          | 9.0                    |
| Black cherry          | 1.0            | .3               | .7              | .3                               | .1                  | .2           | 2.8                    |
| Elm                   | 8.9            | 6.4              | 2.5             | 1.0                              | .6                  | .4           | 12.4                   |
| Other hardwoods       | 6.2            | 2.3              | 3.9             | 1.3                              | 1.0                 | .3           | 9.5                    |
| Noncommercial species | --             | --               | --              | --                               | --                  | --           | 1.8                    |
| Total hardwoods       | 1,022.1        | 519.1            | 503.0           | 196.8                            | 126.6               | 70.2         | 714.2                  |
| All species           | 1,095.8        | 553.7            | 542.1           | 214.6                            | 136.7               | 77.9         | 725.1                  |

<sup>1/</sup> International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

## STONE COUNTY

| Species               | Growing stock  |                  |                 | Sawtimber                        |                     |              | Rough and rotten trees |
|-----------------------|----------------|------------------|-----------------|----------------------------------|---------------------|--------------|------------------------|
|                       | Total          | Poletimber trees | Sawtimber trees | Total                            | In sawtimber stands | Other stands |                        |
|                       | Thousand cords |                  |                 | Million board feet <sup>1/</sup> |                     |              | Thousand cords         |
| <b>Softwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine        | 26.6           | 10.7             | 15.9            | 7.3                              | 4.1                 | 3.2          | .5                     |
| Eastern redcedar      | 9.6            | 8.2              | 1.4             | .6                               | .1                  | .5           | 6.1                    |
| Total softwoods       | 36.2           | 18.9             | 17.3            | 7.9                              | 4.2                 | 3.7          | 6.6                    |
| <b>Hardwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Select white oaks     | 101.6          | 51.7             | 49.9            | 19.6                             | 13.6                | 6.0          | 70.8                   |
| Other white oaks      | 93.6           | 53.3             | 40.3            | 15.7                             | 9.6                 | 6.1          | 88.2                   |
| Select red oaks       | 33.5           | 12.3             | 21.2            | 8.6                              | 5.7                 | 2.9          | 12.5                   |
| Red oaks              | 196.9          | 98.8             | 98.1            | 38.5                             | 21.7                | 16.8         | 94.2                   |
| Other red oaks        | 14.9           | 8.9              | 6.0             | 2.5                              | 1.5                 | 1.0          | 40.2                   |
| Hickory A             | 18.6           | 11.3             | 7.3             | 2.8                              | 1.1                 | 1.7          | 11.1                   |
| Hickory B             | 31.3           | 21.7             | 9.6             | 3.6                              | 1.8                 | 1.8          | 16.5                   |
| Hard maple            | 2.5            | 1.2              | 1.3             | .4                               | .3                  | .1           | 2.2                    |
| Soft maple            | .2             | --               | .2              | .1                               | .1                  | --           | 1.1                    |
| Sweetgum              | --             | --               | --              | --                               | --                  | --           | .1                     |
| Tupelo and blackgum   | 4.1            | 2.0              | 2.1             | .8                               | .5                  | .3           | 1.9                    |
| Ash                   | 8.1            | 3.6              | 4.5             | 1.5                              | 1.0                 | .5           | 8.1                    |
| Sycamore              | 5.9            | 1.9              | 4.0             | 1.5                              | 1.0                 | .5           | 1.5                    |
| Basswood              | .3             | .3               | --              | --                               | --                  | --           | .3                     |
| Black walnut          | 9.5            | 5.4              | 4.1             | 1.4                              | .6                  | .8           | 4.6                    |
| Black cherry          | .5             | .2               | .3              | .2                               | .1                  | .1           | 1.8                    |
| Elm                   | 5.5            | 4.2              | 1.3             | .5                               | .3                  | .2           | 7.6                    |
| Other hardwoods       | 2.8            | 1.3              | 1.5             | .5                               | .4                  | .1           | 5.2                    |
| Noncommercial species | --             | --               | --              | --                               | --                  | --           | .9                     |
| Total hardwoods       | 529.8          | 278.1            | 251.7           | 98.2                             | 59.3                | 38.9         | 368.8                  |
| All species           | 566.0          | 297.0            | 269.0           | 106.1                            | 63.5                | 42.6         | 375.4                  |
| <b>TANEY COUNTY</b>   |                |                  |                 |                                  |                     |              |                        |
| <b>Softwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine        | 29.3           | 11.6             | 17.7            | 8.1                              | 3.6                 | 4.5          | .7                     |
| Eastern redcedar      | 23.2           | 18.7             | 4.5             | 1.9                              | .7                  | 1.2          | 19.3                   |
| Total softwoods       | 52.5           | 30.3             | 22.2            | 10.0                             | 4.3                 | 5.7          | 20.0                   |
| <b>Hardwoods:</b>     |                |                  |                 |                                  |                     |              |                        |
| Select white oaks     | 133.0          | 66.9             | 66.1            | 25.9                             | 17.2                | 8.7          | 107.3                  |
| Other white oaks      | 132.1          | 73.2             | 58.9            | 22.8                             | 12.4                | 10.4         | 141.5                  |
| Select red oaks       | 45.4           | 17.7             | 27.7            | 11.2                             | 7.3                 | 3.9          | 21.3                   |
| Red oaks              | 246.9          | 125.8            | 121.1           | 47.2                             | 24.2                | 23.0         | 133.2                  |
| Other red oaks        | 20.0           | 12.0             | 8.0             | 3.4                              | 1.9                 | 1.5          | 61.3                   |
| Hickory A             | 24.4           | 15.0             | 9.4             | 3.6                              | 1.3                 | 2.3          | 16.5                   |
| Hickory B             | 44.4           | 31.3             | 13.1            | 5.0                              | 2.2                 | 2.8          | 24.2                   |
| Hard maple            | 3.7            | 1.8              | 1.9             | .6                               | .5                  | .1           | 3.5                    |
| Soft maple            | .1             | --               | .1              | --                               | --                  | --           | 1.1                    |
| Sweetgum              | --             | --               | --              | --                               | --                  | --           | .1                     |
| Tupelo and blackgum   | 5.2            | 2.4              | 2.8             | 1.0                              | .6                  | .4           | 2.5                    |
| Ash                   | 11.7           | 5.3              | 6.4             | 2.1                              | 1.3                 | .8           | 15.6                   |
| Sycamore              | 6.8            | 2.7              | 4.1             | 1.5                              | 1.1                 | .4           | 1.7                    |
| Basswood              | .5             | .5               | --              | --                               | --                  | --           | .3                     |
| Black walnut          | 15.0           | 9.4              | 5.6             | 1.9                              | 1.0                 | .9           | 7.6                    |
| Black cherry          | .6             | .2               | .4              | .2                               | --                  | .2           | 2.2                    |
| Elm                   | 9.4            | 7.5              | 1.9             | .7                               | .4                  | .3           | 12.4                   |
| Other hardwoods       | 5.7            | 2.0              | 3.7             | 1.2                              | 1.0                 | .2           | 6.7                    |
| Noncommercial species | --             | --               | --              | --                               | --                  | --           | 1.4                    |
| Total hardwoods       | 704.9          | 373.7            | 331.2           | 128.3                            | 72.4                | 55.9         | 560.4                  |
| All species           | 757.4          | 404.0            | 353.4           | 138.3                            | 76.7                | 61.6         | 580.4                  |

<sup>1/</sup> International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

## TEXAS COUNTY

| Species                | Growing stock  |                  |                 | Sawtimber                        |                     |              | Rough and rotten trees |
|------------------------|----------------|------------------|-----------------|----------------------------------|---------------------|--------------|------------------------|
|                        | Total          | Poletimber trees | Sawtimber trees | Total                            | In sawtimber stands | Other stands |                        |
|                        | Thousand cords |                  |                 | Million board feet <sup>1/</sup> |                     |              | Thousand cords         |
| <b>Softwoods:</b>      |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine         | 162.9          | 60.2             | 102.7           | 45.4                             | 30.5                | 14.9         | 2.0                    |
| Eastern redcedar       | 13.1           | 10.1             | 3.0             | 1.3                              | --                  | 1.3          | 9.1                    |
| <b>Total softwoods</b> | <b>176.0</b>   | <b>70.3</b>      | <b>105.7</b>    | <b>46.7</b>                      | <b>30.5</b>         | <b>16.2</b>  | <b>11.1</b>            |
| <b>Hardwoods:</b>      |                |                  |                 |                                  |                     |              |                        |
| Select white oaks      | 310.3          | 155.5            | 154.8           | 61.1                             | 42.1                | 19.0         | 207.4                  |
| Other white oaks       | 287.7          | 167.2            | 120.5           | 47.4                             | 30.5                | 16.9         | 273.8                  |
| Select red oaks        | 100.2          | 35.3             | 64.9            | 26.1                             | 16.9                | 9.2          | 35.9                   |
| Red oaks               | 630.4          | 317.8            | 312.6           | 123.1                            | 69.1                | 54.0         | 299.0                  |
| Other red oaks         | 47.5           | 28.7             | 18.8            | 7.8                              | 4.6                 | 3.2          | 127.4                  |
| Hickory A              | 58.4           | 35.6             | 22.8            | 8.7                              | 3.3                 | 5.4          | 35.1                   |
| Hickory B              | 97.0           | 66.2             | 30.8            | 11.7                             | 5.4                 | 6.3          | 50.2                   |
| Hard maple             | 8.0            | 3.9              | 4.1             | 1.3                              | 1.1                 | .2           | 5.7                    |
| Soft maple             | .3             | --               | .3              | .1                               | .1                  | --           | 1.8                    |
| Sweetgum               | --             | --               | --              | --                               | --                  | --           | .2                     |
| Tupelo and blackgum    | 12.6           | 6.6              | 6.0             | 2.2                              | 1.4                 | .8           | 6.0                    |
| Ash                    | 19.7           | 9.8              | 9.9             | 3.6                              | 2.7                 | .9           | 18.1                   |
| Sycamore               | 15.2           | 5.4              | 9.8             | 3.7                              | 2.2                 | 1.5          | 3.0                    |
| Basswood               | .9             | .9               | --              | --                               | --                  | --           | .8                     |
| Black walnut           | 26.0           | 14.3             | 11.7            | 4.2                              | 1.9                 | 2.3          | 15.4                   |
| Black cherry           | 1.5            | .6               | .9              | .4                               | .1                  | .3           | 4.4                    |
| Elm                    | 13.0           | 8.7              | 4.3             | 1.7                              | .9                  | .8           | 17.8                   |
| Other hardwoods        | 6.9            | 3.5              | 3.4             | 1.2                              | .8                  | .4           | 14.1                   |
| Noncommercial species  | --             | --               | --              | --                               | --                  | --           | 2.6                    |
| <b>Total hardwoods</b> | <b>1,635.6</b> | <b>860.0</b>     | <b>775.6</b>    | <b>304.3</b>                     | <b>183.1</b>        | <b>121.2</b> | <b>1,118.7</b>         |
| <b>All species</b>     | <b>1,811.6</b> | <b>930.3</b>     | <b>881.3</b>    | <b>351.0</b>                     | <b>213.6</b>        | <b>137.4</b> | <b>1,129.8</b>         |
| <b>WEBSTER COUNTY</b>  |                |                  |                 |                                  |                     |              |                        |
| <b>Softwoods:</b>      |                |                  |                 |                                  |                     |              |                        |
| Shortleaf pine         | 23.5           | 9.1              | 14.4            | 6.6                              | 3.9                 | 2.7          | .4                     |
| Eastern redcedar       | 5.3            | 4.3              | 1.0             | .4                               | --                  | .4           | 2.6                    |
| <b>Total softwoods</b> | <b>28.8</b>    | <b>13.4</b>      | <b>15.4</b>     | <b>7.0</b>                       | <b>3.9</b>          | <b>3.1</b>   | <b>3.0</b>             |
| <b>Hardwoods:</b>      |                |                  |                 |                                  |                     |              |                        |
| Select white oaks      | 105.1          | 51.6             | 53.5            | 21.1                             | 15.4                | 5.7          | 69.0                   |
| Other white oaks       | 96.1           | 54.1             | 42.0            | 16.5                             | 11.3                | 5.2          | 89.9                   |
| Select red oaks        | 33.9           | 10.5             | 23.4            | 9.4                              | 6.7                 | 2.7          | 11.7                   |
| Red oaks               | 207.5          | 100.1            | 107.4           | 42.2                             | 25.8                | 16.4         | 100.2                  |
| Other red oaks         | 15.9           | 9.1              | 6.8             | 2.8                              | 1.8                 | 1.0          | 41.8                   |
| Hickory A              | 19.6           | 11.7             | 7.9             | 3.0                              | 1.3                 | 1.7          | 11.7                   |
| Hickory B              | 31.5           | 21.1             | 10.4            | 3.9                              | 2.0                 | 1.9          | 16.5                   |
| Hard maple             | 2.7            | 1.2              | 1.5             | .5                               | .4                  | .1           | 2.0                    |
| Soft maple             | .2             | --               | .2              | .1                               | .1                  | --           | .9                     |
| Sweetgum               | --             | --               | --              | --                               | --                  | --           | .1                     |
| Tupelo and blackgum    | 4.0            | 2.0              | 2.0             | .7                               | .5                  | .2           | 2.0                    |
| Ash                    | 7.3            | 3.4              | 3.9             | 1.4                              | 1.1                 | .3           | 6.4                    |
| Sycamore               | 5.6            | 1.7              | 3.9             | 1.5                              | 1.0                 | .5           | 1.2                    |
| Basswood               | .3             | .3               | --              | --                               | --                  | --           | .3                     |
| Black walnut           | 8.7            | 4.6              | 4.1             | 1.4                              | .7                  | .7           | 4.6                    |
| Black cherry           | .5             | .2               | .3              | .1                               | --                  | .1           | 2.1                    |
| Elm                    | 4.4            | 3.1              | 1.3             | .5                               | .3                  | .2           | 6.6                    |
| Other hardwoods        | 2.5            | 1.3              | 1.2             | .5                               | .4                  | .1           | 5.5                    |
| Noncommercial species  | --             | --               | --              | --                               | --                  | --           | 1.0                    |
| <b>Total hardwoods</b> | <b>545.8</b>   | <b>276.0</b>     | <b>269.8</b>    | <b>105.6</b>                     | <b>68.8</b>         | <b>36.8</b>  | <b>373.5</b>           |
| <b>All species</b>     | <b>574.6</b>   | <b>289.4</b>     | <b>285.2</b>    | <b>112.6</b>                     | <b>72.7</b>         | <b>39.9</b>  | <b>376.5</b>           |

<sup>1/</sup> International 1/4-inch rule.

(Table 21 cont. on next page)

(Table 21 cont.)

## WRIGHT COUNTY

| Species                | Growing stock  |              |              | Sawtimber                        |              |             | Rough and rotten trees |
|------------------------|----------------|--------------|--------------|----------------------------------|--------------|-------------|------------------------|
|                        | Total          | Poletimber   | Sawtimber    | Total                            | In sawtimber | Other       |                        |
|                        | trees          | trees        | trees        | stands                           | stands       | stands      |                        |
|                        | Thousand cords |              |              | Million board feet <sup>1/</sup> |              |             | Thousand cords         |
| <b>Softwoods:</b>      |                |              |              |                                  |              |             |                        |
| Shortleaf pine         | 34.4           | 13.5         | 20.9         | 9.6                              | 5.3          | 4.3         | .6                     |
| Eastern redcedar       | 7.0            | 5.6          | 1.4          | .6                               | --           | .6          | 4.2                    |
| <b>Total softwoods</b> | <b>41.4</b>    | <b>19.1</b>  | <b>22.3</b>  | <b>10.2</b>                      | <b>5.3</b>   | <b>4.9</b>  | <b>4.8</b>             |
| <b>Hardwoods:</b>      |                |              |              |                                  |              |             |                        |
| Select white oaks      | 133.5          | 67.5         | 66.0         | 26.0                             | 18.0         | 8.0         | 89.3                   |
| Other white oaks       | 122.7          | 70.8         | 51.9         | 20.4                             | 13.1         | 7.3         | 119.3                  |
| Select red oaks        | 42.3           | 14.0         | 28.3         | 11.4                             | 7.5          | 3.9         | 15.3                   |
| Red oaks               | 263.6          | 134.5        | 129.1        | 50.8                             | 27.8         | 23.0        | 127.2                  |
| Other red oaks         | 20.6           | 12.3         | 8.3          | 3.4                              | 2.0          | 1.4         | 56.1                   |
| Hickory A              | 25.4           | 15.5         | 9.9          | 3.8                              | 1.5          | 2.3         | 15.2                   |
| Hickory B              | 41.9           | 28.7         | 13.2         | 5.0                              | 2.3          | 2.7         | 22.1                   |
| Hard maple             | 3.7            | 1.8          | 1.9          | .6                               | .5           | .1          | 2.6                    |
| Soft maple             | .5             | --           | .5           | .2                               | .2           | --          | 2.0                    |
| Sweetgum               | --             | --           | --           | --                               | --           | --          | .1                     |
| Tupelo and blackgum    | 5.2            | 2.6          | 2.6          | 1.0                              | .6           | .4          | 2.5                    |
| Ash                    | 10.5           | 5.3          | 5.2          | 2.0                              | 1.5          | .5          | 9.2                    |
| Sycamore               | 9.7            | 2.9          | 6.8          | 2.6                              | 1.6          | 1.0         | 2.5                    |
| Basswood               | .4             | .4           | --           | --                               | --           | --          | .6                     |
| Black walnut           | 12.1           | 6.7          | 5.4          | 1.9                              | .8           | 1.1         | 7.0                    |
| Black cherry           | .9             | .3           | .6           | .2                               | .1           | .1          | 2.9                    |
| Elm                    | 5.9            | 4.0          | 1.9          | .8                               | .4           | .4          | 9.2                    |
| Other hardwoods        | 3.3            | 1.8          | 1.5          | .6                               | .4           | .2          | 8.0                    |
| Noncommercial species  | --             | --           | --           | --                               | --           | --          | 1.4                    |
| <b>Total hardwoods</b> | <b>702.2</b>   | <b>369.1</b> | <b>333.1</b> | <b>130.7</b>                     | <b>78.3</b>  | <b>52.4</b> | <b>492.5</b>           |
| <b>All species</b>     | <b>743.6</b>   | <b>388.2</b> | <b>355.4</b> | <b>140.9</b>                     | <b>83.6</b>  | <b>57.3</b> | <b>497.3</b>           |

<sup>1/</sup> International 1/4-inch rule.

Table 22.--*Net volume of timber on commercial forest land, by class of timber and softwoods and hardwoods, Southwestern Ozarks, Missouri, 1972*

(Million cubic feet)

| Class of timber       | : All<br>: species : | : Softwoods : | : Hardwoods    |
|-----------------------|----------------------|---------------|----------------|
| Growing stock trees:  |                      |               |                |
| Saw log trees:        |                      |               |                |
| Saw log portion       | 297.5                | 27.6          | 269.9          |
| Upper stem portion    | 118.2                | 7.0           | 111.2          |
| Total sawtimber       | <u>415.7</u>         | <u>34.6</u>   | <u>381.1</u>   |
| Poletimber trees      | 435.4                | 29.2          | 406.2          |
| Total growing stock   | <u>851.1</u>         | <u>63.8</u>   | <u>787.3</u>   |
| Cull trees:           |                      |               |                |
| Rough cull trees:     |                      |               |                |
| Sawtimber             | 153.0                | 2.8           | 150.2          |
| Poletimber            | 236.4                | 3.3           | 233.1          |
| Total rough cull      | <u>389.4</u>         | <u>6.1</u>    | <u>383.3</u>   |
| Short log cull trees: |                      |               |                |
| Sawtimber             | 82.2                 | .9            | 81.3           |
| Poletimber            | --                   | --            | --             |
| Total short log       | <u>82.2</u>          | <u>.9</u>     | <u>81.3</u>    |
| Rotten cull trees:    |                      |               |                |
| Sawtimber             | 59.0                 | .1            | 58.9           |
| Poletimber            | 26.1                 | .2            | 25.9           |
| Total rotten cull     | <u>85.1</u>          | <u>.3</u>     | <u>84.8</u>    |
| Total cull            | <u>556.7</u>         | <u>7.3</u>    | <u>549.4</u>   |
| Salvable dead trees:  |                      |               |                |
| Sawtimber             | 20.5                 | 3.3           | 17.2           |
| Poletimber            | 9.8                  | 1.2           | 8.6            |
| Total salvable dead   | <u>30.3</u>          | <u>4.5</u>    | <u>25.8</u>    |
| All classes           | <u>1,438.1</u>       | <u>75.6</u>   | <u>1,362.5</u> |

Table 23.--Net volume of growing stock, sawtimber, and rough and rotten trees on commercial forest land, by individual species, Southwestern Ozarks, Missouri, 1972

| Species                | : Growing   | : Sawtimber        | : Rough and    |
|------------------------|-------------|--------------------|----------------|
|                        | : stock     | : board            | : rotten trees |
|                        | Million     | Million            | Million        |
|                        | cubic feet  | board              | cubic feet     |
|                        |             | feet <sup>1/</sup> |                |
| <b>Softwoods:</b>      |             |                    |                |
| Shortleaf pine         | 54.3        | 186.7              | 0.8            |
| Eastern redcedar       | 9.5         | 10.5               | 6.5            |
| <b>Total softwoods</b> | <b>63.8</b> | <b>197.2</b>       | <b>7.3</b>     |
| <b>Hardwoods:</b>      |             |                    |                |
| Select white oak group |             |                    |                |
| Bur oak                | --          | .1                 | --             |
| Chinkapin oak          | 5.9         | 8.6                | 14.0           |
| White oak              | 143.7       | 369.5              | 88.3           |
| Swamp chestnut oak     | .5          | --                 | --             |
| Swamp white oak        | .5          | 1.4                | .1             |
| Other white oak group  |             |                    |                |
| Post oak               | 138.9       | 297.7              | 133.5          |
| Select red oak group   |             |                    |                |
| Northern red oak       | 48.7        | 162.2              | 17.8           |
| Shumard oak            | .5          | 2.4                | .4             |
| Red oak group          |             |                    |                |
| Black oak              | 285.1       | 720.2              | 138.7          |
| Scarlet oak            | 12.2        | 29.0               | 5.5            |
| Other red oak group    |             |                    |                |
| Blackjack oak          | 22.2        | 47.4               | 61.5           |
| Water oak              | .3          | 1.2                | --             |
| Willow oak             | .1          | --                 | --             |
| Hickory A group        |             |                    |                |
| Mockernut hickory      | 25.2        | 49.4               | 15.5           |
| Shagbark hickory       | 2.4         | 2.9                | 1.5            |
| Shellbark hickory      | .5          | 1.1                | .1             |
| Hickory B group        |             |                    |                |
| Bitternut hickory      | 2.0         | 1.4                | 1.0            |
| Pignut hickory         | 36.3        | 58.4               | 20.7           |
| Black hickory          | 8.0         | 11.2               | 2.7            |
| Hard maple group       |             |                    |                |
| Sugar maple            | 3.9         | 8.4                | 3.0            |
| Soft maple group       |             |                    |                |
| Silver maple           | .3          | 1.3                | 1.3            |
| Sweetgum               | --          | --                 | .1             |

(Table 23 continued in next column)

| Species                   | : Growing    | : Sawtimber        | : Rough and    |
|---------------------------|--------------|--------------------|----------------|
|                           | : stock      | : board            | : rotten trees |
|                           | Million      | Million            | Million        |
|                           | cubic feet   | board              | cubic feet     |
|                           |              | feet <sup>1/</sup> |                |
| <b>Hardwoods (cont.):</b> |              |                    |                |
| Tupelo and blackgum group |              |                    |                |
| Blackgum                  | 6.0          | 13.7               | 2.9            |
| Ash group                 |              |                    |                |
| Blue ash                  | --           | --                 | .1             |
| Green ash                 | 3.1          | 7.5                | 1.8            |
| White ash                 | 7.7          | 18.4               | 8.4            |
| Sycamore group            |              |                    |                |
| American sycamore         | 8.1          | 26.0               | 1.9            |
| Basswood group            |              |                    |                |
| American basswood         | .4           | --                 | .4             |
| Black walnut              | 13.3         | 26.2               | 7.3            |
| Black cherry              | .7           | 2.7                | 2.4            |
| Elm group                 |              |                    |                |
| American elm              | 3.3          | 7.3                | 5.6            |
| Rock elm                  | 1.2          | .7                 | .9             |
| Slippery elm              | 1.7          | 2.1                | 2.4            |
| Winged elm                | .7           | --                 | .8             |
| Other hardwoods           |              |                    |                |
| Black locust              | --           | --                 | .4             |
| Boxelder                  | --           | --                 | .3             |
| Butternut                 | .4           | 1.0                | .5             |
| Common persimmon          | .5           | --                 | .8             |
| Cucumber tree             | .2           | 1.0                | --             |
| Flowering dogwood         | --           | --                 | 1.6            |
| Hackberry                 | 2.0          | 6.2                | 1.0            |
| Honeylocust               | .5           | 1.4                | .2             |
| Ohio buckeye              | .1           | --                 | --             |
| Osage orange              | --           | --                 | .3             |
| Red mulberry              | --           | --                 | .6             |
| Sassafras                 | .2           | --                 | 1.7            |
| Noncommercial             | --           | --                 | 1.4            |
| <b>Total hardwoods</b>    | <b>787.3</b> | <b>1,888.0</b>     | <b>549.4</b>   |
| <b>All species</b>        | <b>851.1</b> | <b>2,085.2</b>     | <b>556.7</b>   |

<sup>1/</sup> International 1/4-inch rule.

Table 24.--Net volume of growing stock and sawtimber on commercial forest land, by ownership class and species group, Southwestern Ozarks, Missouri, 1972

GROWING STOCK

| Ownership class                        | : All<br>: species | : Shortleaf<br>: pine | : Other<br>: softwoods | : Soft<br>: hardwoods | : Hard<br>: hardwoods |
|--|--------------------|-----------------------|------------------------|-----------------------|-----------------------|
| <u>Thousand cords</u>                  |                    |                       |                        |                       |                       |
| National Forest                        | 1,820.8            | 322.6                 | 41.2                   | 33.2                  | 1,423.8               |
| Other federal                          | 14.4               | --                    | --                     | --                    | 14.4                  |
| State, county and municipal            | 36.9               | --                    | --                     | --                    | 36.9                  |
| Forest industry                        | 184.8              | 20.4                  | 4.9                    | 15.2                  | 144.3                 |
| Farmer and miscellaneous<br>private    | 8,716.0            | 344.8                 | 74.1                   | 269.8                 | 8,027.3               |
| All ownerships                         | 10,772.9           | 687.8                 | 120.2                  | 318.2                 | 9,646.7               |
| <u>SAWTIMBER</u>                       |                    |                       |                        |                       |                       |
| <u>Million board feet<sup>1/</sup></u> |                    |                       |                        |                       |                       |
| National Forest                        | 395.0              | 109.2                 | 6.2                    | 5.4                   | 274.2                 |
| Other federal                          | 3.1                | --                    | --                     | --                    | 3.1                   |
| State, county and municipal            | 10.0               | --                    | --                     | --                    | 10.0                  |
| Forest industry                        | 35.3               | 1.6                   | .2                     | 1.2                   | 32.3                  |
| Farmer and miscellaneous<br>private    | 1,641.8            | 75.9                  | 4.1                    | 55.3                  | 1,506.5               |
| All ownerships                         | 2,085.2            | 186.7                 | 10.5                   | 61.9                  | 1,826.1               |

<sup>1/</sup> International 1/4-inch rule.

Table 25.--Net volume of growing stock on commercial forest land, by species and diameter class, Southwestern Ozarks, Missouri, 1972

(Thousand cords)

| Species                | Diameter class (inches at breast height) |                |                |                |                |                |              |              |              |              |              |             |
|------------------------|--|----------------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------|--------------|-------------|
|                        | All classes                              | 5.0-6.9        | 7.0-8.9        | 9.0-10.9       | 11.0-12.9      | 13.0-14.9      | 15.0-16.9    | 17.0-18.9    | 19.0-20.9    | 21.0-22.9    | 23.0-28.9    | 29.0-39.0+  |
| <b>Softwoods:</b>      |  |                |                |                |                |                |              |              |              |              |              |             |
| Shortleaf pine         | 687.8                                    | 119.0          | 155.8          | 177.3          | 144.5          | 67.0           | 6.8          | 13.2         | 4.2          | --           | --           | --          |
| Eastern redcedar       | 120.2                                    | 62.1           | 33.2           | 10.8           | 14.1           | --             | --           | --           | --           | --           | --           | --          |
| <b>Total softwoods</b> | <b>808.0</b>                             | <b>181.1</b>   | <b>189.0</b>   | <b>188.1</b>   | <b>158.6</b>   | <b>67.0</b>    | <b>6.8</b>   | <b>13.2</b>  | <b>4.2</b>   | <b>--</b>    | <b>--</b>    | <b>--</b>   |
| <b>Hardwoods:</b>      |  |                |                |                |                |                |              |              |              |              |              |             |
| Select white oaks      | 1,906.3                                  | 271.7          | 321.9          | 349.0          | 346.5          | 340.3          | 166.1        | 57.4         | 31.0         | 6.9          | 15.5         | --          |
| Other white oaks       | 1,758.2                                  | 386.7          | 311.9          | 301.1          | 322.1          | 230.4          | 145.1        | 37.2         | 20.0         | 3.7          | --           | --          |
| Select red oaks        | 622.8                                    | 37.8           | 67.8           | 107.9          | 88.6           | 124.7          | 44.7         | 30.8         | 29.2         | 35.8         | 47.5         | 8.0         |
| Red oaks               | 3,763.3                                  | 549.7          | 665.6          | 641.5          | 660.3          | 505.9          | 311.6        | 177.6        | 106.9        | 58.7         | 71.3         | 14.2        |
| Other red oaks         | 286.2                                    | 82.2           | 42.5           | 44.6           | 39.7           | 36.0           | 31.0         | 6.8          | 2.1          | --           | 1.3          | --          |
| Hickory A              | 355.7                                    | 65.2           | 69.0           | 81.7           | 51.4           | 59.5           | --           | 22.2         | 6.7          | --           | --           | --          |
| Hickory B              | 585.6                                    | 143.5          | 133.5          | 121.1          | 79.1           | 51.7           | 47.4         | 4.4          | 4.9          | --           | --           | --          |
| Hard maple             | 48.9                                     | 16.1           | 6.5            | --             | 13.7           | 3.3            | 9.3          | --           | --           | --           | --           | --          |
| Soft maple             | 3.3                                      | --             | --             | --             | --             | --             | 3.3          | --           | --           | --           | --           | --          |
| Tupelo and blackgum    | 75.6                                     | 19.3           | 16.0           | 2.9            | 5.7            | 2.6            | 18.7         | 5.2          | --           | 5.2          | --           | --          |
| Ash                    | 137.1                                    | 12.5           | 27.1           | 25.3           | 17.9           | 15.8           | 5.0          | 16.2         | 7.0          | 1.4          | 4.3          | 4.6         |
| Sycamore               | 102.8                                    | 10.6           | 10.1           | 12.7           | 13.4           | 6.6            | 19.5         | 9.1          | 12.6         | 8.2          | --           | --          |
| Basswood               | 5.4                                      | --             | --             | 5.4            | --             | --             | --           | --           | --           | --           | --           | --          |
| Black walnut           | 167.2                                    | 24.3           | 36.7           | 32.3           | 28.3           | 23.4           | 6.8          | 8.3          | 7.1          | --           | --           | --          |
| Black cherry           | 9.2                                      | --             | --             | 3.2            | 1.9            | --             | --           | --           | --           | --           | --           | --          |
| Elm                    | 87.3                                     | 23.1           | 25.3           | 13.1           | 8.8            | 5.4            | --           | 8.0          | --           | 3.6          | --           | --          |
| Other hardwoods        | 50.0                                     | 10.9           | 6.9            | 5.2            | 11.6           | 5.8            | 8.3          | 1.3          | --           | --           | --           | --          |
| <b>Total hardwoods</b> | <b>9,964.9</b>                           | <b>1,653.6</b> | <b>1,740.8</b> | <b>1,747.0</b> | <b>1,689.0</b> | <b>1,411.4</b> | <b>816.8</b> | <b>384.5</b> | <b>227.5</b> | <b>123.5</b> | <b>144.0</b> | <b>26.8</b> |
| <b>All species</b>     | <b>10,772.9</b>                          | <b>1,834.7</b> | <b>1,929.8</b> | <b>1,935.1</b> | <b>1,847.6</b> | <b>1,478.4</b> | <b>823.6</b> | <b>397.7</b> | <b>231.7</b> | <b>123.5</b> | <b>144.0</b> | <b>26.8</b> |

Table 26.--Net volume of sawtimber on commercial forest land, by species and diameter class, Southwestern Ozarks, Missouri, 1972

(Million board feet)<sup>1/</sup>

| Species                | All classes    | Diameter class (inches at breast height) |              |              |              |              |              |              |              |              |              |           |           |           |           |           |           |           |           |           |           |
|------------------------|----------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                        |                | 9.0- : 10.9                              | 11.0- : 12.9 | 13.0- : 14.9 | 15.0- : 16.9 | 17.0- : 18.9 | 19.0- : 20.9 | 21.0- : 22.9 | 23.0- : 24.9 | 25.0- : 26.9 | 27.0- : 28.9 |           |           |           |           |           |           |           |           |           |           |
| <b>Softwoods:</b>      |                |  |              |              |              |              |              |              |              |              |              |           |           |           |           |           |           |           |           |           |           |
| Shortleaf pine         | 186.7          | 79.0                                     | 63.9         | 33.2         | 2.9          | 5.5          | 2.2          | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Eastern redcedar       | 10.5           | 4.5                                      | 6.0          | --           | --           | --           | --           | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| <b>Total softwoods</b> | <b>197.2</b>   | <b>83.5</b>                              | <b>69.9</b>  | <b>33.2</b>  | <b>2.9</b>   | <b>5.5</b>   | <b>2.2</b>   | <b>--</b>    | <b>--</b>    | <b>--</b>    | <b>--</b>    | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> |
| <b>Hardwoods:</b>      |                |  |              |              |              |              |              |              |              |              |              |           |           |           |           |           |           |           |           |           |           |
| Select white oaks      | 379.6          | --                                       | 132.1        | 136.3        | 65.8         | 23.7         | 12.4         | 2.8          | 6.5          | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Other white oaks       | 297.7          | --                                       | 126.1        | 92.3         | 55.6         | 14.2         | 8.0          | 1.5          | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Select red oaks        | 164.6          | --                                       | 36.8         | 53.5         | 18.4         | 13.1         | 10.6         | 12.6         | 17.0         | 2.6          | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Red oaks               | 749.2          | --                                       | 258.8        | 199.8        | 126.0        | 67.9         | 43.8         | 21.0         | 26.4         | 5.5          | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Other red oaks         | 48.6           | --                                       | 16.8         | 15.0         | 12.6         | 2.3          | .9           | --           | 1.0          | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Hickory A              | 53.4           | --                                       | 19.1         | 24.4         | --           | 7.9          | 2.0          | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Hickory B              | 71.0           | --                                       | 29.6         | 19.9         | 18.4         | 1.7          | 1.4          | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Hard maple             | 8.4            | --                                       | 4.5          | 1.0          | 2.9          | --           | --           | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Soft maple             | 1.3            | --                                       | --           | --           | 1.3          | --           | --           | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Tupelo and blackgum    | 13.7           | --                                       | 1.6          | .8           | 6.7          | 2.0          | --           | 2.6          | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Ash                    | 25.9           | --                                       | 5.6          | 5.1          | 1.8          | 5.9          | 2.8          | .6           | 2.2          | 1.9          | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Sycamore               | 26.0           | --                                       | 4.3          | 2.6          | 6.5          | 3.3          | 5.8          | 3.5          | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Black walnut           | 26.2           | --                                       | 10.0         | 7.8          | 2.4          | 3.3          | 2.7          | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Black cherry           | 2.7            | --                                       | .8           | --           | --           | --           | --           | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Elm                    | 10.1           | --                                       | 3.3          | 2.0          | --           | 3.5          | --           | 1.3          | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| Other hardwoods        | 9.6            | --                                       | 4.1          | 2.2          | 2.8          | .5           | --           | --           | --           | --           | --           | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |
| <b>Total hardwoods</b> | <b>1,888.0</b> | <b>--</b>                                | <b>653.5</b> | <b>562.7</b> | <b>321.2</b> | <b>149.3</b> | <b>90.4</b>  | <b>45.9</b>  | <b>55.0</b>  | <b>10.0</b>  | <b>--</b>    | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> |
| <b>All species</b>     | <b>2,085.2</b> | <b>83.5</b>                              | <b>723.4</b> | <b>595.9</b> | <b>324.1</b> | <b>154.8</b> | <b>92.6</b>  | <b>45.9</b>  | <b>55.0</b>  | <b>10.0</b>  | <b>--</b>    | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b> |

<sup>1/</sup> International 1/4-inch rule.

Table 27.--Net volume of growing stock on commercial forest land, by species and forest type, Southwestern Ozarks, Missouri, 1972

(Million cubic feet)

| Species                | All : forest : types | Shortleaf : pine | Eastern : redcedar | Eastern : redcedar : hardwood | Eastern : redcedar- : hardwood | Shortleaf : pine-oak | Post- : oak  | Black- : scarlet : oak | White : oak | Elm-ash- : cottonwood | Maple- : beech | Non- : stocked |
|------------------------|----------------------|------------------|--------------------|-------------------------------|--------------------------------|----------------------|--------------|------------------------|-------------|-----------------------|----------------|----------------|
| <b>Softwoods:</b>      |                      |                  |                    |                               |                                |                      |              |                        |             |                       |                |                |
| Shortleaf pine         | 54.3                 | 13.5             | --                 | .2                            | 22.4                           | 3.1                  | 9.2          | 5.3                    | .3          | --                    | --             | .3             |
| Eastern redcedar       | 9.5                  | --               | .2                 | 4.3                           | --                             | 1.6                  | 1.2          | 1.1                    | .5          | --                    | --             | .6             |
| <b>Total softwoods</b> | <b>63.8</b>          | <b>13.5</b>      | <b>.2</b>          | <b>4.5</b>                    | <b>22.4</b>                    | <b>4.7</b>           | <b>10.4</b>  | <b>6.4</b>             | <b>.8</b>   | <b>--</b>             | <b>--</b>      | <b>.9</b>      |
| <b>Hardwoods:</b>      |                      |                  |                    |                               |                                |                      |              |                        |             |                       |                |                |
| Select white oaks      | 150.6                | .2               | .1                 | 2.3                           | 4.9                            | 13.5                 | 60.4         | 64.9                   | 2.9         | .6                    | .8             |                |
| Other white oaks       | 138.9                | .4               | .1                 | 3.0                           | 2.4                            | 90.5                 | 33.6         | 5.9                    | .2          | .5                    | 2.3            |                |
| Select red oaks        | 49.2                 | .2               | --                 | 1.8                           | 1.9                            | 1.9                  | 36.2         | 5.3                    | .2          | 1.7                   | --             |                |
| Red oaks               | 297.3                | 1.1              | --                 | 1.7                           | 7.9                            | 50.2                 | 208.2        | 23.9                   | 1.3         | .2                    | 2.8            |                |
| Other red oaks         | 22.6                 | --               | --                 | --                            | .3                             | 14.4                 | 7.5          | .4                     | --          | --                    | --             |                |
| Hickory A              | 28.1                 | --               | --                 | .2                            | .5                             | 7.4                  | 13.9         | 5.4                    | .7          | --                    | --             |                |
| Hickory B              | 46.3                 | --               | --                 | .9                            | .5                             | 19.9                 | 17.5         | 6.5                    | .5          | .5                    | .5             |                |
| Hard maple             | 3.9                  | --               | --                 | --                            | --                             | .5                   | 1.9          | .8                     | --          | .7                    | --             |                |
| Soft maple             | .3                   | --               | --                 | --                            | --                             | --                   | --           | --                     | .3          | --                    | --             |                |
| Tupelo and blackgum    | 6.0                  | --               | --                 | --                            | .2                             | .3                   | 2.8          | 2.7                    | --          | --                    | --             |                |
| Ash                    | 10.8                 | --               | .1                 | .6                            | --                             | 1.3                  | 4.5          | 2.7                    | 1.3         | .3                    | --             |                |
| Sycamore               | 8.1                  | --               | --                 | .1                            | --                             | .2                   | 2.2          | 2.1                    | 3.5         | --                    | --             |                |
| Basswood               | .4                   | --               | --                 | --                            | --                             | --                   | --           | .2                     | --          | --                    | --             |                |
| Black walnut           | 13.3                 | --               | --                 | .8                            | --                             | .4                   | 6.8          | 3.4                    | .6          | 1.1                   | .2             |                |
| Black cherry           | .7                   | --               | --                 | --                            | --                             | .2                   | --           | .3                     | .2          | --                    | --             |                |
| Elm                    | 6.9                  | --               | --                 | .9                            | --                             | 1.7                  | 2.4          | 1.3                    | .4          | .4                    | .2             |                |
| Other hardwoods        | 3.9                  | --               | --                 | .8                            | --                             | .3                   | .6           | 1.5                    | .4          | --                    | .3             |                |
| <b>Total hardwoods</b> | <b>787.3</b>         | <b>1.9</b>       | <b>.3</b>          | <b>13.1</b>                   | <b>18.6</b>                    | <b>202.7</b>         | <b>398.5</b> | <b>127.3</b>           | <b>11.6</b> | <b>6.2</b>            | <b>7.1</b>     |                |
| <b>All species</b>     | <b>851.1</b>         | <b>15.4</b>      | <b>.5</b>          | <b>17.6</b>                   | <b>41.0</b>                    | <b>207.4</b>         | <b>408.9</b> | <b>133.7</b>           | <b>12.4</b> | <b>6.2</b>            | <b>8.0</b>     |                |

Table 28.--Net volume of sawtimber on commercial forest land, by species and forest type, Southwestern Ozarks, Missouri, 1972

(Million board feet)<sup>1/</sup>

| Species                | All : forest : types | Shortleaf : pine | Eastern : redcedar- : hardwood | Shortleaf : pine-oak | Post- : blackjck : oak | Black- : scarlet : oak | White : oak  | Elm-ash- : cottonwood | Maple- : beech | Non- : stocked |
|------------------------|----------------------|------------------|--------------------------------|----------------------|------------------------|------------------------|--------------|-----------------------|----------------|----------------|
| <b>Softwoods:</b>      |                      |                  |                                |                      |                        |                        |              |                       |                |                |
| Shortleaf pine         | 186.7                | 40.2             | 1.4                            | 82.5                 | 9.0                    | 33.4                   | 17.2         | 1.6                   | --             | 1.4            |
| Eastern redcedar       | 10.5                 | --               | 2.8                            | --                   | 1.5                    | 3.9                    | 1.4          | --                    | --             | .9             |
| <b>Total softwoods</b> | <b>197.2</b>         | <b>40.2</b>      | <b>4.2</b>                     | <b>82.5</b>          | <b>10.5</b>            | <b>37.3</b>            | <b>18.6</b>  | <b>1.6</b>            | <b>--</b>      | <b>2.3</b>     |
| <b>Hardwoods:</b>      |                      |                  |                                |                      |                        |                        |              |                       |                |                |
| Select white oaks      | 379.6                | .7               | 2.4                            | 13.5                 | 38.1                   | 161.1                  | 153.1        | 4.1                   | 3.0            | 3.6            |
| Other white oaks       | 297.7                | .6               | 9.6                            | 3.1                  | 181.8                  | 77.6                   | 18.6         | .9                    | 2.5            | 3.0            |
| Select red oaks        | 164.6                | --               | 2.9                            | 1.9                  | 7.4                    | 129.9                  | 14.3         | 1.0                   | 7.2            | --             |
| Red oaks               | 749.2                | 3.1              | 2.1                            | 24.1                 | 117.7                  | 534.9                  | 60.6         | 1.8                   | --             | 4.9            |
| Other red oaks         | 48.6                 | --               | --                             | --                   | 31.8                   | 15.9                   | .9           | --                    | --             | --             |
| Hickory A              | 53.4                 | --               | --                             | --                   | 14.9                   | 24.8                   | 12.8         | .9                    | --             | --             |
| Hickory B              | 71.0                 | --               | --                             | .9                   | 28.7                   | 28.6                   | 10.4         | --                    | 1.5            | .8             |
| Hard maple             | 8.4                  | --               | --                             | --                   | --                     | 4.8                    | 2.3          | --                    | 1.3            | --             |
| Soft maple             | 1.3                  | --               | --                             | --                   | --                     | --                     | --           | 1.3                   | --             | --             |
| Tupelo and blackgum    | 13.7                 | --               | --                             | --                   | .8                     | 3.1                    | 9.8          | --                    | --             | --             |
| Ash                    | 25.9                 | --               | 1.9                            | --                   | 2.8                    | 13.0                   | 4.9          | 3.3                   | --             | --             |
| Sycamore               | 26.0                 | --               | --                             | --                   | --                     | 4.5                    | 8.7          | 12.8                  | --             | --             |
| Black walnut           | 26.2                 | --               | .4                             | --                   | .8                     | 16.6                   | 5.1          | 1.1                   | 1.3            | .9             |
| Black cherry           | 2.7                  | --               | --                             | --                   | --                     | --                     | 2.0          | .7                    | --             | --             |
| Elm                    | 10.1                 | --               | --                             | --                   | .7                     | 6.0                    | 1.2          | --                    | 2.2            | --             |
| Other hardwoods        | 9.6                  | --               | 2.0                            | --                   | --                     | 1.0                    | 5.6          | 1.0                   | --             | --             |
| <b>Total hardwoods</b> | <b>1,888.0</b>       | <b>4.4</b>       | <b>21.3</b>                    | <b>43.5</b>          | <b>425.5</b>           | <b>1,021.8</b>         | <b>310.3</b> | <b>28.9</b>           | <b>19.1</b>    | <b>13.2</b>    |
| <b>All species</b>     | <b>2,085.2</b>       | <b>44.6</b>      | <b>25.5</b>                    | <b>126.0</b>         | <b>436.0</b>           | <b>1,059.1</b>         | <b>328.9</b> | <b>30.5</b>           | <b>19.1</b>    | <b>15.5</b>    |

<sup>1/</sup> International 1/4-inch rule.

Table 30.--Net volume of short-log trees on commercial forest land, by species and diameter class, Southwestern Ozarks, Missouri, 1972

(Million board feet)<sup>1/</sup>

| Species             | Diameter class (inches at breast height) |        |        |        |        |        |        |        |        |        |       |
|---------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
|                     | All                                      | 9.0-   | 11.0-  | 13.0-  | 15.0-  | 17.0   | 19.0-  | 21.0-  | 23.0-  | 29.0-  | 39.0+ |
|                     | classes                                  | : 10.9 | : 12.9 | : 14.9 | : 16.9 | : 18.9 | : 20.9 | : 22.9 | : 28.9 | : 38.9 | :     |
| Softwoods:          |  |        |        |        |        |        |        |        |        |        |       |
| Eastern redcedar    | 3.4                                      | 2.6    | --     | .8     | --     | --     | --     | --     | --     | --     | --    |
| Total softwoods     | 3.4                                      | 2.6    | --     | .8     | --     | --     | --     | --     | --     | --     | --    |
| Hardwoods:          |  |        |        |        |        |        |        |        |        |        |       |
| Select white oaks   | 94.4                                     | --     | 24.9   | 27.3   | 20.0   | 10.0   | 4.0    | --     | 5.8    | 2.4    | --    |
| Other white oaks    | 72.5                                     | --     | 34.2   | 21.0   | 8.0    | 5.8    | 1.8    | --     | 1.2    | .5     | --    |
| Select red oaks     | 6.5                                      | --     | 2.7    | .5     | .4     | --     | .7     | 1.3    | .9     | --     | --    |
| Red oaks            | 69.6                                     | --     | 16.4   | 13.5   | 21.1   | 4.9    | 1.5    | 4.5    | 6.3    | 1.4    | --    |
| Other red oaks      | 7.4                                      | --     | 3.4    | 1.7    | 1.1    | .6     | --     | --     | .6     | --     | --    |
| Hickory A           | 3.7                                      | --     | 1.0    | 2.0    | --     | .7     | --     | --     | --     | --     | --    |
| Hickory B           | 5.5                                      | --     | 3.8    | 1.2    | .5     | --     | --     | --     | --     | --     | --    |
| Hard maple          | 1.6                                      | --     | .8     | --     | .8     | --     | --     | --     | --     | --     | --    |
| Soft maple          | 1.2                                      | --     | .6     | .6     | --     | --     | --     | --     | --     | --     | --    |
| Tupelo and blackgum | 1.2                                      | --     | --     | .6     | --     | --     | --     | --     | .6     | --     | --    |
| Ash                 | 3.4                                      | --     | 1.7    | 1.7    | --     | --     | --     | --     | --     | --     | --    |
| Basswood            | .4                                       | --     | --     | --     | --     | --     | --     | --     | --     | .4     | --    |
| Black walnut        | 2.9                                      | --     | .8     | 1.7    | --     | .4     | --     | --     | --     | --     | --    |
| Elm                 | 3.3                                      | --     | 1.7    | .7     | .9     | --     | --     | --     | --     | --     | --    |
| Other hardwoods     | 1.1                                      | --     | .5     | .6     | --     | --     | --     | --     | --     | --     | --    |
| Total hardwoods     | 274.7                                    | --     | 92.5   | 73.1   | 52.8   | 22.4   | 8.0    | 5.8    | 15.4   | 4.7    | --    |
| All species         | 278.1                                    | 2.6    | 92.5   | 73.9   | 52.8   | 22.4   | 8.0    | 5.8    | 15.4   | 4.7    | --    |

<sup>1/</sup> International 1/4-inch rule.

Table 31.--*Net volume of sawtimber on commercial forest land, by species and log grade class, Southwestern Ozarks, Missouri, 1972*

(Million board feet)<sup>1/</sup>

| Species             | : All :<br>: grades | : Log :<br>: Grade 1 | : Log :<br>: Grade 2 | : Log :<br>: Grade 3 | : Tie and<br>: timber |
|---------------------|---------------------|----------------------|----------------------|----------------------|-----------------------|
| <b>Softwoods:</b>   |                     |                      |                      |                      |                       |
| Shortleaf pine      | 186.7               | 25.0                 | 27.5                 | 134.2                | --                    |
| Eastern redcedar    | 10.5                | --                   | --                   | 10.5                 | --                    |
| Total softwoods     | 197.2               | 25.0                 | 27.5                 | 144.7                | --                    |
| <b>Hardwoods:</b>   |                     |                      |                      |                      |                       |
| Select white oaks   | 379.6               | 23.3                 | 80.3                 | 180.6                | 95.4                  |
| Other white oaks    | 297.7               | 11.2                 | 35.9                 | 182.8                | 67.8                  |
| Select red oaks     | 164.6               | 9.9                  | 69.5                 | 71.3                 | 13.9                  |
| Red oaks            | 749.2               | 38.2                 | 163.2                | 373.2                | 174.6                 |
| Other red oaks      | 48.6                | --                   | 8.6                  | 19.5                 | 20.5                  |
| Hickory A           | 53.4                | --                   | 11.5                 | 25.5                 | 16.4                  |
| Hickory B           | 71.0                | 3.3                  | 6.9                  | 36.9                 | 23.9                  |
| Hard maple          | 8.4                 | --                   | 2.3                  | 5.6                  | .5                    |
| Soft maple          | 1.3                 | .3                   | .4                   | .5                   | .1                    |
| Tupelo and blackgum | 13.7                | --                   | 9.4                  | --                   | 4.3                   |
| Ash                 | 25.9                | --                   | 12.4                 | 13.5                 | --                    |
| Sycamore            | 26.0                | 11.2                 | 5.5                  | 6.5                  | 2.8                   |
| Black walnut        | 26.2                | 2.5                  | 7.4                  | 16.3                 | --                    |
| Black cherry        | 2.7                 | --                   | .3                   | 1.9                  | .5                    |
| Elm                 | 10.1                | --                   | 10.1                 | --                   | --                    |
| Other hardwoods     | 9.6                 | --                   | 1.0                  | 7.7                  | .9                    |
| Total hardwoods     | 1,888.0             | 99.9                 | 424.7                | 941.8                | 421.6                 |
| All species         | 2,085.2             | 124.9                | 452.2                | 1,086.5              | 421.6                 |

<sup>1/</sup> International 1/4-inch rule.

Table 32.--*Walnut volume on nonforest land, by diameter class and class of timber, Southwestern Ozarks, Missouri, 1972*

| Diameter class<br>(inches at breast<br>height) | : Growing :<br>: stock :<br>: trees | : Sawtimber :<br>: trees             | : Rough :<br>: trees   | : Short-log :<br>: trees             | : Rotten :<br>: trees  |
|--|-------------------------------------|--------------------------------------|------------------------|--------------------------------------|------------------------|
|  | Thousand<br>cubic feet              | Thousand<br>board feet <sup>1/</sup> | Thousand<br>cubic feet | Thousand<br>board feet <sup>1/</sup> | Thousand<br>cubic feet |
| 5.0-6.9  | --                                  | --                                   | --                     | --                                   | 104.1                  |
| 7.0-8.9  | --                                  | --                                   | 161.6                  | --                                   | --                     |
| 9.0-10.9                                       | 225.5                               | --                                   | 479.0                  | --                                   | --                     |
| 11.0-12.9                                      | 871.5                               | 4,362.1                              | 157.1                  | --                                   | 58.5                   |
| 13.0-14.9                                      | 270.9                               | 1,186.9                              | --                     | 743.7                                | --                     |
| 15.0-16.9                                      | --                                  | --                                   | --                     | 665.4                                | 123.0                  |
| 17.0-18.9                                      | --                                  | --                                   | --                     | 618.1                                | --                     |
| 19.0-20.9                                      | 307.9                               | 1,476.8                              | 218.6                  | --                                   | --                     |
| 21.0-22.9                                      | --                                  | --                                   | --                     | --                                   | --                     |
| 23.0-28.9                                      | 574.8                               | 3,264.6                              | --                     | --                                   | --                     |
| 29.0-38.9                                      | --                                  | --                                   | --                     | --                                   | 738.1                  |
| 39.0+  | --                                  | --                                   | --                     | --                                   | --                     |
| All diameters                                  | 2,250.6                             | 10,290.4                             | 1,016.3                | 2,027.2                              | 1,023.7                |

<sup>1/</sup> International 1/4-inch rule.

Table 33.--Net annual growth of growing stock and sawtimber on commercial forest land, by species and county, Southwestern Ozarks, Missouri, 1971

| Species             | : All counties : |            | : Barry :  |            | : Christian : |            | : Douglas : |            | : Howell   |          |
|---------------------|------------------|------------|------------|------------|---------------|------------|-------------|------------|------------|----------|
|                     | : Growing :      | : Saw- :   | : Growing: | : Saw- :   | : Growing:    | : Saw- :   | : Growing:  | : Saw- :   | : Growing: | : Saw-   |
|                     | : stock :        | : timber : | : stock :  | : timber : | : stock :     | : timber : | : stock :   | : timber : | : stock :  | : timber |
|                     | Cords            | Thousand   | Cords      | Thousand   | Cords         | Thousand   | Cords       | Thousand   | Cords      | Thousand |
|                     |                  | bd.ft.1/   |            | bd.ft.1/   |               | bd.ft.1/   |             | bd.ft.1/   |            | bd.ft.1/ |
| Softwoods:          |                  |            |            |            |               |            |             |            |            |          |
| Shortleaf pine      | 28,558           | 7,219      | 2,823      | 641        | 1,633         | 413        | 3,924       | 1,003      | 4,013      | 982      |
| Eastern redcedar    | 4,138            | 368        | 380        | 34         | 266           | 22         | 316         | 32         | 354        | 32       |
| Total softwoods     | 32,696           | 7,587      | 3,203      | 675        | 1,899         | 435        | 4,240       | 1,035      | 4,367      | 1,014    |
| Hardwoods:          |                  |            |            |            |               |            |             |            |            |          |
| Select white oaks   | 49,355           | 8,479      | 3,886      | 679        | 2,759         | 465        | 5,228       | 894        | 5,873      | 1,060    |
| Other white oaks    | 35,164           | 4,379      | 2,669      | 323        | 1,878         | 224        | 3,712       | 483        | 4,318      | 573      |
| Select red oaks     | 22,126           | 5,382      | 1,784      | 421        | 1,196         | 286        | 2,351       | 561        | 2,727      | 679      |
| Red oaks            | 132,771          | 22,334     | 10,354     | 1,794      | 7,190         | 1,200      | 14,114      | 2,343      | 16,203     | 2,830    |
| Other red oaks      | 6,962            | 1,064      | 532        | 80         | 367           | 56         | 734         | 112        | 835        | 133      |
| Hickory A           | 8,165            | 954        | 638        | 74         | 455           | 53         | 866         | 100        | 976        | 115      |
| Hickory B           | 13,635           | 1,332      | 1,038      | 103        | 747           | 71         | 1,443       | 142        | 1,620      | 164      |
| Hard maple          | 1,074            | 176        | 80         | 13         | 59            | 9          | 116         | 19         | 128        | 23       |
| Soft maple          | 89               | 47         | 6          | 3          | 10            | 5          | 8           | 5          | 5          | 3        |
| Tupelo and blackgum | 1,039            | 201        | 89         | 16         | 50            | 11         | 114         | 22         | 127        | 25       |
| Ash                 | 3,176            | 677        | 253        | 55         | 190           | 39         | 329         | 69         | 354        | 84       |
| Sycamore            | 5,088            | 1,446      | 380        | 106        | 342           | 102        | 519         | 145        | 494        | 140      |
| Basswood            | 152              | --         | 13         | --         | 9             | --         | 17          | --         | 18         | --       |
| Black walnut        | 4,440            | 668        | 342        | 51         | 240           | 33         | 468         | 71         | 506        | 85       |
| Black cherry        | 213              | 48         | 15         | 3          | 16            | 4          | 21          | 5          | 19         | 4        |
| Elm                 | 1,013            | -55        | 63         | -4         | 51            | -6         | 89          | -2         | 114        | 1        |
| Other hardwoods     | 3,924            | 189        | 304        | 15         | 228           | 12         | 405         | 19         | 430        | 19       |
| Total hardwoods     | 288,386          | 47,321     | 22,446     | 3,732      | 15,787        | 2,564      | 30,534      | 4,988      | 34,747     | 5,938    |
| All species         | 321,082          | 54,908     | 25,649     | 4,407      | 17,686        | 2,999      | 34,774      | 6,023      | 39,114     | 6,952    |

(Table 33 cont. on next page)

(Table 33 cont.)

| Species             | McDonald |          | Newton  |          | Ozark   |          | Stone   |          | Taney   |          |
|---------------------|----------|----------|---------|----------|---------|----------|---------|----------|---------|----------|
|                     | Growing  | Saw-     | Growing | Saw-     | Growing | Saw-     | Growing | Saw-     | Growing | Saw-     |
|                     | stock    | timber   | stock   | timber   | stock   | timber   | stock   | timber   | stock   | timber   |
|                     | Cords    | Thousand | Cords   | Thousand | Cords   | Thousand | Cords   | Thousand | Cords   | Thousand |
|                     |          | bd.ft.1/ |         | bd.ft.1/ |         | bd.ft.1/ |         | bd.ft.1/ |         | bd.ft.1/ |
| <b>Softwoods:</b>   |          |          |         |          |         |          |         |          |         |          |
| Shortleaf pine      | 1,418    | 368      | 873     | 223      | 2,531   | 636      | 1,165   | 295      | 1,266   | 332      |
| Eastern redcedar    | 228      | 20       | 177     | 12       | 456     | 49       | 316     | 22       | 696     | 63       |
| Total softwoods     | 1,646    | 388      | 1,050   | 235      | 2,987   | 685      | 1,481   | 317      | 1,962   | 395      |
| <b>Hardwoods:</b>   |          |          |         |          |         |          |         |          |         |          |
| Select white oaks   | 3,835    | 658      | 2,329   | 415      | 5,089   | 889      | 2,671   | 440      | 3,418   | 573      |
| Other white oaks    | 2,816    | 358      | 1,682   | 222      | 3,550   | 456      | 1,828   | 198      | 2,439   | 237      |
| Select red oaks     | 1,722    | 431      | 1,032   | 263      | 2,278   | 564      | 1,178   | 279      | 1,556   | 359      |
| Red oaks            | 10,759   | 1,785    | 6,190   | 1,074    | 13,367  | 2,281    | 6,873   | 1,160    | 8,253   | 1,407    |
| Other red oaks      | 557      | 86       | 329     | 53       | 709     | 110      | 367     | 55       | 481     | 72       |
| Hickory A           | 644      | 76       | 387     | 46       | 839     | 98       | 427     | 50       | 559     | 66       |
| Hickory B           | 1,063    | 104      | 620     | 64       | 1,380   | 136      | 722     | 68       | 1,013   | 94       |
| Hard maple          | 82       | 13       | 49      | 8        | 105     | 18       | 56      | 9        | 82      | 13       |
| Soft maple          | 6        | 3        | 6       | 3        | 14      | 7        | 6       | 3        | 3       | 1        |
| Tupelo and blackgum | 89       | 16       | 51      | 10       | 101     | 21       | 51      | 11       | 63      | 13       |
| Ash                 | 240      | 53       | 152     | 34       | 355     | 74       | 177     | 37       | 228     | 43       |
| Sycamore            | 392      | 113      | 241     | 75       | 595     | 175      | 291     | 82       | 316     | 79       |
| Basswood            | 10       | --       | 6       | --       | 16      | --       | 7       | --       | 13      | --       |
| Black walnut        | 342      | 58       | 203     | 36       | 466     | 65       | 253     | 37       | 329     | 27       |
| Black cherry        | 17       | 3        | 10      | 3        | 24      | 6        | 13      | 3        | 12      | 2        |
| Elm                 | 89       | -2       | 51      | -4       | 114     | -3       | 63      | -9       | 101     | -15      |
| Other hardwoods     | 329      | 15       | 177     | 9        | 393     | 22       | 215     | 10       | 266     | 13       |
| Total hardwoods     | 22,992   | 3,770    | 13,515  | 2,311    | 29,395  | 4,919    | 15,198  | 2,433    | 19,132  | 2,984    |
| All species         | 24,638   | 4,158    | 14,565  | 2,546    | 32,382  | 5,604    | 16,679  | 2,750    | 21,094  | 3,379    |

(Table 33 cont.)

(Table 33 cont. below)

| Species             | Texas   |          | Webster |          | Wright  |          |
|---------------------|---------|----------|---------|----------|---------|----------|
|                     | Growing | Saw-     | Growing | Saw-     | Growing | Saw-     |
|                     | stock   | timber   | stock   | timber   | stock   | timber   |
|                     | Cords   | Thousand | Cords   | Thousand | Cords   | Thousand |
|                     |         | bd.ft.1/ |         | bd.ft.1/ |         | bd.ft.1/ |
| <b>Softwoods:</b>   |         |          |         |          |         |          |
| Shortleaf pine      | 6,418   | 1,686    | 1,025   | 261      | 1,469   | 379      |
| Eastern redcedar    | 468     | 46       | 203     | 15       | 278     | 21       |
| Total softwoods     | 6,886   | 1,732    | 1,228   | 276      | 1,747   | 400      |
| <b>Hardwoods:</b>   |         |          |         |          |         |          |
| Select white oaks   | 8,051   | 1,343    | 2,722   | 481      | 3,494   | 582      |
| Other white oaks    | 5,824   | 738      | 1,957   | 253      | 2,491   | 314      |
| Select red oaks     | 3,583   | 859      | 1,209   | 307      | 1,510   | 373      |
| Red oaks            | 22,620  | 3,667    | 7,342   | 1,264    | 9,506   | 1,529    |
| Other red oaks      | 1,165   | 171      | 380     | 61       | 506     | 75       |
| Hickory A           | 1,335   | 155      | 453     | 53       | 586     | 68       |
| Hickory B           | 2,279   | 218      | 735     | 74       | 975     | 94       |
| Hard maple          | 178     | 28       | 58      | 10       | 81      | 13       |
| Soft maple          | 7       | 4        | 5       | 3        | 13      | 7        |
| Tupelo and blackgum | 177     | 32       | 51      | 11       | 76      | 13       |
| Ash                 | 468     | 101      | 177     | 39       | 253     | 49       |
| Sycamore            | 759     | 202      | 278     | 84       | 481     | 143      |
| Basswood            | 24      | --       | 8       | --       | 11      | --       |
| Black walnut        | 722     | 112      | 240     | 41       | 329     | 52       |
| Black cherry        | 32      | 6        | 12      | 3        | 22      | 6        |
| Elm                 | 139     | -5       | 63      | -2       | 76      | -4       |
| Other hardwoods     | 658     | 29       | 215     | 11       | 304     | 15       |
| Total hardwoods     | 48,021  | 7,660    | 15,905  | 2,693    | 20,714  | 3,329    |
| All species         | 54,907  | 9,392    | 17,133  | 2,969    | 22,461  | 3,729    |

1/ International 1/4-inch rule.

Table 34.--Timber removals from growing stock and sawtimber on commercial forest land, by item and species group, Southwestern Ozarks, Missouri, 1971<sup>1/</sup>

| Item                              | Growing stock    |        |            |            |            |            | Sawtimber |        |            |            |            |            |            |            |            |            |  |
|-----------------------------------|------------------|--------|------------|------------|------------|------------|-----------|--------|------------|------------|------------|------------|------------|------------|------------|------------|--|
|                                   | All : Shortleaf: |        | Soft :     |            | Hard :     |            | All :     |        | Shortleaf: |            | Other :    |            | Soft :     |            | Hard :     |            |  |
|                                   | species :        | pine : | softwoods: | hardwoods: | hardwoods: | hardwoods: | species:  | pine : | pine :     | softwoods: | hardwoods: | hardwoods: | hardwoods: | hardwoods: | hardwoods: | hardwoods: |  |
| Cords                             |                  |        |            |            |            |            |           |        |            |            |            |            |            |            |            |            |  |
| Thousand board feet <sup>2/</sup> |                  |        |            |            |            |            |           |        |            |            |            |            |            |            |            |            |  |
| Roundwood products:               |                  |        |            |            |            |            |           |        |            |            |            |            |            |            |            |            |  |
| Saw logs                          | 119,689          | 11,027 | 4,522      | 8,481      | 95,659     | 46,346     | 5,269     | 1,693  | 4,224      | 35,160     |            |            |            |            |            |            |  |
| Cooperage logs                    | 6,835            | --     | --         | --         | 6,835      | 3,249      | --        | --     | --         | 3,249      |            |            |            |            |            |            |  |
| Charcoal wood                     | 12,000           | --     | --         | 51         | 11,949     | 1,399      | --        | --     | 6          | 1,393      |            |            |            |            |            |            |  |
| Posts                             | 10,064           | 4,837  | 316        | 139        | 4,772      | 1,401      | 240       | 15     | 37         | 1,109      |            |            |            |            |            |            |  |
| Poles                             | 2,083            | 2,058  | --         | --         | 25         | 288        | --        | --     | --         | --         |            |            |            |            |            |            |  |
| Fuelwood                          | 22,140           | --     | 165        | 2,025      | 19,950     | 4,149      | --        | 31     | 382        | 3,736      |            |            |            |            |            |            |  |
| Miscellaneous <sup>3/</sup>       | 1,013            | --     | --         | 102        | 911        | 434        | --        | --     | 43         | 391        |            |            |            |            |            |            |  |
| All products                      | 173,824          | 17,922 | 5,003      | 10,798     | 140,101    | 57,266     | 5,797     | 1,739  | 4,692      | 45,038     |            |            |            |            |            |            |  |
| Logging residues                  | 33,721           | 1,187  | 15         | 924        | 31,595     | 3,900      | 139       | 1      | 131        | 3,629      |            |            |            |            |            |            |  |
| Other removals                    | 198,784          | 40,430 | --         | 12,975     | 145,379    | 23,834     | 2,324     | --     | 1,763      | 19,747     |            |            |            |            |            |            |  |
| Total removals                    | 406,329          | 59,539 | 5,018      | 24,697     | 317,075    | 85,000     | 8,260     | 1,740  | 6,586      | 68,414     |            |            |            |            |            |            |  |

<sup>1/</sup> See glossary for timber removals from growing stock (page 5).

<sup>2/</sup> International 1/4-inch rule.

<sup>3/</sup> Includes shaving wood, heading bolts, etc.

Table 35.--Timber removals from growing stock and sawtimber on commercial forest land, by species and county, Southwestern Ozarks, Missouri, 1971<sup>1</sup>

| Species                | All counties         |                      |                      | Barry                |                      |                      | Christian            |                      |                      | Douglas              |                      |                      | Howell               |                      |                      |  |
|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|
|                        | Growing : stock      | Sawtimber : stock    | Cords                | Growing : stock      | Sawtimber : stock    | Cords                | Growing : stock      | Sawtimber : stock    | Cords                | Growing : stock      | Sawtimber : stock    | Cords                | Growing : stock      | Sawtimber : stock    | Cords                |  |
|                        | Thousand<br>bd. ft./ |  |
| <b>Softwoods:</b>      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |  |
| Shortleaf pine         | 59,539               | 8,260                | 3,942                | 208                  | 2,559                | 165                  | 7,689                | 928                  | 10,134               | 1,679                |                      |                      |                      |                      |                      |  |
| Eastern redcedar       | 4,883                | 1,734                | 135                  | 42                   | 180                  | 66                   | 226                  | 84                   |                      |                      |                      |                      |                      |                      |                      |  |
| Other softwoods        | 135                  | 6                    | --                   | --                   | --                   | --                   | --                   | --                   |                      |                      |                      |                      |                      |                      |                      |  |
| <b>Total softwoods</b> | <b>64,557</b>        | <b>10,000</b>        | <b>4,077</b>         | <b>250</b>           | <b>2,739</b>         | <b>231</b>           | <b>7,915</b>         | <b>1,012</b>         | <b>10,134</b>        | <b>1,679</b>         |                      |                      |                      |                      |                      |  |
| <b>Hardwoods:</b>      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |  |
| Select white oaks      | 52,602               | 12,489               | 3,436                | 766                  | 1,941                | 455                  | 4,288                | 1,016                | 11,283               | 2,973                |                      |                      |                      |                      |                      |  |
| Other white oaks       | 54,436               | 11,427               | 3,725                | 733                  | 2,240                | 447                  | 4,764                | 972                  | 10,300               | 2,489                |                      |                      |                      |                      |                      |  |
| Select red oaks        | 8,524                | 1,966                | 804                  | 197                  | 430                  | 98                   | 816                  | 185                  | 1,938                | 496                  |                      |                      |                      |                      |                      |  |
| Red oaks               | 169,727              | 35,425               | 15,303               | 3,456                | 8,687                | 1,778                | 16,689               | 3,419                | 34,517               | 8,281                |                      |                      |                      |                      |                      |  |
| Other red oaks         | 4,140                | 832                  | 361                  | 79                   | 211                  | 42                   | 410                  | 81                   | 801                  | 187                  |                      |                      |                      |                      |                      |  |
| Hickory A              | 430                  | 58                   | 34                   | 4                    | 24                   | 3                    | 46                   | 6                    | 51                   | 7                    |                      |                      |                      |                      |                      |  |
| Hickory B              | 22,505               | 4,680                | 1,276                | 217                  | 1,191                | 251                  | 1,720                | 287                  | 4,645                | 1,161                |                      |                      |                      |                      |                      |  |
| Hard maple             | 140                  | 57                   | --                   | --                   | 25                   | 9                    | --                   | 3                    | --                   | --                   |                      |                      |                      |                      |                      |  |
| Soft maple             | 253                  | 120                  | --                   | --                   | 89                   | 38                   | --                   | 2                    | --                   | --                   |                      |                      |                      |                      |                      |  |
| Tupelo and blackgum    | 659                  | 305                  | 291                  | 134                  | 38                   | 18                   | 76                   | 29                   | 63                   | 31                   |                      |                      |                      |                      |                      |  |
| Ash                    | 1,533                | 489                  | 551                  | 208                  | 180                  | 58                   | 75                   | 15                   | 102                  | 29                   |                      |                      |                      |                      |                      |  |
| Sycamore               | 9,189                | 3,486                | 1,153                | 474                  | 495                  | 178                  | 505                  | 158                  | 1,191                | 477                  |                      |                      |                      |                      |                      |  |
| Cottonwood             | 140                  | 69                   | --                   | --                   | --                   | --                   | --                   | --                   | --                   | --                   |                      |                      |                      |                      |                      |  |
| River birch            | 38                   | 11                   | --                   | --                   | --                   | --                   | --                   | --                   | --                   | --                   |                      |                      |                      |                      |                      |  |
| Basswood               | 115                  | 63                   | 51                   | 27                   | --                   | 3                    | --                   | --                   | --                   | --                   |                      |                      |                      |                      |                      |  |
| Black walnut           | 3,000                | 980                  | 209                  | 65                   | 745                  | 263                  | 155                  | 47                   | 121                  | 34                   |                      |                      |                      |                      |                      |  |
| Black cherry           | 51                   | 16                   | --                   | --                   | --                   | 3                    | --                   | 3                    | --                   | --                   |                      |                      |                      |                      |                      |  |
| Elm                    | 13,301               | 2,330                | 1,555                | 388                  | 702                  | 104                  | 1,194                | 195                  | 1,330                | 222                  |                      |                      |                      |                      |                      |  |
| Other hardwoods        | 989                  | 197                  | 89                   | 19                   | 25                   | 8                    | 89                   | 19                   | 114                  | 21                   |                      |                      |                      |                      |                      |  |
| <b>Total hardwoods</b> | <b>341,772</b>       | <b>75,000</b>        | <b>28,838</b>        | <b>6,767</b>         | <b>17,023</b>        | <b>3,756</b>         | <b>30,827</b>        | <b>6,437</b>         | <b>66,456</b>        | <b>16,408</b>        |                      |                      |                      |                      |                      |  |
| <b>All species</b>     | <b>406,329</b>       | <b>85,000</b>        | <b>32,915</b>        | <b>7,017</b>         | <b>19,762</b>        | <b>3,987</b>         | <b>38,742</b>        | <b>7,449</b>         | <b>76,590</b>        | <b>18,087</b>        |                      |                      |                      |                      |                      |  |

(Table 35 cont. on next page)

(Table 35 cont.)

| Species                | McDonald        |                   | Newton          |                   | Ozark           |                   | Stone           |                   | Taney           |                   |
|------------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|
|                        | Growing : stock | Sawtimber : stock |
|                        | Thousand        | Thousand          |
|                        | bd. ft. 2/      | bd. ft. 2/        |
| <b>Softwoods:</b>      |                 |                   |                 |                   |                 |                   |                 |                   |                 |                   |
| Shortleaf pine         | 1,946           | 116               | 1,169           | 70                | 3,923           | 327               | 1,564           | 91                | 1,812           | 140               |
| Eastern redcedar       | --              | --                | --              | --                | 1,067           | 383               | 75              | 21                | 3,200           | 1,138             |
| Other softwoods        | --              | --                | --              | --                | --              | --                | --              | --                | 135             | 6                 |
| <b>Total softwoods</b> | <b>1,946</b>    | <b>116</b>        | <b>1,169</b>    | <b>70</b>         | <b>4,990</b>    | <b>710</b>        | <b>1,639</b>    | <b>112</b>        | <b>5,147</b>    | <b>1,284</b>      |
| <b>Hardwoods:</b>      |                 |                   |                 |                   |                 |                   |                 |                   |                 |                   |
| Select white oaks      | 2,862           | 677               | 2,099           | 447               | 4,775           | 1,147             | 1,540           | 293               | 2,186           | 384               |
| Other white oaks       | 3,320           | 664               | 2,267           | 433               | 5,082           | 1,071             | 1,946           | 329               | 2,816           | 456               |
| Select red oaks        | 464             | 104               | 287             | 56                | 729             | 167               | 236             | 39                | 383             | 68                |
| Red oaks               | 10,317          | 2,007             | 6,233           | 1,113             | 15,065          | 3,089             | 5,588           | 872               | 8,094           | 1,335             |
| Other red oaks         | 261             | 49                | 158             | 27                | 374             | 73                | 144             | 22                | 216             | 35                |
| Hickory A              | 34              | 5                 | 20              | 3                 | 44              | 6                 | 22              | 3                 | 29              | 4                 |
| Hickory B              | 1,404           | 260               | 783             | 116               | 2,287           | 534               | 786             | 103               | 1,197           | 160               |
| Hard maple             | --              | 2                 | --              | 2                 | --              | --                | --              | --                | --              | 1                 |
| Soft maple             | --              | --                | --              | --                | --              | --                | --              | 2                 | 38              | 16                |
| Tupelo and blackgum    | --              | --                | --              | --                | 51              | 28                | --              | 1                 | 25              | 11                |
| Ash                    | 69              | 22                | 11              | 2                 | 90              | 24                | 14              | 2                 | 223             | 64                |
| Sycamore               | 696             | 265               | 448             | 171               | 1,102           | 418               | 156             | 32                | 707             | 278               |
| Cottonwood             | --              | --                | --              | --                | --              | 1                 | --              | --                | 13              | 4                 |
| River birch            | --              | --                | --              | --                | --              | --                | --              | --                | --              | --                |
| Basswood               | --              | --                | --              | --                | --              | --                | --              | --                | 38              | --                |
| Black walnut           | 283             | 93                | 309             | 105               | 133             | 37                | 61              | 19                | 327             | 106               |
| Black cherry           | --              | --                | --              | --                | --              | 2                 | --              | --                | --              | --                |
| Elm                    | 1,038           | 214               | 605             | 109               | 1,181           | 171               | 726             | 82                | 1,457           | 208               |
| Other hardwoods        | 76              | 13                | 89              | 18                | 51              | 9                 | 38              | 10                | 76              | 16                |
| <b>Total hardwoods</b> | <b>20,824</b>   | <b>4,375</b>      | <b>13,309</b>   | <b>2,602</b>      | <b>30,964</b>   | <b>6,777</b>      | <b>11,257</b>   | <b>1,809</b>      | <b>17,825</b>   | <b>3,169</b>      |
| <b>All species</b>     | <b>22,770</b>   | <b>4,491</b>      | <b>14,478</b>   | <b>2,672</b>      | <b>35,954</b>   | <b>7,487</b>      | <b>12,896</b>   | <b>1,921</b>      | <b>22,972</b>   | <b>4,453</b>      |

(Table 35 cont. on next page)

(Table 35 cont.)

| Species                | Texas           |  | Webster         |  | Wright          |  |
|------------------------|-----------------|--|-----------------|--|-----------------|--|
|                        | Growing : stock | Sawtimber :<br>bd. ft. <sup>2</sup> / <sub>1</sub> | Growing : stock | Sawtimber :<br>bd. ft. <sup>2</sup> / <sub>1</sub> | Growing : stock | Sawtimber :<br>bd. ft. <sup>2</sup> / <sub>1</sub> |
| <b>Softwoods:</b>      |                 |  |                 |  |                 |  |
| Shortleaf pine         | 21,398          | 4,335  | 1,381           | 82   | 2,022           | 119  |
| Eastern redcedar       | --              | --   | --              | --   | --              | --   |
| Other softwoods        | --              | --   | --              | --   | --              | --   |
| <b>Total softwoods</b> | <b>21,398</b>   | <b>4,335</b>                                       | <b>1,381</b>    | <b>82</b>  | <b>2,022</b>    | <b>119</b>   |
| <b>Hardwoods:</b>      |                 |  |                 |  |                 |  |
| Select white oaks      | 12,749          | 3,090  | 2,331           | 540  | 3,112           | 701  |
| Other white oaks       | 12,041          | 2,648  | 2,560           | 519  | 3,375           | 666  |
| Select red oaks        | 1,802           | 429  | 296             | 61   | 339             | 66   |
| Red oaks               | 34,467          | 7,474  | 6,725           | 1,234  | 8,042           | 1,367  |
| Other red oaks         | 821             | 171  | 172             | 31   | 211             | 35   |
| Hickory A              | 71              | 10   | 24              | 3  | 31              | 4  |
| Hickory B              | 5,235           | 1,282  | 803             | 121  | 1,178           | 188  |
| Hard maple             | 13              | 2  | 13              | 6  | 89              | 32   |
| Soft maple             | 101             | 44   | --              | 2  | 25              | 16   |
| Tupelo and blackgum    | 89              | 41   | 13              | 7  | 13              | 5  |
| Ash                    | 111             | 34   | 51              | 16   | 56              | 15   |
| Sycamore               | 1,917           | 764  | 352             | 124  | 467             | 147  |
| Cottonwood             | 127             | 64   | --              | --   | --              | --   |
| River birch            | 38              | 11   | --              | --   | --              | --   |
| Basswood               | --              | --   | 13              | 5  | 13              | 5  |
| Black walnut           | 139             | 36   | 388             | 135  | 130             | 40   |
| Black cherry           | 38              | 4  | --              | --   | 13              | 4  |
| Elm                    | 2,021           | 383  | 616             | 90   | 876             | 164  |
| Other hardwoods        | 152             | 29   | 89              | 16   | 101             | 19   |
| <b>Total hardwoods</b> | <b>71,932</b>   | <b>16,516</b>                                      | <b>14,446</b>   | <b>2,910</b>                                       | <b>18,071</b>   | <b>3,474</b>                                       |
| <b>All species</b>     | <b>93,330</b>   | <b>20,851</b>                                      | <b>15,827</b>   | <b>2,992</b>                                       | <b>20,093</b>   | <b>3,593</b>                                       |

1/ See glossary for timber removals from growing stock (page 5).

2/ International 1/4-inch rule.

Table 36.--Annual mortality of growing stock and sawtimber on commercial forest land, by cause and softwoods and hardwoods, Southwestern Ozarks, Missouri, 1971

| Cause             | Growing stock       |           |           | Sawtimber                         |           |           |
|-------------------|---------------------|-----------|-----------|-----------------------------------|-----------|-----------|
|                   | All species         | Softwoods | Hardwoods | All species                       | Softwoods | Hardwoods |
|                   | Thousand cubic feet |           |           | Thousand board feet <sup>1/</sup> |           |           |
| Disease           | 804                 | --        | 804       | 2,563                             | --        | 2,563     |
| Fire              | 72                  | --        | 72        | 47                                | --        | 47        |
| Weather           | 651                 | 91        | 560       | 2,352                             | 496       | 1,856     |
| Unknown and other | 292                 | --        | 292       | 607                               | --        | 607       |
| Logging           | 38                  | --        | 38        | 94                                | --        | 94        |
| All causes        | 1,857               | 91        | 1,766     | 5,663                             | 496       | 5,167     |

<sup>1/</sup> International 1/4-inch rule.

Table 37.--Annual mortality of growing stock and sawtimber on commercial forest land, by species, Southwestern Ozarks, Missouri, 1971

| Species           | Growing stock       | Sawtimber                         |
|-------------------|---------------------|-----------------------------------|
|                   | Thousand cubic feet | Thousand board feet <sup>1/</sup> |
| Softwoods:        |                     |                                   |
| Shortleaf pine    | 91                  | 496                               |
| Total softwoods   | 91                  | 496                               |
| Hardwoods:        |                     |                                   |
| Select white oaks | 249                 | 1,085                             |
| Other white oaks  | 162                 | 440                               |
| Red oaks          | 1,132               | 3,252                             |
| Black walnut      | 130                 | 174                               |
| Elm               | 93                  | 216                               |
| Total hardwoods   | 1,766               | 5,167                             |
| All species       | 1,857               | 5,663                             |

<sup>1/</sup> International 1/4-inch rule.

Table 38.--Output of timber products by source of material and softwoods and hardwoods, Southwestern Ozarks, Missouri, 1969

| Product and species group | Standard unit <sup>1/</sup> | Total | Roundwood products |           |                  |           | Plant byproducts |           |        |
|---------------------------|-----------------------------|-------|--------------------|-----------|------------------|-----------|------------------|-----------|--------|
|                           |                             |       | Growing stock      |           | Nongrowing stock |           |                  |           |        |
|                           |                             |       | No. of units       | M cu. ft. | No. of units     | M cu. ft. | No. of units     | M cu. ft. |        |
| Saw logs:                 | M bd. ft.                   |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 5,649              | 1,037     | 5,638            | 1,035     | 11               | 2         |        |
| Hardwood                  |                             |       | 67,787             | 12,053    | 46,180           | 8,227     | 21,607           | 3,826     |        |
| Total                     |                             |       | 73,436             | 13,090    | 51,818           | 9,262     | 21,618           | 3,828     |        |
| Cooperage logs:           | M bd. ft.                   |       |                    |           |                  |           |                  |           |        |
| Hardwood                  |                             |       | 3,620              | 596       | 3,280            | 540       | 340              | 56        |        |
| Total                     |                             |       | 3,620              | 596       | 3,280            | 540       | 340              | 56        |        |
| Pulpwood:                 |                             |       |                    |           |                  |           |                  |           |        |
| Hardwood                  | Std. cords                  |       | 2,000              | 158       | --               | --        | --               | 2,000     | 158    |
| Total                     |                             |       | 2,000              | 158       | --               | --        | --               | 2,000     | 158    |
| Poles:                    | M pieces                    |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 46,100             | 137       | 46,100           | 137       | --               | --        |        |
| Hardwood                  |                             |       | 700                | 2         | 700              | 2         | --               | --        |        |
| Total                     |                             |       | 46,800             | 139       | 46,800           | 139       | --               | --        |        |
| Posts:                    | M pieces                    |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 657                | 503       | 448              | 343       | 209              | 160       |        |
| Hardwood                  |                             |       | 1,001              | 558       | 692              | 388       | 309              | 170       |        |
| Total                     |                             |       | 1,658              | 1,061     | 1,140            | 731       | 518              | 330       |        |
| Charcoal wood:            | Std. cords                  |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 771                | 54        | --               | --        | --               | 771       | 54     |
| Hardwood                  |                             |       | 59,727             | 4,163     | 13,625           | 948       | 29,117           | 2,026     | 16,985 |
| Total                     |                             |       | 60,498             | 4,217     | 13,625           | 948       | 29,117           | 2,026     | 17,756 |
| Other: <sup>2/</sup>      | M cu. ft.                   |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 58                 | 58        | --               | --        | --               | 58        | 58     |
| Hardwood                  |                             |       | 403                | 403       | 80               | 80        | --               | 323       | 323    |
| Total                     |                             |       | 461                | 461       | 80               | 80        | --               | 381       | 381    |
| Fuelwood:                 | Std. cords                  |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 765                | 47        | 185              | 11        | 318              | 19        | 262    |
| Hardwood                  |                             |       | 92,920             | 6,037     | 26,720           | 1,736     | 57,277           | 3,721     | 8,923  |
| Total                     |                             |       | 93,685             | 6,084     | 26,905           | 1,747     | 57,595           | 3,740     | 9,185  |
| All products:             | M cu. ft.                   |       |                    |           |                  |           |                  |           |        |
| Softwood                  |                             |       | 1,836              | 1,836     | 1,526            | 1,526     | 181              | 181       | 129    |
| Hardwood                  |                             |       | 23,970             | 23,970    | 11,921           | 11,921    | 9,799            | 9,799     | 2,250  |
| Total                     |                             |       | 25,806             | 25,806    | 13,447           | 13,447    | 9,980            | 9,980     | 2,379  |

<sup>1/</sup> M (meaning thousand) board feet by International 1/4-inch rule. Cords are on a roughwood, 128-cubic foot basis.

<sup>2/</sup> Other (industrial production) includes handle bolts, shaving bolts, heading stock, etc.

Table 39.--Forest products harvested by ownership class and product, Southwestern Ozarks, Missouri, 1969

| Ownership class     | Saw logs        | Cooperage logs  | Veneer logs     | Pulp wood           | Charcoal wood       | Posts M pieces | Fuel wood           | Poles         | Mine timbers | Handle bolts    | Miscellaneous |
|---------------------|-----------------|-----------------|-----------------|---------------------|---------------------|----------------|---------------------|---------------|--------------|-----------------|---------------|
|                     | M<br>bd.ft. 1/4 | M<br>bd.ft. 1/4 | M<br>bd.ft. 1/4 | Cords <sup>2/</sup> | Cords <sup>2/</sup> | M pieces       | Cords <sup>2/</sup> | Pieces        | M<br>cu.ft.  | M<br>bd.ft. 1/4 | M<br>cu.ft.   |
| <b>Federal:</b>     |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| National Forest:    |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Softwoods           | 536             | --              | --              | --                  | --                  | 75             | --                  | 50            | --           | --              | --            |
| Hardwoods           | 10,857          | 91              | --              | --                  | 679                 | --             | 1,501               | --            | --           | --              | --            |
| Corps of Engineers: |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Softwoods           | --              | --              | --              | --                  | --                  | 4              | --                  | --            | --           | --              | --            |
| <b>Total</b>        | <b>11,393</b>   | <b>91</b>       | <b>--</b>       | <b>--</b>           | <b>679</b>          | <b>79</b>      | <b>1,501</b>        | <b>50</b>     | <b>--</b>    | <b>--</b>       | <b>--</b>     |
| <b>State:</b>       |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Softwoods           | --              | --              | --              | --                  | --                  | 2              | --                  | --            | --           | --              | --            |
| Hardwoods           | --              | --              | --              | --                  | 46                  | --             | --                  | --            | --           | --              | --            |
| <b>Total</b>        | <b>--</b>       | <b>--</b>       | <b>--</b>       | <b>--</b>           | <b>46</b>           | <b>2</b>       | <b>--</b>           | <b>--</b>     | <b>--</b>    | <b>--</b>       | <b>--</b>     |
| <b>Private:</b>     |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Industrial:         |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Softwoods           | 357             | --              | --              | --                  | --                  | --             | --                  | --            | --           | --              | --            |
| Hardwoods           | 2,289           | 12              | --              | --                  | 11                  | --             | --                  | --            | --           | --              | --            |
| Farm and other:     |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Softwoods           | 4,756           | --              | --              | --                  | --                  | 576            | 503                 | 46,050        | --           | --              | --            |
| Hardwoods           | 54,641          | 3,517           | --              | --                  | 42,006              | 1,001          | 82,496              | 700           | --           | --              | 80            |
| <b>Total</b>        | <b>62,043</b>   | <b>3,529</b>    | <b>--</b>       | <b>--</b>           | <b>42,017</b>       | <b>1,577</b>   | <b>82,999</b>       | <b>46,750</b> | <b>--</b>    | <b>--</b>       | <b>80</b>     |
| <b>All owners:</b>  |                 |                 |                 |                     |                     |                |                     |               |              |                 |               |
| Softwoods           | 5,649           | --              | --              | --                  | --                  | 657            | 503                 | 46,100        | --           | --              | --            |
| Hardwoods           | 67,787          | 3,620           | --              | --                  | 42,742              | 1,001          | 83,997              | 700           | --           | --              | 80            |
| <b>Total</b>        | <b>73,436</b>   | <b>3,620</b>    | <b>--</b>       | <b>--</b>           | <b>42,742</b>       | <b>1,658</b>   | <b>84,500</b>       | <b>46,800</b> | <b>--</b>    | <b>--</b>       | <b>80</b>     |

1/ International 1/4-inch rule.  
2/ Standard cords, rough wood basis.

Table 40.--Volume of primary plant residue, by kind of material and type of use, Southwestern Ozarks, Missouri, 1969

(Thousand cubic feet)

| Source industry and kind of residue | Volume by type of use |              |                    |                     |                        |              |              |              |              |              |
|-------------------------------------|-----------------------|--------------|--------------------|---------------------|------------------------|--------------|--------------|--------------|--------------|--------------|
|                                     | Fiber <sup>1/</sup>   | Charcoal     | Fuel <sup>2/</sup> | Other <sup>3/</sup> | Not used <sup>4/</sup> |              |              |              |              |              |
|                                     | : Hard-woods          | : Soft-woods | : Hard-woods       | : Soft-woods        | : Hard-woods           | : Soft-woods | : Hard-woods | : Soft-woods | : Hard-woods | : Soft-woods |
| <b>Lumber:</b>                      |                       |              |                    |                     |                        |              |              |              |              |              |
| Coarse                              | 158                   | 54           | 1,147              | 17                  | 427                    | 26           | --           | 208          | 1,605        |              |
| Fine                                | --                    | --           | --                 | --                  | 99                     | 32           | 247          | 147          | 1,957        |              |
| <b>Total</b>                        | <b>158</b>            | <b>54</b>    | <b>1,147</b>       | <b>17</b>           | <b>526</b>             | <b>58</b>    | <b>247</b>   | <b>355</b>   | <b>3,562</b> |              |
| <b>All other:</b>                   |                       |              |                    |                     |                        |              |              |              |              |              |
| Coarse                              | --                    | --           | 42                 | --                  | 54                     | --           | --           | --           | 40           |              |
| Fine                                | --                    | --           | --                 | --                  | --                     | --           | 76           | --           | 144          |              |
| <b>Total</b>                        | <b>--</b>             | <b>--</b>    | <b>42</b>          | <b>--</b>           | <b>54</b>              | <b>--</b>    | <b>76</b>    | <b>--</b>    | <b>184</b>   |              |
| <b>All industries:</b>              |                       |              |                    |                     |                        |              |              |              |              |              |
| Coarse                              | 158                   | 54           | 1,189              | 17                  | 481                    | 26           | --           | 208          | 1,645        |              |
| Fine                                | --                    | --           | --                 | --                  | 99                     | 32           | 323          | 147          | 2,101        |              |
| <b>Total</b>                        | <b>158</b>            | <b>54</b>    | <b>1,189</b>       | <b>17</b>           | <b>580</b>             | <b>58</b>    | <b>323</b>   | <b>355</b>   | <b>3,746</b> |              |

1/ For manufacture of pulp, hardboard, or roofing felt.  
2/ All residue used for industrial or domestic fuel whether sold or given away.  
3/ Includes uses such as livestock bedding, mulch, small dimension, and specialty items.  
4/ Includes residue burned as waste.

Table 41.--Timber products output from roundwood, by species and product, Southwestern Ozarks, Missouri, 1969

| Species                | Saw logs        |               | Veneer logs     |              | Cooperage logs  |              | Charcoal wood       |              | Other products <sup>3/</sup> |               | All products <sup>3/</sup> |              |
|------------------------|-----------------|---------------|-----------------|--------------|-----------------|--------------|---------------------|--------------|------------------------------|---------------|----------------------------|--------------|
|                        | M<br>bd. ft. 1/ | M<br>cu. ft.  | M<br>bd. ft. 1/ | M<br>cu. ft. | M<br>bd. ft. 1/ | M<br>cu. ft. | Cords <sup>2/</sup> | M<br>cu. ft. | M<br>cu. ft.                 | M<br>cu. ft.  | M<br>cu. ft.               | M<br>cu. ft. |
| <b>Softwoods:</b>      |                 |               |                 |              |                 |              |                     |              |                              |               |                            |              |
| Shortleaf pine         | 4,231           | 735           | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 610           | 1,345                      |              |
| Eastern redcedar       | 1,418           | 302           | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 47            | 349                        |              |
| Other softwoods        | 0               | 0             | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 13            | 13                         |              |
| <b>Total softwoods</b> | <b>5,649</b>    | <b>1,037</b>  | <b>0</b>        | <b>0</b>     | <b>0</b>        | <b>0</b>     | <b>0</b>            | <b>0</b>     | <b>0</b>                     | <b>670</b>    | <b>1,707</b>               |              |
| <b>Hardwoods:</b>      |                 |               |                 |              |                 |              |                     |              |                              |               |                            |              |
| White oaks             | 18,473          | 3,299         | 0               | 0            | 0               | 0            | 12,321              | 860          | 4,058                        | 8,813         |                            |              |
| Red oaks               | 11,051          | 1,971         | 0               | 0            | 0               | 0            | 5,545               | 383          | 407                          | 2,761         |                            |              |
| Black oak              | 28,630          | 5,112         | 0               | 0            | 0               | 0            | 18,616              | 1,295        | 815                          | 7,222         |                            |              |
| Hickory                | 2,305           | 393           | 0               | 0            | 0               | 0            | 5,722               | 400          | 279                          | 1,072         |                            |              |
| Hard maple             | 54              | 7             | 0               | 0            | 0               | 0            | 60                  | 3            | 0                            | 10            |                            |              |
| Soft maple             | 136             | 20            | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 20            |                            |              |
| Blackgum               | 340             | 55            | 0               | 0            | 0               | 0            | 48                  | 3            | 0                            | 58            |                            |              |
| Ash                    | 414             | 69            | 0               | 0            | 0               | 0            | 310                 | 21           | 11                           | 101           |                            |              |
| Cottonwood             | 66              | 10            | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 10            |                            |              |
| Basswood               | 70              | 10            | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 10            |                            |              |
| Black walnut           | 1,971           | 431           | 0               | 0            | 0               | 0            | 0                   | 0            | 0                            | 431           |                            |              |
| Black cherry           | 13              | 1             | 0               | 0            | 0               | 0            | 120                 | 9            | 0                            | 10            |                            |              |
| Elm                    | 706             | 110           | 0               | 0            | 0               | 0            | 0                   | 0            | 284                          | 394           |                            |              |
| Birch                  | 6               | 1             | 0               | 0            | 0               | 0            | 0                   | 0            | 2                            | 3             |                            |              |
| Sycamore               | 3,547           | 563           | 0               | 0            | 0               | 0            | 0                   | 0            | 8                            | 571           |                            |              |
| Other hardwoods        | 5               | 1             | 0               | 0            | 0               | 0            | 0                   | 0            | 233                          | 234           |                            |              |
| <b>Total hardwoods</b> | <b>67,787</b>   | <b>12,053</b> | <b>0</b>        | <b>0</b>     | <b>0</b>        | <b>3,620</b> | <b>42,742</b>       | <b>2,974</b> | <b>6,097</b>                 | <b>21,720</b> |                            |              |
| <b>All species</b>     | <b>73,436</b>   | <b>13,090</b> | <b>0</b>        | <b>0</b>     | <b>0</b>        | <b>3,620</b> | <b>42,742</b>       | <b>2,974</b> | <b>6,767</b>                 | <b>23,427</b> |                            |              |

<sup>1/</sup> International 1/4-inch rule.

<sup>2/</sup> Standard cords, rough wood basis.

<sup>3/</sup> Includes posts, fuelwood, shaving bolts, heading bolts, etc.

Table 42.--Average annual allowable cut for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and kind of material, Southwestern Ozarks, Missouri

| Species                | Growing stock <sup>1/</sup> |                  | Sawtimber <sup>1/</sup>           |               | Rough and rotten trees |                 |                |
|------------------------|-----------------------------|------------------|-----------------------------------|---------------|------------------------|-----------------|----------------|
|                        | Total                       | Poletimber trees | Sawtimber trees                   | Total         | Total                  | Short-log trees | Other          |
|                        | Cords                       |                  | Thousand board feet <sup>2/</sup> |               | Cords                  |                 |                |
| <b>Softwoods:</b>      |                             |                  |                                   |               |                        |                 |                |
| Shortleaf pine         | 18,443                      | 5,583            | 12,860                            | 5,523         | 63                     | --              | 63             |
| Eastern redcedar       | 987                         | 569              | 418                               | 187           | 1,608                  | 266             | 1,342          |
| <b>Total softwoods</b> | <b>19,430</b>               | <b>6,152</b>     | <b>13,278</b>                     | <b>5,710</b>  | <b>1,671</b>           | <b>266</b>      | <b>1,405</b>   |
| <b>Hardwoods:</b>      |                             |                  |                                   |               |                        |                 |                |
| Select white oaks      | 55,759                      | 23,329           | 32,430                            | 12,892        | 33,746                 | 11,822          | 21,924         |
| Other white oaks       | 52,962                      | 20,532           | 32,430                            | 11,955        | 34,000                 | 5,646           | 28,354         |
| Select red oaks        | 22,975                      | 4,949            | 18,026                            | 6,983         | 9,392                  | 1,304           | 8,088          |
| Red oaks               | 87,405                      | 28,051           | 59,354                            | 23,011        | 50,696                 | 7,836           | 42,860         |
| Other red oaks         | 7,000                       | 2,430            | 4,570                             | 1,981         | 17,671                 | 494             | 17,177         |
| Hickory A              | 5,684                       | 3,266            | 2,418                             | 896           | 4,734                  | --              | 4,734          |
| Hickory B              | 16,253                      | 10,430           | 5,823                             | 2,117         | 6,899                  | 861             | 6,038          |
| Hard maple             | 2,215                       | 190              | 2,025                             | 652           | 494                    | 405             | 89             |
| Soft maple             | 152                         | --               | 152                               | 54            | 380                    | 102             | 278            |
| Sweetgum               | --                          | --               | --                                | --            | 152                    | --              | 152            |
| Tupelo and blackgum    | 2,861                       | 1,899            | 962                               | 342           | 1,000                  | 278             | 722            |
| Ash                    | 4,126                       | 949              | 3,177                             | 1,249         | 2,987                  | 379             | 2,608          |
| Sycamore               | 1,747                       | 101              | 1,646                             | 641           | 127                    | --              | 127            |
| Black walnut           | 4,266                       | 1,709            | 2,557                             | 926           | 3,127                  | 405             | 2,722          |
| Black cherry           | 430                         | --               | 430                               | 208           | 1,076                  | --              | 1,076          |
| Elm                    | 2,595                       | 1,747            | 848                               | 371           | 2,139                  | 177             | 1,962          |
| Other hardwoods        | 747                         | --               | 747                               | 254           | 1,418                  | --              | 1,418          |
| Noncommercial species  | --                          | --               | --                                | --            | 342                    | --              | 342            |
| <b>Total hardwoods</b> | <b>267,177</b>              | <b>99,582</b>    | <b>167,595</b>                    | <b>64,532</b> | <b>170,380</b>         | <b>29,709</b>   | <b>140,671</b> |
| <b>All species</b>     | <b>286,607</b>              | <b>105,734</b>   | <b>180,873</b>                    | <b>70,242</b> | <b>172,051</b>         | <b>29,975</b>   | <b>142,076</b> |

<sup>1/</sup> Cuttings of less than 3 cords per acre, or the equivalent in board feet, are excluded.

<sup>2/</sup> International 1/4-inch rule.

Table 43.--Average annual allowable cut<sup>1/</sup> of growing stock for 1972-1981 from harvest cuttings and thinnings, on commerial forest land, by species and forest type, Southwestern Ozarks, Missouri

(Thousand cubic feet)

| Species                | All forest types |            | Shortleaf pine |            | Eastern redcedar-hardwood |  | Shortleaf pine-oak |  | Post-blackjack oak |  | Black-scarlet oak |  | White oak |  | Elm-ash-cottonwood |  | Maple-beech |  |    |  |
|------------------------|------------------|------------|----------------|------------|---------------------------|--|--------------------|--|--------------------|--|-------------------|--|-----------|--|--------------------|--|-------------|--|----|--|
|                        |                  |            |                |            |                           |  |                    |  |                    |  |                   |  |           |  |                    |  |             |  |    |  |
| <b>Softwoods:</b>      |                  |            |                |            |                           |  |                    |  |                    |  |                   |  |           |  |                    |  |             |  |    |  |
| Shortleaf pine         | 1,457            | 350        | 26             | 513        | 136                       |  | 292                |  | 140                |  |                   |  |           |  |                    |  |             |  |    |  |
| Eastern redcedar       | 78               | --         | 78             | --         | --                        |  | --                 |  | --                 |  | --                |  | --        |  | --                 |  | --          |  | -- |  |
| <b>Total softwoods</b> | <b>1,535</b>     | <b>350</b> | <b>104</b>     | <b>513</b> | <b>136</b>                |  | <b>292</b>         |  | <b>140</b>         |  |                   |  |           |  |                    |  |             |  |    |  |
| <b>Hardwoods:</b>      |                  |            |                |            |                           |  |                    |  |                    |  |                   |  |           |  |                    |  |             |  |    |  |
| Select white oaks      | 4,405            | 6          | 125            | 73         | 436                       |  | 2,159              |  | 1,566              |  | 40                |  |           |  |                    |  |             |  |    |  |
| Other white oaks       | 4,184            | 22         | 12             | 68         | 2,994                     |  | 914                |  | 150                |  |                   |  |           |  |                    |  |             |  |    |  |
| Select red oaks        | 1,815            | --         | 36             | 101        | 174                       |  | 1,389              |  | 94                 |  | 21                |  |           |  |                    |  |             |  |    |  |
| Red oaks               | 6,905            | 32         | 11             | 221        | 922                       |  | 5,272              |  | 447                |  |                   |  |           |  |                    |  |             |  |    |  |
| Other red oaks         | 553              | --         | --             | --         | 408                       |  | 145                |  | --                 |  |                   |  |           |  |                    |  |             |  |    |  |
| Hickory A              | 449              | --         | --             | 11         | 97                        |  | 330                |  | 11                 |  |                   |  |           |  |                    |  |             |  |    |  |
| Hickory B              | 1,284            | --         | 8              | 6          | 581                       |  | 490                |  | 199                |  |                   |  |           |  |                    |  |             |  |    |  |
| Hard maple             | 175              | --         | --             | --         | --                        |  | 117                |  | 58                 |  |                   |  |           |  |                    |  |             |  |    |  |
| Soft maple             | 12               | --         | --             | --         | --                        |  | --                 |  | --                 |  | 12                |  |           |  |                    |  |             |  |    |  |
| Tupelo and blackgum    | 226              | --         | --             | --         | --                        |  | --                 |  | 125                |  |                   |  |           |  |                    |  |             |  |    |  |
| Ash                    | 326              | --         | 20             | --         | 51                        |  | 122                |  | 85                 |  | 48                |  |           |  |                    |  |             |  |    |  |
| Sycamore               | 138              | --         | --             | --         | 138                       |  | 199                |  | --                 |  |                   |  |           |  |                    |  |             |  |    |  |
| Black walnut           | 337              | --         | 43             | --         | 15                        |  | 43                 |  | 34                 |  | 15                |  |           |  |                    |  |             |  |    |  |
| Black cherry           | 34               | --         | --             | --         | --                        |  | --                 |  | 34                 |  |                   |  |           |  |                    |  |             |  |    |  |
| Elm                    | 205              | --         | 9              | --         | 69                        |  | 77                 |  | 50                 |  |                   |  |           |  |                    |  |             |  |    |  |
| Other hardwoods        | 59               | --         | 36             | --         | --                        |  | 23                 |  | --                 |  |                   |  |           |  |                    |  |             |  |    |  |
| <b>Total hardwoods</b> | <b>21,107</b>    | <b>60</b>  | <b>300</b>     | <b>480</b> | <b>5,747</b>              |  | <b>11,500</b>      |  | <b>2,838</b>       |  | <b>136</b>        |  |           |  |                    |  |             |  |    |  |
| <b>All species</b>     | <b>22,642</b>    | <b>410</b> | <b>404</b>     | <b>993</b> | <b>5,883</b>              |  | <b>11,792</b>      |  | <b>2,978</b>       |  | <b>136</b>        |  |           |  |                    |  |             |  |    |  |

<sup>1/</sup> Cuttings of less than 240 cubic feet per acre are excluded.

Table 44.--Average annual allowable cut of growing stock for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and stand-volume class, Southwestern Ozarks, Missouri

(Thousand cubic feet)

| Species                | Stand-volume class <sup>1/</sup><br>(Cubic feet per acre) |              |              |               |                 |
|------------------------|---|--------------|--------------|---------------|-----------------|
|                        | All classes   | 240-<br>399  | 400-<br>799  | 800-<br>1,199 | 1,200-<br>1,599 |
| <b>Softwoods:</b>      |   |              |              |               |                 |
| Shortleaf pine         | 1,457   | 430          | 558          | 269           | 200             |
| Eastern redcedar       | 78  | 28           | 29           | 21            | --              |
| <b>Total softwoods</b> | <b>1,535</b>  | <b>458</b>   | <b>587</b>   | <b>290</b>    | <b>200</b>      |
| <b>Hardwoods:</b>      |   |              |              |               |                 |
| Select white oaks      | 4,405   | 443          | 1,717        | 1,233         | 1,012           |
| Other white oaks       | 4,184   | 413          | 2,091        | 1,255         | 425             |
| Select red oaks        | 1,815   | 240          | 467          | 519           | 589             |
| Red oaks               | 6,905   | 543          | 2,717        | 2,266         | 1,379           |
| Other red oaks         | 553   | 80           | 285          | 95            | 93              |
| Hickory A              | 449   | 135          | 227          | 87            | --              |
| Hickory B              | 1,284   | 206          | 592          | 379           | 107             |
| Hard maple             | 175   | --           | 96           | --            | 79              |
| Soft maple             | 12  | --           | 12           | --            | --              |
| Tupelo and blackgum    | 226   | --           | 26           | 88            | 112             |
| Ash                    | 326   | 5            | 203          | 118           | --              |
| Sycamore               | 138   | 47           | --           | 91            | --              |
| Black walnut           | 337   | 57           | 104          | 107           | 69              |
| Black cherry           | 34  | --           | --           | 34            | --              |
| Elm                    | 205   | 17           | 73           | 80            | 35              |
| Other hardwoods        | 59  | 23           | --           | 36            | --              |
| <b>Total hardwoods</b> | <b>21,107</b>   | <b>2,209</b> | <b>8,610</b> | <b>6,388</b>  | <b>3,900</b>    |
| <b>All species</b>     | <b>22,642</b>   | <b>2,667</b> | <b>9,197</b> | <b>6,678</b>  | <b>4,100</b>    |

<sup>1/</sup> Cuttings of less than 240 cubic feet per acre are excluded.

Table 45.--Average annual allowable cut for 1972-1981, by harvest cuttings of growing stock on commercial forest land, by species and stand-volume class, Southwestern Ozarks, Missouri

(Thousand cubic feet)

| Species                | Stand-volume class <sup>1/</sup><br>(cubic feet per acre) |              |              |              |              |
|------------------------|---|--------------|--------------|--------------|--------------|
|                        | All classes   | 240-399      | 400-799      | 800-1,199    | 1,200-1,599  |
| <b>Softwoods:</b>      |   |              |              |              |              |
| Shortleaf pine         | 1,280   | 314          | 497          | 269          | 200          |
| Eastern redcedar       | 78  | 28           | 29           | 21           | --           |
| <b>Total softwoods</b> | <b>1,358</b>  | <b>342</b>   | <b>526</b>   | <b>290</b>   | <b>200</b>   |
| <b>Hardwoods:</b>      |   |              |              |              |              |
| Select white oaks      | 4,028   | 386          | 1,574        | 1,077        | 991          |
| Other white oaks       | 4,040   | 407          | 1,992        | 1,255        | 386          |
| Select red oaks        | 1,695   | 175          | 437          | 519          | 564          |
| Red oaks               | 5,478   | 367          | 1,815        | 2,192        | 1,104        |
| Other red oaks         | 482   | 80           | 278          | 95           | 29           |
| Hickory A              | 369   | 80           | 202          | 87           | --           |
| Hickory B              | 1,231   | 177          | 568          | 379          | 107          |
| Hard maple             | 175   | --           | 96           | --           | 79           |
| Soft maple             | 12  | --           | 12           | --           | --           |
| Tupelo and blackgum    | 213   | --           | 13           | 88           | 112          |
| Ash                    | 321   | --           | 203          | 118          | --           |
| Sycamore               | 130   | 39           | --           | 91           | --           |
| Black walnut           | 291   | 37           | 85           | 100          | 69           |
| Black cherry           | 34  | --           | --           | 34           | --           |
| Elm                    | 202   | 14           | 73           | 80           | 35           |
| Other hardwoods        | 59  | 23           | --           | 36           | --           |
| <b>Total hardwoods</b> | <b>18,760</b>   | <b>1,785</b> | <b>7,348</b> | <b>6,151</b> | <b>3,476</b> |
| <b>All species</b>     | <b>20,118</b>   | <b>2,127</b> | <b>7,874</b> | <b>6,441</b> | <b>3,676</b> |

<sup>1/</sup> Cuttings of less than 240 cubic feet per acre are excluded.

Table 46.--Average annual allowable cut for 1972-1981, by thinnings of growing stock on commercial forest land, by species and stand-volume class, Southwestern Ozarks, Missouri

(Thousand cubic feet)

| Species                | : All<br>: classes | : Stand-volume class <sup>1/</sup> (cubic feet per acre) |              |             |               |
|------------------------|--------------------|--|--------------|-------------|---------------|
|                        |                    | : 240-399  | : 400-799    | : 800-1,199 | : 1,200-1,599 |
| <b>Softwoods:</b>      |                    |  |              |             |               |
| Shortleaf pine         | 177                | 116  | 61           | --          | --            |
| <b>Total softwoods</b> | <b>177</b>         | <b>116</b>   | <b>61</b>    | <b>--</b>   | <b>--</b>     |
| <b>Hardwoods</b>       |                    |  |              |             |               |
| Select white oaks      | 377                | 57   | 143          | 156         | 21            |
| Other white oaks       | 144                | 6  | 99           | --          | 39            |
| Select red oaks        | 120                | 65   | 30           | --          | 25            |
| Red oaks               | 1,427              | 176  | 902          | 74          | 275           |
| Other red oaks         | 71                 | --   | 7            | --          | 64            |
| Hickory A              | 80                 | 55   | 25           | --          | --            |
| Hickory B              | 53                 | 29   | 24           | --          | --            |
| Tupelo and blackgum    | 13                 | --   | 13           | --          | --            |
| Ash                    | 5                  | 5  | --           | --          | --            |
| Sycamore               | 8                  | 8  | --           | --          | --            |
| Black walnut           | 46                 | 20   | 19           | 7           | --            |
| Elm                    | 3                  | 3  | --           | --          | --            |
| <b>Total hardwoods</b> | <b>2,347</b>       | <b>424</b>   | <b>1,262</b> | <b>237</b>  | <b>424</b>    |
| <b>All species</b>     | <b>2,524</b>       | <b>540</b>   | <b>1,323</b> | <b>237</b>  | <b>424</b>    |

<sup>1/</sup> Cuttings of less than 240 cubic feet per acre are excluded.

Table 47.--Average annual allowable cut of sawtimber<sup>1/</sup> for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and forest type, Southwestern Ozarks, Missouri

(Thousand board feet)<sup>2/</sup>

| Species                | All forest types |              | Shortleaf pine |              | Eastern redcedar-hardwood |               | Shortleaf pine-oak |            | Post-blackjack oak |           | Black scarlet oak |           | White oak |           | Elm-ash-cottonwood |           | Maple-beech |           |
|------------------------|------------------|--------------|----------------|--------------|---------------------------|---------------|--------------------|------------|--------------------|-----------|-------------------|-----------|-----------|-----------|--------------------|-----------|-------------|-----------|
|                        |                  |              |                |              |                           |               |                    |            |                    |           |                   |           |           |           |                    |           |             |           |
| <b>Softwoods:</b>      |                  |              |                |              |                           |               |                    |            |                    |           |                   |           |           |           |                    |           |             |           |
| Shortleaf pine         | 5,862            | 1,184        | 153            | 2,337        | 481                       | 1,221         | 419                | 67         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Eastern redcedar       | 187              | --           | 187            | --           | --                        | --            | --                 | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| <b>Total softwoods</b> | <b>6,049</b>     | <b>1,184</b> | <b>340</b>     | <b>2,337</b> | <b>481</b>                | <b>1,221</b>  | <b>419</b>         | <b>67</b>  | <b>--</b>          | <b>--</b> | <b>--</b>         | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b>          | <b>--</b> | <b>--</b>   | <b>--</b> |
| <b>Hardwoods:</b>      |                  |              |                |              |                           |               |                    |            |                    |           |                   |           |           |           |                    |           |             |           |
| Select white oaks      | 13,221           | 31           | 61             | 199          | 1,547                     | 6,504         | 4,719              | 160        | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Other white oaks       | 12,050           | 29           | 67             | 232          | 8,395                     | 2,459         | 748                | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Select red oaks        | 7,056            | --           | 200            | 8            | 517                       | 5,832         | 391                | 108        | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Red oaks               | 23,392           | 118          | 57             | 874          | 3,059                     | 17,829        | 1,440              | 15         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Other red oaks         | 1,991            | --           | --             | --           | 1,625                     | 364           | 2                  | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Hickory A              | 961              | --           | --             | --           | 384                       | 489           | 51                 | 37         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Hickory B              | 2,124            | --           | --             | --           | 790                       | 900           | 434                | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Hard maple             | 653              | --           | --             | --           | --                        | 409           | 244                | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Soft maple             | 54               | --           | --             | --           | --                        | --            | --                 | 54         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Tupelo and blackgum    | 347              | --           | --             | --           | --                        | --            | --                 | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Ash                    | 1,256            | --           | 57             | --           | 192                       | 637           | 232                | 138        | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Sycamore               | 968              | --           | --             | --           | --                        | 641           | 18                 | 309        | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Black walnut           | 930              | --           | 45             | --           | --                        | 818           | 3                  | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | 64        |
| Black cherry           | 208              | --           | --             | --           | --                        | --            | 208                | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Elm                    | 371              | --           | --             | --           | --                        | 234           | 137                | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| Other hardwoods        | 260              | --           | 150            | --           | --                        | 110           | --                 | --         | --                 | --        | --                | --        | --        | --        | --                 | --        | --          | --        |
| <b>Total hardwoods</b> | <b>65,842</b>    | <b>178</b>   | <b>637</b>     | <b>1,313</b> | <b>16,509</b>             | <b>37,318</b> | <b>8,882</b>       | <b>821</b> | <b>184</b>         | <b>--</b> | <b>--</b>         | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b>          | <b>--</b> | <b>--</b>   | <b>--</b> |
| <b>All species</b>     | <b>71,891</b>    | <b>1,362</b> | <b>977</b>     | <b>3,650</b> | <b>16,990</b>             | <b>38,539</b> | <b>9,301</b>       | <b>888</b> | <b>184</b>         | <b>--</b> | <b>--</b>         | <b>--</b> | <b>--</b> | <b>--</b> | <b>--</b>          | <b>--</b> | <b>--</b>   | <b>--</b> |

<sup>1/</sup> Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

<sup>2/</sup> International 1/4-inch rule.

Table 48.--Average annual allowable cut of sawtimber<sup>1/</sup> for 1972-1981 from harvest cuttings and thinnings, on commercial forest land, by species and stand-volume class, Southwestern Ozarks, Missouri

(Thousand board feet)<sup>2/</sup>

| Species             | :      | :       | Stand-volume class    |                 |
|---------------------|--------|---------|-----------------------|-----------------|
|                     |        |         | (board feet per acre) |                 |
|                     | :      | All     | 0- : 1,500-           | : 2,500-        |
|                     | :      | classes | : 1,499               | : 2,499 : 4,999 |
| Softwoods:          |        |         |                       |                 |
| Shortleaf pine      | 5,862  | 2,255   | 1,539                 | 2,068           |
| Eastern redcedar    | 187    | 124     | 63                    | --              |
| Total softwoods     | 6,049  | 2,379   | 1,602                 | 2,068           |
| Hardwoods:          |        |         |                       |                 |
| Select white oaks   | 13,221 | 3,313   | 4,925                 | 4,983           |
| Other white oaks    | 12,050 | 4,631   | 5,610                 | 1,809           |
| Select red oaks     | 7,056  | 2,018   | 1,499                 | 3,539           |
| Red oaks            | 23,392 | 9,203   | 5,769                 | 8,420           |
| Other red oaks      | 1,991  | 1,121   | 870                   | --              |
| Hickory A           | 961    | 679     | 44                    | 238             |
| Hickory B           | 2,124  | 879     | 817                   | 428             |
| Hard maple          | 653    | 84      | 244                   | 325             |
| Soft maple          | 54     | 54      | --                    | --              |
| Tupelo and blackgum | 347    | 5       | 56                    | 286             |
| Ash                 | 1,256  | 405     | 392                   | 459             |
| Sycamore            | 968    | 519     | --                    | 449             |
| Black walnut        | 930    | 301     | 225                   | 404             |
| Black cherry        | 208    | 208     | --                    | --              |
| Elm                 | 371    | 137     | --                    | 234             |
| Other hardwoods     | 260    | 116     | 144                   | --              |
| Total hardwoods     | 65,842 | 23,673  | 20,595                | 21,574          |
| All species         | 71,891 | 26,052  | 22,197                | 23,642          |

<sup>1/</sup> Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

<sup>2/</sup> International 1/4-inch rule.

Table 49.--Average annual allowable cut for 1972-1981, by harvest cuttings of sawtimber<sup>1/</sup> on commercial forest land, by species and stand-volume class, Southwestern Ozarks, Missouri

(Thousand board feet)<sup>2/</sup>

| Species                | Stand-volume class    |               |                 |                |
|------------------------|-----------------------|---------------|-----------------|----------------|
|                        | (board feet per acre) |               |                 |                |
|                        | All                   | 0- : 1,500-   | 1,500- : 2,500- | 2,500- : 4,999 |
|                        | classes               | 1,499         | 2,499           | 4,999          |
| <b>Softwoods:</b>      |                       |               |                 |                |
| Shortleaf pine         | 5,313                 | 1,706         | 1,539           | 2,068          |
| Eastern redcedar       | 187                   | 124           | 63              | --             |
| <b>Total softwoods</b> | <b>5,500</b>          | <b>1,830</b>  | <b>1,602</b>    | <b>2,068</b>   |
| <b>Hardwoods:</b>      |                       |               |                 |                |
| Select white oaks      | 12,457                | 3,066         | 4,408           | 4,983          |
| Other white oaks       | 11,723                | 4,304         | 5,610           | 1,809          |
| Select red oaks        | 6,680                 | 1,680         | 1,461           | 3,539          |
| Red oaks               | 20,157                | 6,222         | 5,515           | 8,420          |
| Other red oaks         | 1,989                 | 1,119         | 870             | --             |
| Hickory A              | 777                   | 539           | --              | 238            |
| Hickory B              | 2,124                 | 879           | 817             | 428            |
| Hard maple             | 653                   | 84            | 244             | 325            |
| Soft maple             | 54                    | 54            | --              | --             |
| Tupelo and blackgum    | 291                   | 5             | --              | 286            |
| Ash                    | 1,233                 | 382           | 392             | 459            |
| Sycamore               | 896                   | 447           | --              | 449            |
| Black walnut           | 859                   | 230           | 225             | 404            |
| Black cherry           | 208                   | 208           | --              | --             |
| Elm                    | 371                   | 137           | --              | 234            |
| Other hardwoods        | 260                   | 116           | 144             | --             |
| <b>Total hardwoods</b> | <b>60,732</b>         | <b>19,472</b> | <b>19,686</b>   | <b>21,574</b>  |
| <b>All species</b>     | <b>66,232</b>         | <b>21,302</b> | <b>21,288</b>   | <b>23,642</b>  |

<sup>1/</sup> Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

<sup>2/</sup> International 1/4-inch rule.

Table 50.--Average annual allowable cut for 1972-1981, by thinnings of sawtimber<sup>1/</sup> on commercial forest land, by species and stand-volume class, Southwestern Ozarks, Missouri

(Thousand board feet)<sup>2/</sup>

| Species             | : | All     | Stand-volume class    |        |
|---------------------|---|---------|-----------------------|--------|
|                     |   |         | (board feet per acre) |        |
|                     | : | classes | 0-                    | 1,500- |
|                     | : |         | 1,499                 | 2,499  |
| <b>Softwoods:</b>   |   |         |                       |        |
| Shortleaf pine      |   | 549     | 549                   | --     |
| Total softwoods     |   | 549     | 549                   | --     |
| <b>Hardwoods:</b>   |   |         |                       |        |
| Select white oaks   |   | 764     | 247                   | 517    |
| Other white oaks    |   | 327     | 327                   | --     |
| Select red oaks     |   | 376     | 338                   | 38     |
| Red oaks            |   | 3,235   | 2,981                 | 254    |
| Other red oaks      |   | 2       | 2                     | --     |
| Hickory A           |   | 184     | 140                   | 44     |
| Tupelo and blackgum |   | 56      | --                    | 56     |
| Ash                 |   | 23      | 23                    | --     |
| Sycamore            |   | 72      | 72                    | --     |
| Black walnut        |   | 71      | 71                    | --     |
| Total hardwoods     |   | 5,110   | 4,201                 | 909    |
| All species         |   | 5,659   | 4,750                 | 909    |

<sup>1/</sup> Cuttings of less than 3 cords per acre, or the equivalent in board feet, are included.

<sup>2/</sup> International 1/4-inch rule.

Table 51.--Area of allowable cut<sup>1/</sup> for 1972-1981, by harvest cuttings on commercial forest land, by forest type and stand-age class, Southwestern Ozarks, Missouri

(Thousand acres)

| Forest type               | Stand-age class (years) |       |       |       |       |       |       |       |       |       |         |         |
|---------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------|
|                           | All :<br>ages           | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-119 | 120-139 |
| Shortleaf pine            | 3.5                     | --    | --    | --    | --    | --    | 3.5   | --    | --    | --    | --      | --      |
| Eastern redcedar          | 1.9                     | .6    | --    | 1.3   | --    | --    | --    | --    | --    | --    | --      | --      |
| Eastern redcedar-hardwood | 14.7                    | --    | --    | --    | 1.0   | 6.8   | 2.3   | --    | 2.3   | --    | 2.3     | --      |
| Shortleaf pine-oak        | 11.0                    | --    | --    | --    | --    | 1.5   | 5.9   | 3.6   | --    | --    | --      | --      |
| Post-blackjack oak        | 144.8                   | --    | --    | --    | --    | --    | 22.9  | 51.0  | 15.8  | 11.8  | 23.7    | 19.6    |
| Black-scarlet oak         | 150.1                   | --    | --    | --    | --    | --    | 18.2  | 60.0  | 15.8  | 28.1  | 20.0    | 8.0     |
| White oak                 | 51.6                    | --    | --    | --    | --    | --    | 1.1   | 14.4  | 6.9   | 14.7  | 14.5    | --      |
| Elm-ash-cottonwood        | 5.9                     | --    | --    | --    | --    | 3.2   | 2.7   | --    | --    | --    | --      | --      |
| Maple-beech               | 1.5                     | --    | --    | --    | --    | --    | --    | --    | 1.5   | --    | --      | --      |
| All forest types          | 385.0                   | .6    | --    | 1.3   | 1.0   | 11.5  | 56.6  | 129.0 | 42.3  | 54.6  | 60.5    | 27.6    |

<sup>1/</sup> For a 10-year period.

Table 52.--Area of allowable cut<sup>1/</sup> by thinnings on commercial forest land for 1972-1981, by forest type and stand-age class, Southwestern Ozarks, Missouri

(Thousand acres)

| Forest type        | Stand-age class (years) |     |       |       |       |       |       |       |
|--------------------|-------------------------|-----|-------|-------|-------|-------|-------|-------|
|                    | All :<br>ages           | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 |
| Shortleaf pine     | 2.4                     | --  | 2.4   | --    | --    | --    | --    | --    |
| Shortleaf pine-oak | 2.6                     | --  | --    | --    | --    | 2.6   | --    | --    |
| Black-scarlet oak  | 168.0                   | --  | 14.5  | 39.0  | 47.2  | 35.8  | 31.5  | --    |
| White oak          | 31.7                    | 3.4 | --    | 6.3   | 3.5   | 3.7   | 7.5   | 7.3   |
| Elm-ash-cottonwood | 3.5                     | --  | --    | 3.5   | --    | --    | --    | --    |
| All forest types   | 208.2                   | 3.4 | 16.9  | 48.8  | 50.7  | 42.1  | 39.0  | 7.3   |

<sup>1/</sup> For a 10-year period.

PRINCIPAL TREE SPECIES IN MISSOURI'S SOUTHWESTERN OZARKS UNIT<sup>3/</sup>

SOFTWOOD SPECIES

- Shortleaf pine . . . . . *Pinus echinata*  
 Eastern redcedar . . . . . *Juniperus virginiana*

HARD HARDWOOD SPECIES

Ashes:

- White ash . . . . . *Fraxinus americana*  
 Green ash . . . . . *Fraxinus pennsylvanica*  
 Blue ash . . . . . *Fraxinus quadrangulata*

- Black walnut . . . . . *Juglans nigra*

Hard maples:

- Sugar maple . . . . . *Acer saccharum*

Hickory group A:

- Shellbark hickory . . . . . *Carya laciniosa*  
 Shagbark hickory . . . . . *Carya ovata*  
 Mockernut hickory . . . . . *Carya tomentosa*

Hickory group B:

- Bitternut hickory . . . . . *Carya cordiformis*  
 Pignut hickory . . . . . *Carya glabra* var. *glabra*  
 Black hickory . . . . . *Carya texana*

Select white oaks:

- White oak . . . . . *Quercus alba*  
 Bur oak . . . . . *Quercus macrocarpa*  
 Swamp chestnut oak . . . . . *Quercus michauxii*  
 Chinkapin oak . . . . . *Quercus muehlenbergii*  
 Swamp white oak . . . . . *Quercus bicolor*

Other white oaks:

- Post oak . . . . . *Quercus stellata* var. *stellata*

Select red oaks:

- Northern red oak . . . . . *Quercus rubra*  
 Shumard oak . . . . . *Quercus shumardii* var. *shumardii*

Red oaks:

- Scarlet oak . . . . . *Quercus coccinea*  
 Black oak . . . . . *Quercus velutina*

Other red oaks:

- Blackjack oak . . . . . *Quercus marilandica*  
 Water oak . . . . . *Quercus nigra*  
 Willow oak . . . . . *Quercus phellos*

Other hard hardwoods:

- Black locust . . . . . *Robinia pseudoacacia*  
 Common persimmon . . . . . *Diospyros virginiana*  
 Flowering dogwood . . . . . *Cornus florida*  
 Honeylocust . . . . . *Gleditsia triacanthos*  
 Osage-orange . . . . . *Maclura pomifera*  
 Red mulberry . . . . . *Morus rubra*

SOFT HARDWOOD SPECIES

- American basswood . . . . . *Tilia americana*  
 American sycamore . . . . . *Platanus occidentalis*  
 Black cherry . . . . . *Prunus serotina*  
 Butternut . . . . . *Juglans cinerea*

Elms:

- Winged elm . . . . . *Ulmus alata*  
 American elm . . . . . *Ulmus americana*  
 Slippery elm . . . . . *Ulmus rubra*  
 Rock elm . . . . . *Ulmus thomasi*

Soft maples:

- Silver maple . . . . . *Acer saccharinum*

- Sweetgum . . . . . *Liquidambar styraciflua*

Tupelo and blackgum:

- Blackgum . . . . . *Nyssa sylvatica* var. *biflora*

Other soft hardwoods:

- Boxelder . . . . . *Acer negundo*  
 Cucumbertree . . . . . *Magnolia acuminata*  
 Hackberry . . . . . *Celtis occidentalis*  
 Ohio buckeye . . . . . *Aesculus glabra*  
 Sassafras . . . . . *Sassafras albidum*

<sup>3/</sup> The common and scientific names are based on "Check List of Native and Naturalized Trees of the United States

(Including Alaska)," by Elbert L. Little, Jr., U.S. Dep. Agric., Agric. Handb. 41, 472 p., 1953.

## APPENDIX

### ACCURACY OF SURVEY

Forest survey information is based on a sampling procedure designed to provide reliable statistics at the State and Survey Unit levels. Consequently, the reported figures are estimates only. However, a measure of the reliability of these figures is given by the sampling errors. These sampling errors may be interpreted as meaning that the chances are two out of three that if a 100-percent inventory had been taken, using the same methods, the results would have been within the limits indicated.

For example, the estimated area of commercial forest land in the Southwestern Ozarks Unit in 1972, 2,311.4 thousand acres, has a sampling error of  $\pm 1.8$  percent (41.6 thousand acres). The commercial forest area from a 100-percent inventory, then, would be expected to fall between 2,269.8 and 2,353.0 thousand acres ( $2,311.4 \pm 41.6$ ), there being a one-in-three chance that this is not the case.

Following are sampling errors for total estimated volume, net growth, and removals for both growing stock and sawtimber, and for area of commercial forest land during the 1972 Southwestern Ozarks Survey:

| <i>Item</i>            | <i>Southwestern<br/>Ozarks Unit<br/>Totals</i> | <i>Sampling<br/>error<br/>(Percent)</i> |
|------------------------|--|---|
| <b>Growing Stock:</b>  |  |   |
| Volume                 | 10,772.9 M cords                               | 3.8                                     |
| Growth                 | 321.1 M cords                                  | 5.6                                     |
| Removals               | 406.3 M cords                                  | 9.3                                     |
| <b>Sawtimber:</b>      |  |   |
| Volume                 | 2,085.2 MM bd. ft.                             | 4.7                                     |
| Growth                 | 54.9 MM bd. ft.                                | 6.8                                     |
| Removals               | 85.0 MM bd. ft.                                | 7.4                                     |
| Commercial forest land | 2,311.4 M acres                                | 1.8                                     |

As survey data are broken down into units smaller than State or Survey Unit totals, the sampling error increases. The smaller the breakdown, the larger the sampling error. For example, the sampling

error for area of commercial forest land in a particular county is higher than that for total commercial forest area in the Survey Unit. An approximation of the increasing sampling error can be obtained from table 53, which shows the sampling errors associated with estimates smaller than totals in the Southwestern Ozarks Unit.

### SURVEY PROCEDURE

The major steps in the survey of the Southwestern Ozarks Unit were as follows:

1. A total of 27,343 1-acre points distributed systematically across aerial photos of the entire area were observed. A photo interpreter classified these points as either forest land (15,107) or nonforest land (12,236) in order to make a preliminary estimate of forest area. Next, 5,900 of the forest points were stereoclassified as to forest type, stand-size class, and density. Then 816 points classed as forest and 682 points classed as nonforest were examined on the ground to correct the preliminary area estimate for errors in classification and for actual changes in land use since the photos were taken. Some of the points examined were locations of permanent sample plots (each of which contained one variable-radius plot with basal area factor 5) established during the 1959 survey. Of the 613 points determined to be on commercial forest land from ground examination, 245 were at previously unsampled locations and 10-point variable-radius plots (basal area factor 37.5) were established uniformly over the sample acres. The remaining 368 points were at formerly established permanent plot locations and were remeasured by superimposing 10-point variable-radius plots (basal area factor 37.5) over the existing plots in addition to remeasuring the basal area factor 5 plots. Tree measurements made on new and remeasured plots were the basis for estimates of timber volume, growth, mortality, number of trees, and other forest classifications.

2. Statistics on timber utilization in 1969 were obtained from mill surveys and from remeasurement of permanent sample plots. The Missouri Department of Conservation conducted a canvass of resident sawmills, veneer

Table 53.--Sampling errors<sup>1/</sup> for estimates smaller than unit totals of volume, net growth, and removals, and of area of commercial forest land, Southwestern Ozarks, Missouri, 1972

| Sampling error (percent) | Commercial forest |          | Growing stock  |         |          | Sawtimber          |        |          |
|--------------------------|-------------------|----------|----------------|---------|----------|--------------------|--------|----------|
|                          | Thousand acres    |          | Thousand cords |         |          | Million board feet |        |          |
|                          | Inventory         | Growth   | Inventory      | Growth  | Removals | Inventory          | Growth | Removals |
| 1                        | 8,652.0           |          |                |         |          |                    |        |          |
| 2                        | 2,163.0           |          |                |         |          |                    |        |          |
| 3                        | 961.3             |          |                |         |          |                    |        |          |
| 4                        | 540.7             | 11,348.0 |                |         |          |                    |        |          |
| 5                        | 346.1             | 7,262.7  | 447.3          | 1,393.7 | 2,194.1  | 116.4              | 188.2  |          |
| 10                       | 86.5              | 1,815.7  | 111.8          | 348.1   | 548.5    | 29.1               | 47.1   |          |
| 15                       | 38.4              | 807.0    | 49.7           | 154.4   | 243.8    | 12.9               | 20.9   |          |
| 20                       | 21.6              | 453.9    | 28.0           | 87.3    | 137.1    | 7.3                | 11.8   |          |
| 25                       | 13.8              | 290.5    | 17.9           | 55.7    | 87.8     | 4.7                | 7.5    |          |
| 50                       | 3.5               | 72.6     | 4.5            | 13.9    | 21.9     | 1.2                | 1.9    |          |
| 100                      | .9                | 18.2     | 1.1            | 3.8     | 5.5      | .3                 | .5     |          |

<sup>1/</sup> At the 68-percent probability level.

mills, and other primary wood-using plants. The North Central Forest Experiment Station canvassed resident pulpmills, and the underground mining industry in Missouri, as well as out-of-State sawmills, pulpmills, and veneer mills to determine their use of timber from Missouri. Fuelwood and fencepost output was based on U.S. Census of Agriculture and Housing figures, a canvass of public and industrial timber owners, and a canvass of resident wood-treating plants. Estimates of primary mill residue used for fuelwood were obtained from the canvass of Missouri primary wood-using plants. Timber cut for products by owner class was determined by a canvass of all public and industrial timber owners. The portion of timber cut unaccounted for by the latter owners was grouped under "farmer and other owners."

3. To develop wood utilization factors used in converting timber products output to timber removals for saw logs, veneer logs, cooperage logs, pulpwood, and charcoal wood, 486 felled trees throughout the State were measured. Factors for all other products were obtained during the 1959-1960 Missouri utilization study.

4. Field data were sent to St. Paul where they were edited, punched on cards, and stored on magnetic tape for later machine sorting, computing, and tabulation.

#### ALLOWABLE CUT

Allowable cut is the estimated volume of timber on commercial forest land that

could be cut annually for the next 10 years, while improving tree stocking and bringing about a more even distribution of age classes. In Missouri, annual allowable cut is shown separately as that from harvest cutting and from thinnings, and was determined by computer using an area control system for determining the number of acres to be cut annually.

The harvest cut of sawtimber was calculated from stands of forest types normally managed for sawtimber whose site index and age indicated they were ready for harvest, or would be within the next 10 years. Table 54 shows the site index used in these calculations for each forest type to determine whether the objective of management would be to grow sawtimber or pulpwood. Included also is the rotation age for each.

Stands that did not qualify for harvest during that period were checked to see if they were overstocked by basal area standards, or would be within the next 10 years. Stands determined to be overstocked were "thinned" by the computer back to their recommended basal-area stocking level, and the volume of sawtimber trees "thinned" was added to the volume of allowable cut by thinnings of growing stock and sawtimber. The volume of poletimber trees "thinned" was added to the growing-stock allowable cut by thinnings. In scheduling thinnings, the computer program first "removes" rough and rotten trees, then short-log trees, and finally, growing-stock trees.

Table 54.--Forest type, site index, and rotation age, by management objective, used in calculation of annual allowable cut, Missouri, 1972

| Forest type               | Site index   | Rotation age | Management objective |
|---------------------------|--------------|--------------|----------------------|
|                           |              | Years        |                      |
| Shortleaf pine            | 50 or higher | 60           | Sawtimber            |
|                           | Less than 50 | 40           | Pulpwood             |
| Shortleaf pine-oak        | 60 or higher | 80           | Sawtimber            |
|                           | Less than 60 | 50           | Pulpwood             |
| Eastern redcedar          | 35 or higher | 55           | Sawtimber            |
|                           | Less than 35 | 70           | Sawtimber            |
| Eastern redcedar-hardwood | 45 or higher | 50           | Sawtimber            |
|                           | Less than 45 | 60           | Sawtimber            |
| Black-scarlet oak         | 60 or higher | 80           | Sawtimber            |
|                           | Less than 60 | 50           | Pulpwood             |
| White oak                 | 60 or higher | 80           | Sawtimber            |
|                           | Less than 60 | 50           | Pulpwood             |
| Post-blackjack oak        | All sites    | 50           | Pulpwood             |
| Oak-gum-cypress           | All sites    | 60           | Sawtimber            |
| Cottonwood                | All sites    | 30           | Sawtimber            |
| Elm-ash-cottonwood        | All sites    | 50           | Sawtimber            |
| Maple-beech               | All sites    | 90           | Sawtimber            |

The harvest cut of growing stock included that of sawtimber in addition to the volume from stands of forest types normally managed for pulpwood that were or would be rotation age within the next 10 years.

Allowable cut is based on the assumptions that all timber will be available and accessible when needed, and that a ready market will exist for every species, size, and grade of material harvested. Further, it assumes that the proper sequence of cutting is known and will be followed, and that logging practices employed will result in an improved forest. Because there is no way of guaranteeing that these assumptions will be carried out during the next 10 years, the allowable cut estimates should be compared with timber removals figures only in a general way.

#### LOG GRADE

In the Southwestern Ozarks Unit the butt log of every sawtimber tree (972 trees) on every permanent sample plot was log-graded. Additionally, all of the logs in a smaller sample of trees throughout the

State (265 trees) were log-graded. The volume yield by log grade for each tree in the latter sample was used to distribute the volume of trees in the former sample into log-grade classes. The resulting volumes by log-grade classes were expanded to provide an estimate for the entire unit.

Logs are graded on the basis of external characteristics as indicators of quality. Hardwood species were graded according to "Hardwood Log Grades for Standard Lumber and How to Use Them," published by the Forest Products Laboratory under the designation D1737A, 1961, and USDA Forest Service standards for hardwood tie and timber logs. The best 12-foot section of the lowest 16-foot hardwood log, or the best 12-foot upper section if the butt log did not meet minimum log-grade standards, was graded.

Shortleaf pine was graded according to "Interim Southern Pine Log Grades," USDA Forest Service, 1953. All other softwoods were graded according to "Specifications for Log Grades of Hardwoods and Softwoods," Northern Hemlock and Hardwood Association, 1947. The lowest 16-foot log in softwood trees or a shorter log down to 12 feet if a 16-foot butt log was not present, was graded.

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*Plant a tree...trees give oxygen.*