

PACIFIC SOUTHWEST Forest and Range Experiment Station

FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE
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FOREST PRODUCTS HARVESTED IN HAWAII—1969

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*USDA Forest Service
Research Note PSW-239
1971*

The value of primary forest products harvested in Hawaii in 1969 dropped slightly from that of the harvest surveyed in 1967. Values of harvest in both years were, however, nearly 25 percent over that of primary forest products in 1958, when the first survey was made. Products included are sawlogs, craftwood logs, veneer logs, fuelwood, posts, and treefern. The total values of these products—cut and hauled but not further processed—in the five surveys, by year, are: 1958—\$269,000; 1960—\$197,000; 1963—\$230,000; 1967—\$334,000, 1969—\$331,000.¹ Results of surveys by the Pacific Southwest Forest and Range Experiment Station and the Hawaii Division of Forestry suggest that the forests of Hawaii can support a much larger primary forest products industry.²

METHODS

The Hawaii Division of Forestry mailed questionnaires to all known producers of primary forest products in the State. Personal contacts were made to clarify confusing or incomplete reports and to help respondents who did not fully understand the questionnaire. The responses were then checked for duplications, tabulated, and summed to arrive at the production figures.

RESULTS

Of 50 respondents from whom production figures were obtained, 15 were manufacturers of primary forest products, 13 were ranches, 6 were sugar plantations, 6 were private forest products harvesters, 8 were State or Federal agencies, and 2 were private landowners.

Large variations are apparent in both individual product classes and total production figures (*table 1*). This variation is due to two factors: (a) the small base of the primary forest products industry, with the resultant large effect of production variations of individual producers; and (b) the relative difficulty of obtaining accurate production estimates.

Abstract: Primary forest products harvested in Hawaii in 1969 were valued at \$331,000—a \$3,000 drop from the value of the harvest surveyed in 1967. Sawlogs and veneer logs were the most important products. Koa and robusta eucalyptus were the primary sawlog species. Albizia and robusta eucalyptus provided most of the veneer logs.

Oxford: 792(969).

Retrieval Terms: forest products output; Hawaii; annual harvest.

Table 1—Production and value of primary forest products harvested in Hawaii, 1958, 1960, 1963, 1967 and 1969

Year	Sawlogs	Craftwood	Veneer logs	Fuelwood	Posts	Treefern
	Bd. ft.	Bd. ft.	Bd. ft.	Cords	Pieces	Cu. ft.
TOTAL PRODUCTION						
1958	405,000	510,000	—	1,300	65,000	100,000
1960	850,000	100,000	30,000	1,500	37,000	115,000
1963	—	¹ 913,000	—	847	22,000	118,000
1967	² 3,925,000	196,000	—	720	7,100	143,000
1969	1,650,000	422,000	1,056,000	1,720	10,100	55,000
AVERAGE UNIT VALUE (DOLLARS)						
1958	100	240	—	14.50	.83	.35
1960	70	200	300	30.00	.60	.38
1963	—	¹ 160	—	22.43	1.05	.33
1967	40	300	—	38.89	1.69	.52
1969	52	230	47	31.40	1.58	.49
TOTAL VALUE (DOLLARS)						
1958	40,000	121,000	—	19,000	54,000	35,000
1960	57,000	20,000	9,000	45,000	22,000	44,000
1963	—	¹ 149,000	—	19,000	23,000	39,000
1967	161,000	58,000	—	28,000	12,000	75,000
1969	86,000	98,000	50,000	54,000	16,000	27,000

¹Sawlogs and craftwood were not separated in 1963. LeBarron estimated that the volume was about equally distributed between sawlogs and craftwood. (See Notes Section).

²An undetermined volume of koa reported as sawlogs was sold as veneer logs, cants for slicing, and craftwood.

Sawlogs, Craftwood Logs and Veneer

In Hawaii, craftwood is obtained both from sawlogs and from true "craftwood," i.e., chunks and pieces. In 1969, craftwood was valued at \$98,000 and accounted for 30 percent of the total value of forest products. Sawlogs were valued at \$86,000 or 26 percent of the total value of forest products. Veneer logs were valued at \$50,000 or 15 percent of the total. Koa (*Acacia koa*) and robusta (*Eucalyptus robusta*) were the primary sawlog species (table 2). Monkey-pod (*Pithecellobium saman*) was the primary craftwood; albizzia (*Albizia falcataria*) and robusta provided most of the veneer logs.

Sawlogs, craftwood, and veneer logs must be combined to permit valid comparisons of 1969 output of these products with output determined by previous surveys. Sawlogs and craftwood were not separated in the 1963 survey. An undetermined volume of koa reported as sawlogs in the 1967 survey was sold for veneer logs, cants for slicing, or craftwood. The large increase in veneer logs in 1969, compared to findings of previous surveys, resulted

from production by the first Hawaii-based plywood mill, which became operational in 1968.

These three products accounted for 60 percent of the total value of primary forest products output in 1958, 44 percent in 1960, 65 percent in 1963, 66 percent in 1967, and 71 percent in 1969. The data show their production has varied widely from year to year. Because the craftwood industry derives about 80 percent of its material from sawlogs, it can be said that sawlogs and veneer logs are the most important primary forest products.

This survey did not investigate the volume of imported craftwood, but it is known that a large volume of finished monkey-pod products are brought in from the Philippines, Hong Kong, and elsewhere. This import volume exceeds the locally harvested volume of craftwood by a wide margin.

Fuelwood

In 1969, about 1,720 cords of fuelwood, worth an estimated \$54,000, were harvested. This value is 16 percent of the total value of all primary forest

Table 2—Total volume and value of primary forest products harvested in Hawaii, by product classes and tree species, 1969

Species	Sawlogs		Craftwood		Veneer logs		Fuelwood		Posts	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
	Percent									
Eucalyptus robusta	59	45	—	—	44	38	33	31	13	4
Norfolk-Island-pine	2	2	—	—	—	—	—	—	—	—
Ohia	6	5	—	—	—	—	—	—	25	50
Koa	33	48	22	23	11	18	2	2	—	—
Monkey-pod	—	—	56	56	—	—	—	—	—	—
Milo	—	—	4	2	—	—	—	—	—	—
Albizia	—	—	—	—	35	34	—	—	—	—
Kiawe	—	—	—	—	—	—	49	52	40	21
Others	—	—	18	19	10	10	16	15	22	25
Total	100	100	100	100	100	100	100	100	100	100

products. By comparison, fuelwood accounted for only 8 percent of the total value reported in 1963 and 1967. The reason for the apparent increase is unknown, unless it could be due to a better response to questionnaires sent to fuelwood producers.

The most important fuelwoods are kiawe (*Prosopis pallida*) and robusta. Thirty-six percent of the fuelwood produced was manufactured into charcoal and 64 percent was burned directly. All fuelwood manufactured into charcoal was obtained from live kiawe trees. Ninety-seven percent of the fuelwood burned directly came from live trees, primarily kiawe and robusta, and 3 percent was from dead and down trees.

Posts

About 10,000 posts worth an estimated \$16,000 were produced in 1969. This amount was 5 percent of the total value of forest products harvested. The primary species used were kiawe and ohia (*Metrosideros collina*). Ninety-one percent of the posts were cut from live forest trees, and 9 percent were salvaged from dead and down material. Post production was up slightly from 1967, but still considerably below the levels in 1958, 1960, and 1963. Steel posts, now in wide use in Hawaii, are obviously taking the place of wood posts.

Treefern

In 1969, about 55,000 cubic feet of treefern were harvested, with an estimated value of \$27,000 or 8

percent of the total value of forest products. This volume is only about 40 percent of the treefern production recorded in previous surveys, although the price at 49¢ per cubic foot does not vary significantly from that of 52¢ per cubic foot in 1967. The reason for the lower 1969 production is not known.

Reliability of Estimates

Accurate estimates of the volumes and values of primary forest products are difficult to obtain because of the great diversity of producers; the difficulty of assigning a value to some products, such as fence posts and firewood cut by ranchers for their own use; and incomplete or unreliable responses to questionnaires resulting from respondent's lack of record keeping or diverse methods of measurement. These periodical surveys do provide, however, a worthwhile indication of trends in the forest products industry, and the results should be considered as such.

Acknowledgment: We thank Ernest Pung, Hawaii Division of Forestry, and Roger G. Skolmen, Pacific Southwest Forest and Range Experiment Station, for their technical assistance. Special thanks are due to the Division's District Foresters—Libert K. Landgraf, Karl H. Korte, Herbert H. Kikukawa, and Ralph E. Daehler—for their cooperation and help in distributing and collecting questionnaires.

NOTES

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U.S. Forest Service research in Hawaii
is conducted in cooperation with
Division of Forestry
Hawaii Department of Land and Natural Resources

GPO 981-018