

PRIMARY FOREST
PRODUCTS INDUSTRY
and TIMBER USE
IOWA, 1972

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FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

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HIGHLIGHTS

From 1953 to 1972:

- Total roundwood production in Iowa fell 37 percent to 22.9 million cubic feet.
- Roundwood products cut on private lands remained at more than 95 percent.
- Saw log output declined 18 percent to 53.5 million board feet.
- Veneer log production climbed 10 percent to 5.2 million board feet.
- Pulpwood output rose 1607 percent to 54.6 thousand cords.
- Fuelwood production dropped 59 percent to 156.9 thousand cords.
- Production of posts, cooperage logs, mine timbers, and farm timbers fell 75 percent to 519 thousand cubic feet.
- Active primary wood-using mills declined from several hundred to only 65.

OVERVIEW OF THE INDUSTRY

Rural Iowa is primarily farmland. Forest land has declined significantly from 7 percent of the total land area since 1954.

Nevertheless, a healthy primary wood-using industry exists. More than 95 percent of the commercial forest land is privately owned, and a correspondingly high percent of the timber products are cut on private land.

The number of mills dwindled to 65 in 1972, but the surviving firms are generally larger, better managed, and more financially sound than in the early 1950's.

Fifty-two of the 65 active mills in 1972 were in the Northeast¹ and Southeast Units (fig. 1), near the major timber supply. Most mills used local wood sources.

Markets for Iowa wood products were generally favorable during 1972. Demand was strong for pallets, furniture components, railroad ties, paper, and paperboard.

SAW LOGS--SAWMILLS

Iowa loggers harvested 53.5 million board feet of saw logs in 1972, up 14 percent from 1969. More than half (57 percent) of the saw logs were cut in the Northeast Unit.

Most of the saw logs (50.6 million board feet) were shipped to Iowa sawmills. The remainder, largely black walnut² logs, were exported, primarily to Missouri, Minnesota, and Kansas.

Red oak, cottonwood, elm, white oak, and soft maple accounted for 80 percent of the harvest. More red oak was cut (11.1 million board feet) for saw logs than any other species as output rose 3.8 million board feet over 1969. Red oak was mostly used for railroad ties and furniture.

¹Geographic area used by Forest Survey to report periodic inventories of the Nation's forest resources. See figure 1 for counties encompassed in each of the four Forest Survey Units in Iowa.

²Common and scientific names of all species mentioned in this text report are listed on pages 5-6.

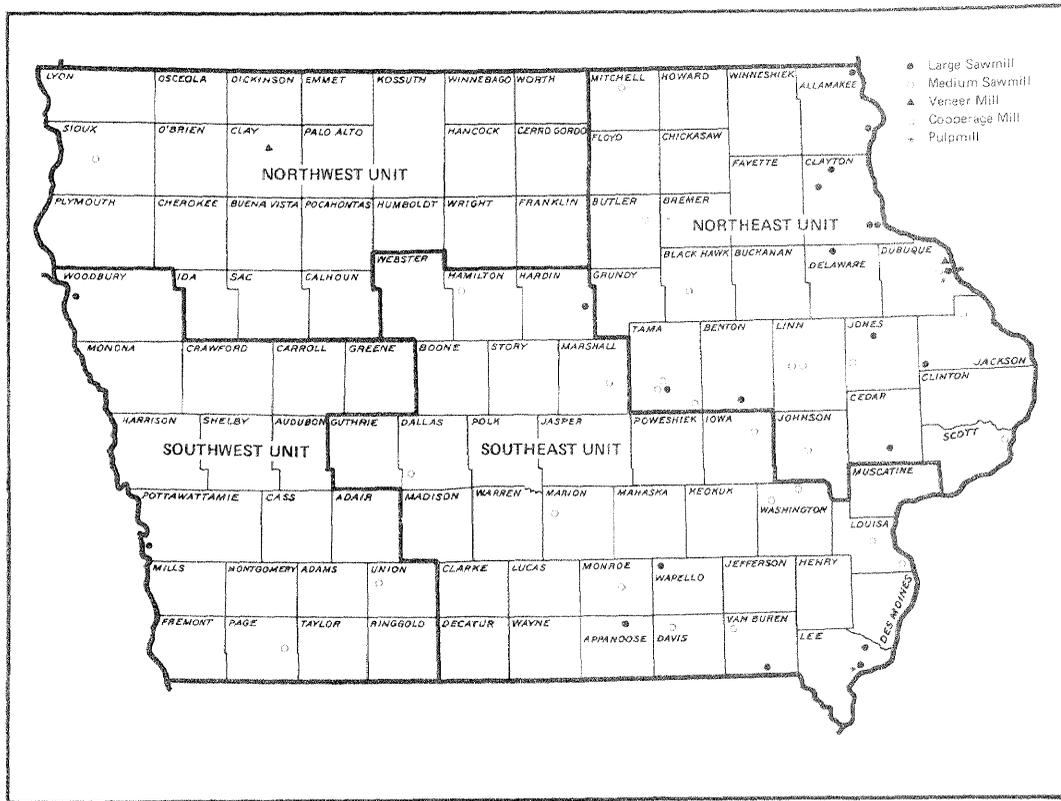


Figure 1.--Primary wood-using plants in Iowa, 1972. Sawmills are classed by volume of lumber produced in 1972: Large = more than one million board feet; Medium = 0.101 to 1.000 million board feet (smaller sawmills not shown).

Cottonwood saw log production climbed 55 percent from 1969 to 10.8 million board feet in 1972. This species was used mainly for pallets, boxes, and crating.

Output of elm saw logs was 7.8 million board feet, about the same as in 1969. Many trees were salvaged after infection by Dutch Elm Disease, a serious killer of elm in the Midwest.

Iowa's 60 sawmills received 59.6 million board feet of saw logs in 1972, an increase of 15.2 million board feet over 1969. Fifteen percent of the receipts came from other states, chiefly Missouri (4.3 million board feet), Illinois (1.1 million board feet), and Wisconsin (1.0 million board feet). Of the 7.5 million board feet

of black walnut received, 6.1 million board feet were procured in other states.

Lumber production in Iowa ranged from 43 to 91 million board feet annually since 1941. The 56 million board feet of lumber sawn in 1972 was used primarily for farm buildings, railroad ties, pallets, furniture, and dunnage.

For many years the active sawmill population in Iowa has been declining while the average annual lumber production per mill has been rising. Average lumber production per mill in 1953 was less than 65 thousand board feet for several hundred sawmills. By 1969, average production was 698 thousand board feet at 63 mills and rose to 927 thousand board feet in 1972.

Larger mills generally operate more days per year, are better financed, are more stable during business downturns, and have greater opportunities for marketing their wood residues.

VENEER LOGS

Nearly half the 5.2-million-board-foot veneer log volume cut in Iowa during 1972 was black walnut. The other major species harvested was red oak (0.9 million board feet). Both species are extensively used in furniture and other home furnishings.

Only 1.2 million board feet of Iowa veneer logs were used in the State. Important customers for Iowa veneer logs in 1972 included veneer mills in Wisconsin (1.5 million board feet), Indiana (0.5 million board feet), and foreign countries (1.2 million board feet). Walnut was the principal export species. Overall, the trend in veneer log output has been slightly downward since 1960.

Hickory is becoming an important veneer species in Iowa. More than half a million board feet of hickory logs were cut in 1972 compared with none before 1966. Hickory is a preferred species for furniture.

Output of elm veneer logs is falling because of the decimation of the high quality elm resource by Dutch Elm Disease.

Only two Iowa veneer mills were operating in 1972. Both produce high quality veneers.

PULPWOOD

Of the 54.6 thousand cords of pulpwood produced in 1972, 30.9 thousand cords were hardwood roundwood (including chips from roundwood); the remaining volume was about equally divided between softwood and hardwood plant residue. Softwood residue used for fiber products came entirely from secondary wood-using firms in Iowa such as millwork plants. By contrast, the Iowa hardwood residue used as pulpwood was mainly slabs and edgings from sawmills.

Annual pulpwood production is now about twice the amount produced in the early 60's when no wood residue from Iowa was pulped. About 1962, pulp mills began using Iowa hardwood residue, and in 1968

Iowa softwood residue was first used.

Two pulp mills operate in Iowa along the eastern border; their combined pulping capacity is about 230 tons per 24 hours.

OTHER ROUNDWOOD PRODUCTS

Other products cut in Iowa totaled 10.3 million cubic feet and included cooperage bolts, fuelwood, posts, mine timbers, and farm timbers. Ninety-five percent was fuelwood, and the major species burned were elm and ash. Until the recent energy crisis, fuelwood cutting had been declining rapidly for 2 decades. In 1953 the fuelwood harvest was 2.4 times larger than in 1972.

Demand for mine timbers was low in 1972 because only two underground coal mines were operating in Iowa.

PRIMARY PLANT RESIDUE

During 1972 primary wood-using mills in Iowa generated 2.9 million cubic feet (about 37,000 cords) of coarse residue, 1.8 million cubic feet of fine residue, and 2.7 million cubic feet of bark. Large amounts of all three residue categories were not used (dumped or burned as waste) including 45 percent of the coarse residue. The largest quantity of unused coarse residue was found in northeast Iowa:

<i>Unit</i>	<i>Unused coarse residue (thousand cubic feet)</i>
Northeast	609
Southeast	449
Southwest	262
Northwest	17
All Units	<u>1,337</u>

Nearly half (47 percent) the fine residue was not used:

<i>Unit</i>	<i>Unused fine residue (thousand cubic feet)</i>
Northeast	443
Southeast	167
Southwest	236
Northwest	6
All Units	<u>852</u>

Two-thirds (67 percent) of the bark was disposed of as waste:

<i>Unit</i>	<i>Unused bark (thousand cubic feet)</i>
Northeast	744
Southeast	782
Southwest	289
Northwest	15
All Units	1,830

Clearly, Iowa's primary mill operators have been only partially successful in finding markets for their wood and bark residue. Even large mills have problems. Ten of the 21 large sawmills (each producing more than a million board feet of lumber per year) utilized no more than half of their coarse residue in 1972. Similarly, 11 of these mills sold no more than half their fine residue, and 18 of them sold no more than half their bark.

Estimates of residue in 1972 by type of disposal for each county are shown in the Appendix. Individuals or firms desiring residue can use the county data in seeking sources.

INDUSTRY OUTLOOK

During the next 8 years harvesting of roundwood products in Iowa will probably increase. Some markets, such as furniture and pallets, have weakened recently. However, during the next few years these markets are expected to be strong along with those for railroad ties, paper, and paperboard. Saw logs, pulpwood, and fuelwood will continue to be the dominant products cut in Iowa. Fuelwood production from roundwood has probably increased since 1972 and is likely to remain higher as long as other fuels remain relatively expensive and in short supply.

The number of Iowa primary wood-using mills appears to have stabilized since 1969, and will probably remain around 60 to 70 for several years, but average output per mill will increase. Over the long run, continued land clearing could deplete the commercial timber base below the minimum required to maintain the timber industries with homegrown wood.

The amount of wood and bark residue used should increase. Pulpmills are likely

to procure more coarse residue and farmers will probably use more fine residue for poultry litter and livestock bedding. Both coarse and fine residue will probably be in greater demand as fuelwood. Bark should be in greater demand as a mulch and soil stabilizer.

STUDY METHODS

Industrial roundwood data for 1972 came from a complete canvass of primary wood-using firms using Iowa logs and bolts. All canvassing in Iowa (except pulpmills) was done by the Iowa Conservation Commission through personal contacts with the firms. The North Central Forest Experiment Station sent questionnaires to Iowa pulpmills and out-of-State mills using Iowa roundwood.

The Station also obtained by mail the 1972 timber product output data for public forest land and forest land owned by primary wood-using firms.

Fuelwood, post, and farm timber production in 1972 from private land (other than industrial) was determined by a personal canvass of a sample of Iowa households. The sample was selected by the Statistical Reporting Service, USDA, from the open country stratum and agri-urban substratum of the new rural area sampling frame. The open country sample was proportional to the estimated area of privately owned forest land in each Survey Unit. Households in the sample were personally contacted by the Iowa Conservation Commission.

The Station edited and compiled the data.

DEFINITION OF TERMS

Roundwood products--Saw logs, veneer logs, pulpwood, fuelwood, posts, cooperage bolts, mine timbers, and farm timbers. Primary wood-using plant residue--Wood materials (coarse and fine) and bark not utilized for principal products at manufacturing plants using roundwood. These residues include wood products (byproducts) obtained incidental to production of principal products, and wood materials not utilized for some product.

Coarse plant residue--Wood residue suitable
for chipping such as slabs, edgings,
and veneer cores.

Fine plant residue--Wood residue not
suitable for chipping, such as
sawdust and veneer clippings.

COMMON AND SCIENTIFIC NAMES OF TREE SPECIES MENTIONED

SOFTWOOD SPECIES

Eastern white pine. *Pinus strobus*
Red pine. *Pinus resinosa*
Eastern redcedar. *Juniperus virginiana*

HARDWOOD SPECIES

White oak:

White oak *Quercus alba*
Swamp white oak *Quercus bicolor*
Bur oak *Quercus macrocarpa*
Swamp chestnut oak. *Quercus michauxii*
Chinkapin oak *Quercus muehlenbergii*
Overcup oak *Quercus lyrata*
Chestnut oak. *Quercus prinus*
Post oak. *Quercus stellata*

Red oak:

Cherrybark oak. *Quercus falcata* var. *pagodaefolia*
Northern red oak. *Quercus rubra*
Scarlet oak *Quercus coccinea*
Southern red oak. *Quercus falcata*
Shingle oak *Quercus imbricaria*
Water oak *Quercus nigra*
Pin oak *Quercus palustris*
Willow oak. *Quercus phellos*
Black oak *Quercus velutina*

Hickory:

Bitternut hickory *Carya cordiformis*
Pignut hickory. *Carya glabra*
Pecan *Carya illinoensis*
Shellbark hickory *Carya laciniosa*
Shagbark hickory. *Carya ovata*
Mockernut hickory *Carya tomentosa*

Hard maple:

Black maple *Acer nigrum*
Sugar maple *Acer saccharum*

Soft maple:

Red maple *Acer rubrum*
Silver maple. *Acer saccharinum*

Ash:

White ash *Fraxinus americana*
Black ash *Fraxinus nigra*
Green ash *Fraxinus pennsylvanica*
Blue ash. *Fraxinus quadrangulata*

Cottonwood:

Eastern cottonwood. *Populus deltoides*
Swamp cottonwood. *Populus heterophylla*

Aspen:

Bigtooth aspen. *Populus grandidentata*
Quaking aspen *Populus tremuloides*

Basswood. *Tilia americana*

Elm:

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

Black walnut. *Juglans nigra*

Black cherry. *Prunus serotina*

Hackberry *Celtis occidentalis*

Willow. *Salix nigra*

Birch:

Yellow birch. *Betula alleghaniensis*

River birch *Betula nigra*

Paper birch *Betula papyrifera*

APPENDIX

Table 1.--Roundwood production by species, Unit and product, Iowa, 1972

NORTHEAST UNIT				
Species	Product			
	Saw logs	Veneer logs	Pulpwood	Other products
	Thousand board feet ¹	Standard	Standard	Thousand
		cords ²	cords ²	cubic feet
Softwoods	97	--	--	--
White oak	4,558	10	2,000	329
Red oak	8,750	707	3,600	253
Hickory	464	--	3,600	71
Hard maple	1,538	216	400	--
Soft maple	1,495	108	222	82
Ash	1,104	111	200	164
Cottonwood	2,130	35	222	--
Aspen	158	--	778	13
Basswood	2,017	252	89	240
Elm	5,528	233	222	1,369
Black walnut	1,354	1,650	--	48
Black cherry	100	3	45	--
Hackberry	291	--	89	--
Willow	347	--	--	164
Birch	216	--	222	6
Other hardwoods	91	33	--	85
All species	30,238	3,358	11,689	2,824
SOUTHEAST UNIT				
Softwoods	--	--	--	--
White oak	1,786	8	5,094	72
Red oak	2,296	190	5,094	1
Hickory	315	569	849	33
Hard maple	--	--	--	--
Soft maple	4,529	6	2,335	65
Ash	330	--	--	65
Cottonwood	4,050	50	2,335	--
Aspen	--	--	1,167	--
Basswood	136	--	234	--
Elm	1,426	204	234	391
Black walnut	840	663	--	--
Black cherry	13	--	--	--
Hackberry	236	--	467	--
Willow	61	--	234	--
Birch	256	--	1,167	--
Other hardwoods	2	8	--	64
All species	16,276	1,698	19,210	691

(Table 1 continued on next page)

(Table 1 continued)

SOUTHWEST UNIT				
Softwoods	--	--	--	18
White oak	31	--	--	8
Red oak	3	--	--	--
Hickory	4	--	--	--
Hard maple	--	--	--	--
Soft maple	123	--	--	75
Ash	18	--	--	1,423
Cottonwood	3,695	--	--	--
Aspen	--	--	--	--
Basswood	19	--	--	--
Elm	172	--	--	1,524
Black walnut	386	64	--	--
Black cherry	--	--	--	--
Hackberry	11	--	--	--
Willow	--	--	--	--
Birch	--	--	--	--
Other hardwoods	--	--	--	23
All species	4,462	64	--	3,071
NORTHWEST UNIT				
Softwoods	8	--	--	21
White oak	133	--	--	--
Red oak	30	22	--	--
Hickory	--	--	--	--
Hard maple	30	--	--	--
Soft maple	327	7	--	92
Ash	197	--	--	1,745
Cottonwood	899	--	--	--
Aspen	30	--	--	--
Basswood	33	--	--	--
Elm	682	2	--	1,870
Black walnut	89	36	--	--
Black cherry	--	--	--	--
Hackberry	30	--	--	--
Willow	30	--	--	--
Birch	--	--	--	--
Other hardwoods	--	--	--	1
All species	2,518	67	--	3,729
ALL UNITS				
Softwoods	105	--	--	39
White oak	6,508	18	7,094	409
Red oak	11,079	919	8,694	254
Hickory	783	569	4,449	104
Hard maple	1,568	216	400	--
Soft maple	6,474	121	2,557	314
Ash	1,649	111	200	3,397
Cottonwood	10,774	85	2,557	--
Aspen	188	--	1,945	13
Basswood	2,205	252	323	240
Elm	7,808	439	456	5,154
Black walnut	2,669	2,413	--	48
Black cherry	113	3	45	--
Hackberry	568	--	556	--
Willow	438	--	234	164
Birch	472	--	1,389	6
Other hardwoods	93	41	--	173
All species	53,494	5,187	30,899	10,315

¹International 1/4-inch log rule²Roughwood basis

Table 2.--Roundwood production in Iowa, 1953 and 1972

(In thousand cubic feet)

Product	All species		Softwoods		Hardwoods	
	1953	1972	1953	1972	1953	1972
Saw logs	9,600	9,004	240	17	9,360	8,987
Veneer logs	700	1,157	--	--	700	1,157
Cooperage logs	500	102	--	--	500	102
Pulpwood	200	2,441	--	--	200	2,441
Posts	1,200	185	--	--	1,200	185
Fuelwood	24,000	9,796	--	39	24,000	9,757
Other products ¹	400	232	--	--	400	232
Total	36,600	22,917	240	56	36,360	22,861

¹Includes mine and farm timbers.

Table 3.--Forest products harvested by ownership class, product, and Unit in Iowa, 1972

NORTHEAST UNIT								
Ownership class	Saw logs	Veneer	Cooperage	Pulpwood	Posts	Mine	Fuelwood	Misc.
	: logs	: logs	: logs	: Cords ²	: Thousand	: Thousand	: Cords ²	: Thousand
	: Thousand board feet ¹				: pieces	: cubic feet		: cubic feet
Federal:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	270	--
State:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	84	12	--	9	--	--	--	--
Private:								
Industrial:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	616	66	--	--	--	--	--	--
Farm and other:								
Softwoods	97	--	--	--	--	--	--	--
Hardwoods	29,441	3,280	355	11,680	160	2	37,800	199
All owners:								
Softwoods	97	--	--	--	--	--	--	--
Hardwoods	30,141	3,358	355	11,689	160	2	38,070	199
SOUTHEAST UNIT								
Federal:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	--	--
State:								
Softwoods	--	--	--	--	1	--	--	--
Hardwoods	132	34	--	95	--	--	20	--
Private:								
Industrial:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	427	693	28	1,039	--	--	--	--
Farm and other:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	15,717	971	203	18,076	118	8	8,489	23
All owners:								
Softwoods	--	--	--	--	1	--	--	--
Hardwoods	16,276	1,698	231	19,210	118	8	8,509	23
SOUTHWEST UNIT								
Federal:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	--	--
State:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	--	--
Private:								
Industrial:								
Softwoods	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	--	--
Farm and other:								
Softwoods	--	--	--	--	--	--	269	--
Hardwoods	4,462	64	40	--	42	--	46,507	--
All owners:								
Softwoods	--	--	--	--	--	--	269	--
Hardwoods	4,462	64	40	--	42	--	46,507	--

(Table 3 continued on next page)

(Table 3 continued)

NORTHWEST UNIT

Federal:									
Softwoods	--	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	--	--	--
State:									
Softwoods	--	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	--	--	--
Private:									
Industrial:									
Softwoods	--	--	--	--	--	--	--	--	--
Hardwoods	116	28	--	--	--	--	--	--	--
Farm and other:									
Softwoods	8	--	--	--	--	--	331	--	--
Hardwoods	2,394	39	--	--	5	--	57,013	--	--
All owners:									
Softwoods	8	--	--	--	--	--	331	--	--
Hardwoods	2,510	67	--	--	5	--	57,013	--	--
ALL UNITS									
Federal:									
Softwoods	--	--	--	--	--	--	--	--	--
Hardwoods	--	--	--	--	--	--	270	--	--
State:									
Softwoods	--	--	--	--	1	--	--	--	--
Hardwoods	216	46	--	104	--	--	20	--	--
Private:									
Industrial:									
Softwoods	--	--	--	--	--	--	--	--	--
Hardwoods	1,159	787	28	1,039	--	--	--	--	--
Farm and other:									
Softwoods	105	--	--	--	--	--	600	--	--
Hardwoods	52,014	4,354	598	29,756	325	10	149,809	222	--
All owners:									
Softwoods	105	--	--	--	1	--	600	--	--
Hardwoods	53,389	5,187	626	30,899	325	10	150,099	222	--

¹International $\frac{3}{4}$ -inch rule.²Standard cords, roughwood basis.

Table 4.--Saw log production by species and State of destination, Iowa, 1972

(In thousand board feet)¹

NORTHEAST UNIT						
Species	Iowa	Missouri	Minnesota	Kansas	Other States	Total
Softwoods:						
White pine	95	0	0	0	0	95
Red pine	2	0	0	0	0	2
Redcedar	0	0	0	0	0	0
Total swds.	97	0	0	0	0	97
Hardwoods:						
White oak	4,246	0	311	0	1	4,558
Red oak	8,297	0	312	0	141	8,750
Hickory	464	0	0	0	0	464
Hard maple	1,520	0	14	0	4	1,538
Soft maple	1,345	150	0	0	0	1,495
Ash	1,090	0	14	0	0	1,104
Cottonwood	2,118	0	0	0	12	2,130
Aspen	144	0	14	0	0	158
Basswood	1,947	0	70	0	0	2,017
Elm	5,528	0	0	0	0	5,528
Blk. walnut	966	331	14	42	1	1,354
Blk. cherry	100	0	0	0	0	100
Hackberry	291	0	0	0	0	291
Willow	347	0	0	0	0	347
Birch	202	0	14	0	0	216
Other spp.	91	0	0	0	0	91
Total hws.	28,696	481	763	42	159	30,141
All species	28,793	481	763	42	159	30,238
SOUTHEAST UNIT						
Softwoods:						
White pine	0	0	0	0	0	0
Red pine	0	0	0	0	0	0
Redcedar	0	0	0	0	0	0
Total swds.	0	0	0	0	0	0
Hardwoods:						
White oak	1,762	24	0	0	0	1,786
Red oak	2,284	12	0	0	0	2,296
Hickory	315	0	0	0	0	315
Hard maple	0	0	0	0	0	0
Soft maple	4,260	269	0	0	0	4,529
Ash	330	0	0	0	0	330
Cottonwood	4,009	24	0	0	17	4,050
Aspen	0	0	0	0	0	0
Basswood	136	0	0	0	0	136
Elm	1,426	0	0	0	0	1,426
Blk. walnut	156	199	0	485	0	840
Blk. cherry	13	0	0	0	0	13
Hackberry	235	1	0	0	0	236
Willow	61	0	0	0	0	61
Birch	256	0	0	0	0	256
Other spp.	2	0	0	0	0	2
Total hws.	15,245	529	0	485	17	16,276
All species	15,245	529	0	485	17	16,276
SOUTHWEST UNIT						
Softwoods:						
White pine	0	0	0	0	0	0
Red pine	0	0	0	0	0	0
Redcedar	0	0	0	0	0	0
Total swds.	0	0	0	0	0	0
Hardwoods:						
White oak	30	1	0	0	0	31
Red oak	3	0	0	0	0	3
Hickory	4	0	0	0	0	4
Hard maple	0	0	0	0	0	0
Soft maple	12	111	0	0	0	123
Ash	11	7	0	0	0	18
Cottonwood	3,695	0	0	0	0	3,695
Aspen	0	0	0	0	0	0
Basswood	14	5	0	0	0	19
Elm	172	0	0	0	0	172
Blk. walnut	222	161	0	3	0	386
Blk. cherry	0	0	0	0	0	0
Hackberry	0	11	0	0	0	11
Willow	0	0	0	0	0	0
Birch	0	0	0	0	0	0
Other spp.	0	0	0	0	0	0
Total hws.	4,163	296	0	3	0	4,462
All species	4,163	296	0	3	0	4,462

(Table 4 continued on next page)

(Table 4 continued)

NORTHWEST UNIT						
Softwoods:						
White pine	8	0	0	0	0	8
Red pine	0	0	0	0	0	0
Redcedar	0	0	0	0	0	0
Total swds.	8	0	0	0	0	8
Hardwoods:						
White oak	133	0	0	0	0	133
Red oak	30	0	0	0	0	30
Hickory	0	0	0	0	0	0
Hard maple	30	0	0	0	0	30
Soft maple	233	50	0	0	44	327
Ash	195	0	0	0	2	197
Cottonwood	883	0	0	0	16	899
Aspen	30	0	0	0	0	30
Basswood	30	0	0	0	3	33
Elm	660	0	0	0	22	682
Blk. walnut	63	12	0	14	0	89
Blk. cherry	0	0	0	0	0	0
Hackberry	30	0	0	0	0	30
Willow	30	0	0	0	0	30
Birch	0	0	0	0	0	0
Other spp.	0	0	0	0	0	0
Total hws.	2,347	62	0	14	87	2,510
All species	2,355	62	0	14	87	2,518
ALL UNITS						
Softwoods:						
White pine	103	0	0	0	0	103
Red pine	2	0	0	0	0	2
Redcedar	0	0	0	0	0	0
Total swds.	105	0	0	0	0	105
Hardwoods:						
White oak	6,171	25	311	0	1	6,508
Red oak	10,614	12	312	0	141	11,079
Hickory	783	0	0	0	0	783
Hard maple	1,550	0	14	0	4	1,568
Soft maple	5,850	580	0	0	44	6,474
Ash	1,626	7	14	0	2	1,649
Cottonwood	10,705	24	0	0	45	10,774
Aspen	174	0	14	0	0	188
Basswood	2,127	5	70	0	3	2,205
Elm	7,786	0	0	0	22	7,808
Blk. walnut	1,407	703	14	544	1	2,669
Blk. cherry	113	0	0	0	0	113
Hackberry	556	12	0	0	0	568
Willow	438	0	0	0	0	438
Birch	458	0	14	0	0	472
Other spp.	93	0	0	0	0	93
Total hws.	50,451	1,368	763	544	263	53,389
All species	50,556	1,368	763	544	263	53,494

¹International $\frac{1}{4}$ -inch rule.

Table 5.--Saw log production and receipts in Iowa by species, 1969 and 1972

(In thousand board feet)¹

Species	Production			Receipts		
	1969	1972	Change	1969	1972	Change
Softwoods	223	105	-118	223	105	-118
White oak	4,785	6,508	+1,723	4,905	6,758	+1,853
Red oak	7,329	11,079	+3,750	7,771	11,317	+3,546
Hickory	365	783	+418	441	862	+421
Hard maple	1,490	1,568	+78	1,670	1,588	-82
Soft maple	9,434	6,474	-2,960	8,140	6,391	-1,749
Ash	1,213	1,649	+436	1,270	1,697	+427
Cottonwood	6,931	10,774	+3,843	6,296	11,436	+5,140
Aspen	222	188	-34	192	178	-14
Basswood	1,565	2,205	+640	1,672	2,180	+508
Elm	7,976	7,808	-168	8,054	7,840	-214
Black walnut	4,356	2,669	-1,687	2,756	7,509	+4,753
Black cherry	117	113	-4	170	117	-53
Birch	323	472	+149	272	496	+224
Other hardwoods	587	1,099	+512	572	1,147	+575
All species	46,916	53,494	+6,578	44,404	59,621	+15,217

¹International $\frac{1}{4}$ -inch log rule.

Table 6.--Saw log receipts in Iowa by species and State of origin, 1972

(In thousand board feet)¹

Species	NORTHEAST UNIT									
	All States	Iowa	Missouri	Illinois	Wisconsin	Arkansas	Kansas	Nebraska	Minnesota	South Dakota
Softwoods:										
White pine	93	93	0	0	0	0	0	0	0	0
Red pine	2	2	0	0	0	0	0	0	0	0
Total softwoods	95	95	0	0	0	0	0	0	0	0
Hardwoods:										
White oak	4,848	4,692	0	60	72	0	0	0	24	0
Red oak	9,572	9,160	0	80	164	0	0	0	168	0
Hickory	550	536	0	5	6	0	0	0	3	0
Hard maple	1,548	1,510	0	10	16	0	0	0	12	0
Soft maple	2,254	2,247	0	0	3	0	0	0	4	0
Ash	1,235	1,214	0	7	9	0	0	0	5	0
Cottonwood	2,272	2,265	0	0	2	0	0	0	5	0
Aspen	138	134	0	0	1	0	0	0	3	0
Basswood	1,995	1,963	0	10	14	0	0	0	8	0
Elm	6,166	6,129	0	12	17	0	0	0	8	0
Black walnut	2,055	1,025	0	235	671	0	0	0	124	0
Black cherry	104	100	0	2	2	0	0	0	0	0
Hackberry	272	272	0	0	0	0	0	0	0	0
Willow	339	339	0	0	0	0	0	0	0	0
Birch	218	218	0	0	0	0	0	0	0	0
Other species	114	91	0	4	19	0	0	0	0	0
Total hardwoods	33,680	31,895	0	425	996	0	0	0	364	0
All species	33,775	31,990	0	425	996	0	0	0	364	0
SOUTHEAST UNIT										
Hardwoods:										
White oak	1,753	1,354	180	219	0	0	0	0	0	0
Red oak	1,732	1,441	173	118	0	0	0	0	0	0
Hickory	308	243	40	25	0	0	0	0	0	0
Hard maple	40	40	0	0	0	0	0	0	0	0
Soft maple	4,115	3,581	374	160	0	0	0	0	0	0
Ash	394	352	29	13	0	0	0	0	0	0
Cottonwood	4,662	4,326	229	107	0	0	0	0	0	0
Aspen	40	40	0	0	0	0	0	0	0	0
Basswood	168	147	10	11	0	0	0	0	0	0
Elm	1,364	1,347	15	2	0	0	0	0	0	0
Black walnut	97	80	15	2	0	0	0	0	0	0
Black cherry	13	13	0	0	0	0	0	0	0	0
Hackberry	301	284	15	2	0	0	0	0	0	0
Willow	99	99	0	0	0	0	0	0	0	0
Birch	278	240	35	3	0	0	0	0	0	0
Other species	22	2	10	10	0	0	0	0	0	0
Total hardwoods	15,386	13,589	1,125	672	0	0	0	0	0	0
All species	15,386	13,589	1,125	672	0	0	0	0	0	0
SOUTHWEST UNIT										
Hardwoods:										
White oak	64	32	0	0	0	0	0	32	0	0
Red oak	13	13	0	0	0	0	0	0	0	0
Hickory	4	4	0	0	0	0	0	0	0	0
Soft maple	14	14	0	0	0	0	0	0	0	0
Ash	55	47	0	0	0	0	0	8	0	0
Cottonwood	4,273	3,885	0	0	0	0	0	194	0	194
Basswood	17	17	0	0	0	0	0	0	0	0
Elm	236	236	0	0	0	0	0	0	0	0
Black walnut	5,279	224	3,183	0	0	756	705	411	0	0
Total hardwoods	9,955	4,472	3,183	0	0	756	705	645	0	194
All species	9,955	4,472	3,183	0	0	756	705	645	0	194

(Table 6 continued on next page)

(Table 6 continued)

NORTHWEST UNIT										
Softwoods:										
White pine	10	10	0	0	0	0	0	0	0	0
Total softwoods	10	10	0	0	0	0	0	0	0	0
Hardwoods:										
White oak	93	93	0	0	0	0	0	0	0	0
Soft maple	8	8	0	0	0	0	0	0	0	0
Ash	13	13	0	0	0	0	0	0	0	0
Cottonwood	229	229	0	0	0	0	0	0	0	0
Elm	74	74	0	0	0	0	0	0	0	0
Black walnut	78	78	0	0	0	0	0	0	0	0
Total hardwoods	495	495	0	0	0	0	0	0	0	0
All species	505	505	0	0	0	0	0	0	0	0
ALL UNITS										
Softwoods:										
White pine	103	103	0	0	0	0	0	0	0	0
Red pine	2	2	0	0	0	0	0	0	0	0
Total softwoods	105	105	0	0	0	0	0	0	0	0
Hardwoods:										
White oak	6,758	6,171	180	279	72	0	0	32	24	0
Red oak	11,317	10,614	173	198	164	0	0	0	168	0
Hickory	862	783	40	30	6	0	0	0	3	0
Hard maple	1,588	1,550	0	10	16	0	0	0	12	0
Soft maple	6,391	5,850	374	160	3	0	0	0	4	0
Ash	1,697	1,626	29	20	9	0	0	8	5	0
Cottonwood	11,436	10,705	229	107	2	0	0	194	5	194
Aspen	178	174	0	0	1	0	0	0	3	0
Basswood	2,180	2,127	10	21	14	0	0	0	8	0
Elm	7,840	7,786	15	14	17	0	0	0	8	0
Black walnut	7,509	1,407	3,198	237	671	756	705	411	124	0
Black cherry	117	113	0	2	2	0	0	0	0	0
Hackberry	573	556	15	2	0	0	0	0	0	0
Willow	438	438	0	0	0	0	0	0	0	0
Birch	496	458	35	3	0	0	0	0	0	0
Other species	136	93	10	14	19	0	0	0	0	0
Total hardwoods	59,516	50,451	4,308	1,097	996	756	705	645	364	194
All species	59,621	50,556	4,308	1,097	996	756	705	645	364	194

¹International 1/4-inch rule.

Table 7.--Veneer log and bolt production by species and State or country of destination, Iowa, 1972

(In thousand board feet)¹

Species	Destination							Total
	Iowa	Wisconsin	Indiana	Illinois	Ohio	Missouri	Other States	
Softwoods:								
White pine	0	0	0	0	0	0	0	0
Red pine	0	0	0	0	0	0	0	0
Redcedar	0	0	0	0	0	0	0	0
Total swds.	0	0	0	0	0	0	0	0
Hardwoods:								
White oak	6	5	0	2	5	0	0	18
Red oak	168	743	0	8	0	0	0	919
Hickory	569	0	0	0	0	0	0	569
Hard maple	0	161	33	22	0	0	0	216
Soft maple	0	95	0	0	0	0	26	121
Ash	79	32	0	0	0	0	0	111
Cottonwood	0	0	0	0	0	0	85	85
Aspen	0	0	0	0	0	0	0	0
Basswood	0	252	0	0	0	0	0	252
Elm	204	235	0	0	0	0	0	439
Blk. walnut	149	0	492	230	220	147	21,175	2,413
Blk. cherry	0	3	0	0	0	0	0	3
Hackberry	0	0	0	0	0	0	0	0
Willow	0	0	0	0	0	0	0	0
Birch	0	0	0	0	0	0	0	0
Other spp.	0	0	17	0	0	24	0	41
Total hdds.	1,175	1,526	542	262	225	171	1,286	5,187
All species	1,175	1,526	542	262	225	171	1,286	5,187

¹International 1/4-inch rule.²Exported to other countries.

Table 8.--Veneer log production in Iowa for selected years, 1960-1972

(In thousand board feet)¹

Species	1960	1963	1966	1968	1970	1972
Red oak	919	551	867	1,385	930	919
Hickory	--	--	7	32	361	569
Hard maple	584	337	245	454	292	216
Soft maple	822	223	320	182	97	121
Cottonwood	1,040	71	849	411	1,121	85
Elm	1,070	34	(²)	641	483	439
Black walnut	³ 3,138	³ 4,339	³ 3,138	³ 3,429	3785	⁴ 2,413
Other hardwoods	1,376	990	1,484	1,148	525	425
All species	8,949	6,545	6,910	7,682	4,594	5,187

¹International 1/4-inch log rule.

²Included with "other hardwoods."

³Does not include exports overseas.

⁴Includes exports overseas.

Table 9.--Iowa pulpwood production by species groups, 1956-1972

(In standard cords, roughwood basis)

Year	From roundwood				From residue		Total
	Softwoods	Soft hardwoods	Hard hardwoods	Total	Softwoods	Hardwoods	
1956	--	15,000	4,000	19,000	--	--	19,000
1957	--	10,487	4,018	14,505	--	--	14,505
1958	--	9,443	5,636	15,079	--	--	15,079
1959	--	11,803	9,326	21,129	--	--	21,129
1960	100	15,376	8,020	23,496	--	--	23,496
1961	--	12,411	10,050	22,461	--	--	22,461
1962	--	14,403	14,087	28,490	--	(¹)	(¹)
1963	--	10,372	9,200	19,572	--	(¹)	(¹)
1964	80	15,320	17,598	32,998	--	(¹)	(¹)
1965	--	12,596	12,082	24,678	--	6,401	31,079
1966	--	13,959	13,190	27,149	--	9,175	36,324
1967	--	11,675	15,365	27,040	--	8,303	35,343
1968	--	12,035	12,842	24,877	2,833	10,152	37,862
1969	40	8,031	8,780	16,851	1,501	13,228	31,580
1970	80	16,321	19,700	36,101	10,227	11,353	57,681
1971	40	14,843	22,976	37,859	7,908	6,770	52,537
1972	--	10,062	20,837	30,899	11,482	12,237	54,618

¹Not available.

Table 10.--Production and disposition of softwood and hardwood plant residue by type of residue, disposal, and county, Iowa, 1972

(In thousand cubic feet)

County or unit and type of use	NORTHEAST UNIT							
	Wood residue						Bark	
	Total		Coarse ¹		Fine ²		Softwood	Hardwood
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Allamakee								
Fiber products	0	153.3	0	153.3	0	0	0	0
Miscellaneous ³	0	39.2	0	0	0	39.2	0	1.9
Not used	0	50.2	0	0	0	50.2	0	97.1
Total	0	242.7	0	153.3	0	89.4	0	99.0
Benton								
Domestic fuel	0	0.7	0	0.7	0	0	0	0.5
Miscellaneous ³	0	57.3	0	0	0	57.3	0	0
Not used	0	98.6	0	98.2	0	.4	0	63.4
Total	0	156.6	0	98.9	0	57.7	0	63.9
Black hawk								
Domestic fuel	0	19.2	0	19.2	0	0	0	12.4
Miscellaneous ³	0	11.2	0	0	0	11.2	0	0
Total	0	30.4	0	19.2	0	11.2	0	12.4
Butler								
Domestic fuel	0	0	0	0	0	0	0	12.4
Miscellaneous ³	0	22.4	0	0	0	22.4	0	0
Not used	0	53.6	0	48.0	0	5.6	0	18.6
Total	0	76.0	0	48.0	0	28.0	0	31.0
Cedar								
Domestic fuel	0	57.6	0	57.6	0	0	0	37.2
Miscellaneous ³	0	33.6	0	0	0	33.6	0	0
Not used	0	136.8	0	86.4	0	50.4	0	55.8
Total	0	228.0	0	144.0	0	84.0	0	93.0
Clayton								
Fiber products	0	332.1	0	332.1	0	0	0	58.9
Domestic fuel	0	47.0	0	47.0	0	0	0	30.4
Miscellaneous ³	0	157.9	0	20.2	0	137.7	0	44.3
Not used	0	95.2	0	0	0	95.2	0	124.3
Total	0	632.2	0	399.3	0	232.9	0	257.9
Delaware								
Fiber products	0	95.0	0	95.0	0	0	0	0
Not used	0	55.4	0	0	0	55.4	0	61.4
Total	0	150.4	0	95.0	0	55.4	0	61.4
Dubuque								
Fiber products	0	57.6	0	57.6	0	0	0	364.6
Miscellaneous ³	0	16.8	0	0	0	16.8	0	0
Not used	0	158.2	0	77.9	0	80.3	0	95.6
Total	0	232.6	0	135.5	0	97.1	0	460.2
Jackson								
Fiber products	0	89.2	0	89.2	0	0	0	57.6
Domestic fuel	0	24.0	0	24.0	0	0	0	15.5
Miscellaneous ³	0	57.8	0	0	0	57.8	0	0
Not used	0	53.7	0	28.7	0	25.0	0	18.5
Total	0	224.7	0	141.9	0	82.8	0	91.6
Johnson								
Domestic fuel	0	22.0	0	22.0	0	0	0	14.2
Miscellaneous ³	0	16.0	0	0	0	16.0	0	0
Not used	0	5.5	0	5.5	0	0	0	3.5
Total	0	43.5	0	27.5	0	16.0	0	17.7
Jones								
Fiber products	0	22.5	0	22.5	0	0	0	14.1
Miscellaneous ³	0	17.8	0	0	0	17.8	0	0
Not used	0	151.1	0	90.0	0	61.1	0	62.3
Total	0	191.4	0	112.5	0	78.9	0	76.4
Linn								
Domestic fuel	0	16.8	0	16.8	0	0	0	10.9
Miscellaneous ³	0	12.8	0	1.9	0	10.9	0	1.2
Not used	0	54.0	0	34.1	0	19.9	0	22.1
Total	0	83.6	0	52.8	0	30.8	0	34.2

(Table 10 continued on next page)

(Table 10 continued)

NORTHEAST UNIT continued

County or unit and type of use	Wood residue								Bark	
	Total		Coarse ¹		Fine ²					
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Mitchell										
Miscellaneous ³	2.1	2.1	0	0	2.1	2.1	0	0		
Not used	3.6	3.6	3.6	3.6	0	0	2.3	2.3		
Total	5.7	5.7	3.6	3.6	2.1	2.1	2.3	2.3		
Scott										
Fiber products	0	45.6	0	45.6	0	0	0	0		
Miscellaneous ³	0	30.4	0	2.4	0	28.0	0	0		
Not used	0	0	0	0	0	0	0	31.0		
Total	0	76.0	0	48.0	0	28.0	0	31.0		
Tama										
Domestic fuel	0.1	35.0	0.1	35.0	0	0	0.1	22.6		
Miscellaneous ³	.4	97.6	0	0	.4	97.6	0	0		
Not used	.6	132.3	.6	132.3	0	0	.4	85.6		
Total	1.1	264.9	.7	167.3	.4	97.6	.5	108.2		
All counties Northeastern										
Fiber products	0	795.3	0	795.3	0	0	0	495.2		
Domestic fuel	.1	222.3	.1	222.3	0	0	.1	156.1		
Miscellaneous ³	2.5	572.9	0	24.5	2.5	548.4	0	47.4		
Not used	4.2	1,048.2	4.2	604.7	0	443.5	2.7	741.5		
Total	6.8	2,638.7	4.3	1,646.8	2.5	991.9	2.8	1,440.2		
SOUTHEAST UNIT										
Appanoose										
Fiber products	0	67.2	0	67.2	0	0	0	0		
Miscellaneous ³	0	31.4	0	0	0	31.4	0	0		
Not used	0	8.9	0	.7	0	8.2	0	43.8		
Total	0	107.5	0	67.9	0	39.6	0	43.8		
Dallas										
Miscellaneous ³	0	17.9	0	0	0	17.9	0	0		
Not used	0	30.7	0	30.7	0	0	0	19.8		
Total	0	48.6	0	30.7	0	17.9	0	19.8		
Davis										
Domestic fuel	0	0.4	0	0.4	0	0	0	0.3		
Miscellaneous ³	0	4.2	0	0	0	4.2	0	0		
Not used	0	6.8	0	6.8	0	0	0	4.4		
Total	0	11.4	0	7.2	0	4.2	0	4.7		
Hamilton										
Miscellaneous ³	0	1.8	0	0	0	1.8	0	0		
Not used	0	7.8	0	6.0	0	1.8	0	3.9		
Total	0	9.6	0	6.0	0	3.6	0	3.9		
Hardin										
Domestic fuel	0	48.0	0	48.0	0	0	0	31.0		
Miscellaneous ³	0	42.0	0	0	0	42.0	0	0		
Not used	0	62.0	0	48.0	0	14.0	0	31.0		
Total	0	152.0	0	96.0	0	56.0	0	62.0		
Iowa										
Miscellaneous ³	0	16.4	0	0	0	16.4	0	0		
Not used	0	28.1	0	28.1	0	0	0	18.1		
Total	0	44.5	0	28.1	0	16.4	0	18.1		
Lee										
Fiber products	0	127.2	0	127.2	0	0	0	0		
Miscellaneous ³	0	40.1	0	0	0	40.1	0	51.0		
Not used	0	115.3	0	51.3	0	64.0	0	491.9		
Total	0	282.6	0	178.5	0	104.1	0	542.9		
Louisa										
Miscellaneous ³	0	1.0	0	0	0	1.0	0	0		
Not used	0	77.7	0	49.7	0	28.0	0	32.1		
Total	0	78.7	0	49.7	0	29.0	0	32.1		
Marion										
Miscellaneous ³	0	6.3	0	0	0	6.3	0	0		
Not used	0	16.5	0	14.4	0	2.1	0	9.3		
Total	0	22.8	0	14.4	0	8.4	0	9.3		

(Table 10 continued on next page)

(Table 10 continued)

County or unit and type of use	NORTHWEST UNIT								
	Wood residue							Bark	
	Total	Coarse ¹		Fine ²		Softwood	Hardwood		
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	
Clay									
Industrial fuel	0	68.4	0	0	0	68.4	0	55.4	
Miscellaneous ³	0	62.1	0	50.0	0	12.1	0	0	
Total	0	130.5	0	50.0	0	80.5	0	55.4	
Franklin									
Miscellaneous ³	0.3	2.5	0	0	0.3	2.5	0	0	
Not used	.5	4.3	.5	4.3	0	0	.3	2.8	
Total	.8	6.8	.5	4.3	.3	2.5	.3	2.8	
Hancock									
Domestic fuel	0	3.1	0	3.1	0	0	0	0	
Miscellaneous ³	0	1.8	0	0	0	1.8	0	0	
Not used	0	0	0	0	0	0	0	2.0	
Total	0	4.9	0	3.1	0	1.8	0	2.0	
Humboldt									
Domestic fuel	0	1.9	0	1.9	0	0	0	0	
Miscellaneous ³	0	1.1	0	0	0	1.1	0	0	
Not used	0	0	0	0	0	0	0	1.2	
Total	0	3.0	0	1.9	0	1.1	0	1.2	
Lyon									
Industrial fuel	0	0.5	0	0.5	0	0	0	0	
Not used	0	.3	0	0	0	.3	0	.3	
Total	0	.8	0	.5	0	.3	0	.3	
Sioux									
Domestic fuel	0	0.5	0	0.5	0	0	0	0	
Miscellaneous ³	0	.8	0	.5	0	.3	0	0	
Not used	0	13.9	0	8.6	0	5.3	0	6.2	
Total	0	15.2	0	9.6	0	5.6	0	6.2	
Wright									
Domestic fuel	0	0.5	0	0.5	0	0	0	0	
Miscellaneous ³	0	2.5	0	0	0	2.5	0	.9	
Not used	0	3.8	0	3.8	0	0	0	1.8	
Total	0	6.8	0	4.3	0	2.5	0	2.7	
All counties Northwestern									
Industrial fuel	0	68.9	0	0.5	0	68.4	0	55.4	
Domestic fuel	0	6.0	0	6.0	0	0	0	0	
Miscellaneous ³	.3	70.8	0	50.5	.3	20.3	0	0.9	
Not used	.5	22.3	.5	16.7	0	5.6	.3	14.3	
Total	.8	168.0	.5	73.7	.3	94.3	.3	70.6	
ALL UNITS									
Total Iowa									
Fiber products	0	989.7	0	989.7	0	0	0	495.2	
Industrial fuel	0	68.9	0	.5	0	68.4	0	55.4	
Domestic fuel	.1	334.1	.1	324.3	0	9.8	.1	225.1	
Miscellaneous ³	2.8	1,155.3	0	289.7	2.8	865.6	0	121.8	
Not used	4.7	2,184.9	4.7	1,332.7	0	852.2	3.0	1,826.6	
Total	7.6	4,732.9	4.8	2,936.9	2.8	1,796.0	3.1	2,724.1	

¹Suitable for chipping such as slabs, edgings, veneer cores, etc.²Not suitable for chipping such as sawdust, veneer clippings, etc.³Livestock bedding, mulch, small dimension, and specialty items.

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