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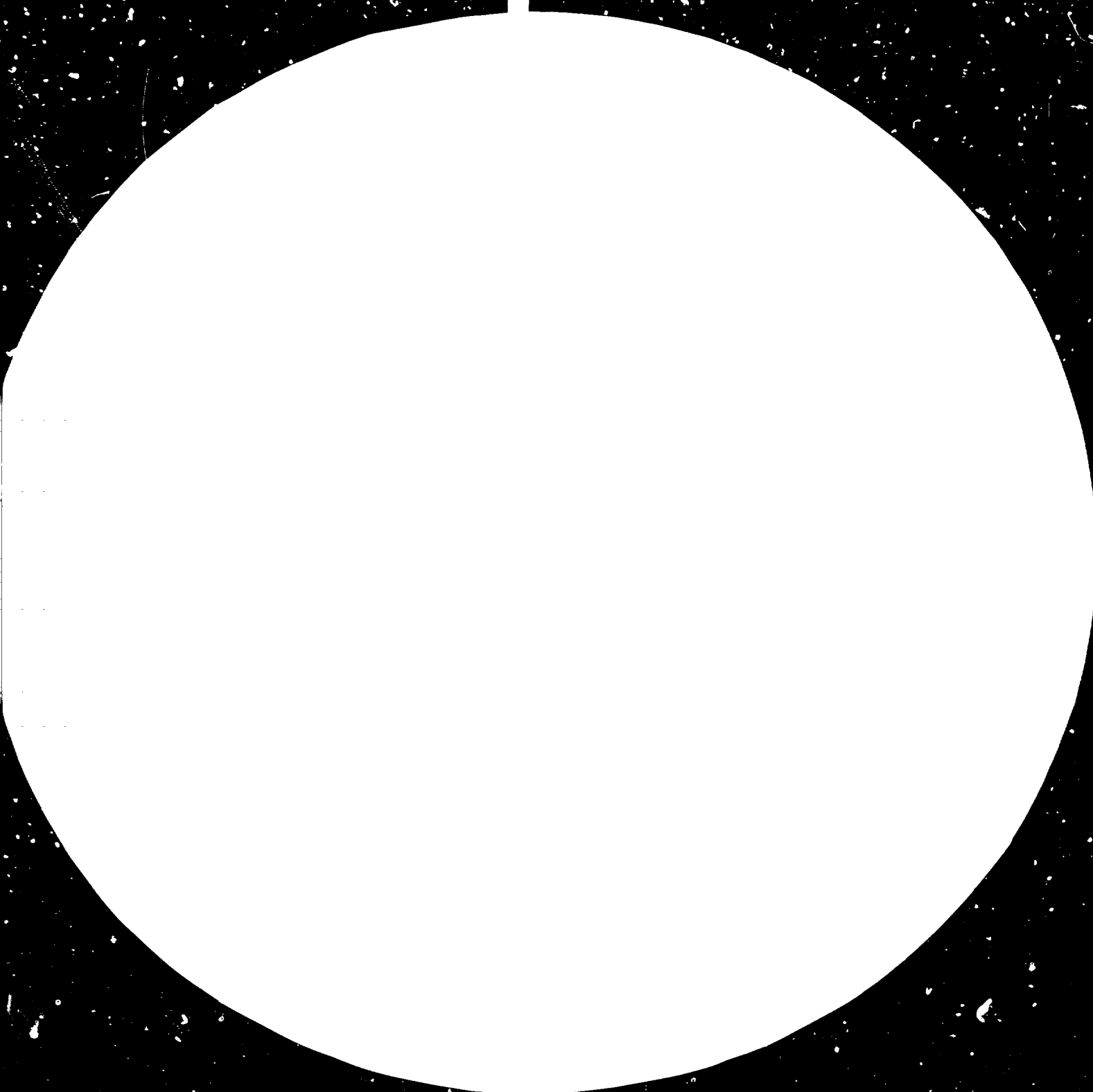
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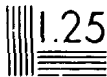
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Technical Course on Criteria for the
Selection of Woodworking Machines

Milan, Italy, 5-21 May 1980

THE WOOD PROCESSING INDUSTRY IN COSTA RICA *

by

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Introduction

Costa Rica has a land area of 50,900 km², measuring approximately 600 km from north to south and 100 km from east to west. It is bounded by the Atlantic and Pacific Oceans on the east and west respectively. Its average latitude of 10 degrees north gives it a humid tropical climate. Its population is approximately 2.2 million with an average per capita income of US\$ 1300.00. Its population is a homogeneous racial mix with Spanish as its official language.

Forestry Situation

The prime source of income in Costa Rica is based on the export of agricultural products. These include coffee, cocoa, bananas, cotton and beef. Due to the economic importance of the agricultural sector, government support has traditionally been directed towards these products at the expense of the forestry-related industries. As a result of the unavoidable consequences of this policy, coupled with an increased awareness and alarm at the diminishing internal wood supply, the government in the last decade has placed increasing importance on the care and replenishment of the timber supply in the form of public education, monetary incentives, and reforestation programmes.

Costa Rica's forestry resources, if properly managed, have potential in the near future to become a large influence in the development of many rural regions, and a source of foreign income entering the country.

According to one study, 175,000 persons are directly supported by forestry industries with 175,000 more receiving a portion of their support from this activity. Thus, the existence of 350,000 Costa Ricans is related in various degrees to the forest and its products.

It is estimated that there are presently 1.4 million hectares of productive forest lands, 60,000 of which are cut annually. Without a strong reforestation programme the forest would be depleted in 23 years

if cutting proceeds at this present rate. As previously mentioned, there now exists great fiscal incentives for reforestation. The potential of these programmes, coupled with improved methods of timber conversion gives Costa Rica an optimistic outlook for the future of its wood supply. The map of Costa Rica annexed to this report delineates the zones with a forest cover.

Wood Consumption Situation

The natural forest cover of Costa Rica consists of mixed tropical hardwoods with a density of 70 m³ per hectare. Using the above mentioned figure of an annual cut of 60,000 hectares this would produce 4.2 million m³ of usable roundwood. Nevertheless what is truly used is about 25 per cent of this figure or 1,071,927 m³. The greatest portion of the unused wood is a result of land clearing for cultivation and cattle. In very few cases is this wood processed into primary or secondary products. There are a number of programmes under way to diminish the percentage of usable wood which is wasted annually. One of the more prominent ideas is to fix by law the annual cut allowing the demand to rise naturally until an equilibrium is reached. It is estimated that the increase in demand for wood raw materials is between 8 and 9 per cent per year.

Table 1

Consumption of Raw Material by Wood Industry

<u>Industry</u>	<u>Annual Consumption (m³)</u>	<u>Per cent</u>
Sawmills	591,981.	55.23
Plywood, Particleboard, Paper	129,946.	12.12
Fuelwood, Charcoal	350,000.	32.65
TOTAL	1,071,927.	100.00

Sawmill Situation

Costa Rica has just over 200 sawmills, with a large range of types and production capacities. They are distributed throughout the entire country but in a non uniform pattern. There is a high concentration of

mills in the Central Valley, the population center of the country. Officially registered sawmills number 164. The following table presents them according to their production capacity.

Table 2

Survey of Sawmills by Production Capacity

<u>Production</u>	<u>No. of Sawmills</u>	<u>Per cent</u>
m ³ per day		
0-4.9	51	31
5-9.9	45	27
10-14.9	31	19
15-19.9	14	10
20-24.9	8	5
25-29.9	8	5
30-34.9	3	1
35 +	<u>4</u>	<u>2</u>
TOTAL	164	100

The installed sawmill production capacity is 885,744 m³ per year with actual production close to 601,776 m³ per year (1978 figures). The degree of underutilization of installed facilities is apparent. With regards to the type of sawmill machinery, the band saw is highly predominant compared to the circular saw. There is one mill with a gang saw in its production line. In those mills which are registered there are 73 circular headrigs and 113 band saw headrigs. Table 3 lists additional sawmill machinery installed in these mills, and indicate their frequency.

Table 3

Additional Sawmill Machinery

<u>Machine</u>	<u>No. of Sawmills</u>
Planer	149
Moulder	75
Edger	39
Trimmer	112
Saw filing shop	114
Winch	79
Tractor	55
Overhead hoist	27
Forklift	29
Gang Rip Saw	8
Kiln driver	7
Other equipment	37

Table 4 gives data on the country's furniture plants by number of employees.

Table 4

Size of Plant in Relation to No. of Employees

<u>No. Employees</u>	<u>No. of Plants</u>	<u>Per cent</u>
1-10	232	81.11
11-20	28	9.8
21-30	8	2.8
31-50	4	1.4
51-80	5	1.75
81-100	5	1.75
101-150	3	1.05
150-300	1	0.04
TOTAL	286	100.0

