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Technical Course on the Criteria for  
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THE WOODWORKING INDUSTRIES IN UGANDA ✓

by

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1. PRESENT SITUATION OF THE WOODWORKING INDUSTRIES

1.1. The wood using industries comprise over 130 establishments which represent approximately 23 per cent of the total manufacturing establishments, covering sawmilling, furniture and joinery manufacture, plywood, particle board, paper, paperboard, matches and parquet. The industries employ over 6.000 persons which represents approximately 19 per cent of the total number employed in all manufacturing industries. This labour force accounts for only 7 per cent of the total manufacturing output and 9 per cent of the total manufacturing value added. This situation reflects low average output per worker. Payments to employees engaged in the wood using industries accounts for approximately 12 per cent of the total annual wage bill paid in all manufacturing industries. Investment expenditure by the wood using industries has been running at approximately 14 per cent of the value of production and 31 per cent of the value added.

1.2. Trade with foreign countries in wood products, has been in existence. Exports of mainly sawn timber to Western Europe and the neighbouring states of Kenya, Rwanda, Sudan and Zaire, have been recorded. Substantial imports of pulp, paper, fibreboards, matches and parquet have also been recorded.

1.3. Government encourages foreign investment not only in the wood processing industries but also in other manufacturing sectors. Therefore, investments are welcome in both the primary and secondary wood processing sectors. There are tremendous potentials in the country for investment.

1.4. The industries are currently undergoing a phase of transformation following the departure of non-citizen Asians. As a result of this, low production is recorded mainly because of frequent breakdowns, inadequate inputs and transport and lack of experienced technical personnel.

2. TIMBERS

2.1. Uganda's Reserved Forestry Land reserves total over 1.530.000 hectares of which just over 48 per cent is tropical high forest, 51 per cent Savannah woodland and some 26.000 hectares of plantations. The tropical high forests are concentrated to the West of the country, around the humid

lakeshores belt of Lake Victoria and the lower slopes of Mt. Elgon, while the Savannah woodland is found in the drier areas of the North and Eastern parts of Uganda. Commercial timber production is almost entirely limited to the tropical forests and plantations of both softwoods and eucalyptus hardwoods.

2.2. There are over 500 indigenous species in Uganda's natural forests but about 50 of them, are exploited for timber production. Timber species of major importance to furniture and joinery industries include:

- a) Iroko - *Chlorophora excelsa*
- b) African Mahogany - *Khaya anthotheca*
- c) Utile - *Entandrophragma Utile*
- d) Sapele - *Entandrophragma Cylindricum*
- e) Loliondo (Elgon Olive) - *Olea welwitschii*

2.3. Very few imports of timber have been recorded in the recent past. However, five years ago, Uganda used to import at least 12,000 m<sup>3</sup> of Cypress timber from Kenya.

2.4. Sawn timber is mostly used when its moisture content is above the fibre saturation point (28 per cent), mainly because of low production which does not allow long air-drying periods without starving the market and lack of adequate seasoning facilities. Steam kilns are in operation at one of the Corporation's Sawmill in Jinja. Solar kilns have also been developed by the Department of Forestry, but unfortunately, these have not been put to commercial use for timber drying.

2.5. Problems connected with timbers arise from the fact that there are numerous species with varied properties which the producers and users have to deal with. Because of the mixed nature of tropical high forest species, harvesting, processing treatment and utilisation, have to be worked out in such a way that grouping of species, has to be done. This is not an easy task especially when new and unknown species are constantly being added to the exploitable list.

3. PRIMARY WOOD PROCESSING INDUSTRIES

3.1. The Primary wood processing industries, comprising 41 sawmills, one plywood factory, one particle-board factory, and one match factory, form a vital component of Uganda's economy. The industries employ approximately 4,000 people which represents approximately 12 per cent of the total number employed in all manufacturing industries. The sizes of mills range from units employing 40 persons to units employing over 500 persons. Many of the sawmill fall in the former category.

3.2. Statistical information is not readily available particularly from the Private firms. Nevertheless, production statistics for the Wood Industries Corporation are summarized below:

Product	Year					
	1973 Quantity	Value Ml.Shs.	1974 Quantity	Value Ml.Shs	1975 Quantity	Value Ml.Shs
1. Timber sawn	23126 m3	10.30	30147 m3	21.00	23630 m3	20.76
2. Plywood	422369 m3	4.40	515410 m2	6.23	246539 m2	5.61
3. Particleboard	78870 m2	0.88	46390 m2	0.52	64500 m2	0.99

3.3. Products manufactured include sawn timber, plywood, blockboards, teacheats, flush doors, particle-board and matches.

3.4. Equipment and machinery used in a typical mill include: wide band breakdown saws, wide band resaws, circular resaws and circular cross-cut saws. Log turners and manual and electric lifting hoists are common. Power is provided by either hydro-electric or industrial engines or generators and old locomotive steam engines.

3.5. A number of development projects aimed at increasing production in the primary wood processing sector, have been proposed and presented to a various agencies for financing. The projects are boradly summarized as follows:

- a) Rehabilitation of existing mills by providing, in a number of cases, new machinery, plant, equipment and vehicles.
- b) Resiting of some sawmills in order to take advantage of topography, infrastructure and source of raw material.
- c) Establishment of new sawmills in mature natural forests and softwood plantations.
- d) Establishment of complementary industries which aim at producing goods and services to complement other national development projects or to utilize available wood raw material. An example of such an industry is charcoal production.

3.6. A few of the problems in this sector are summarized below:

- a) Low production due to:
  - i) very old antiquated machinery, plant and equipment which breakdown very frequently and remain unrepaired for a long time because of lack of spare parts.
  - ii) Inadequate number of logging lorries and tractors to keep the mills fully supplied with enough logs to maximize production.
- b) Poor quality of plywood and particleboard caused mainly by inaocuracies of very old key machinery in the production lines e.g. peelers and presses.
- c) Lack of adequate seasoning facilities.
- d) Shortage of trained and experienced personnel particularly production technicians, accountants and engineers.

#### 4. SECONDARY WOOD PROCESSING INDUSTRIES

4.1. There are numerous furniture and joinery workshops spread all over the oountry. In the capital city of Kampala alone, there are over 1.000 workshops. The majority of these are very small, employing as few as 10 persons and are located in urban areas. The furniture products made range from simple wooden articles e.g. ohairs to sophisticated upholstery items. On the other hand, joinery products, range from very simple doors and windows made for typical rural and cheap houses to very sophisticated wooden and

casement items which are normally used in the more expensive buildings, particularly in urban areas.

4.2. Special product designs have not been developed locally. However, good and attractive designs, have been acquired from foreign countries and are being used in the manufacture of furniture, particularly in big workshops.

4.3. The furniture and joinery industry has for a long time remained a craftsman's activity. As such, "automation" is not existent in workshops. However, machinery such as planers, mortises, lathes, narrow and circular saws are very common in a typical workshop. The larger workshops have additional machinery e.g. 4/6 moulders, automatic presses, sanders and sprayers. Despite lack of automation facilities in the majority of workshops, the quality of furniture and joinery is reasonably good and some of it is being exported.

4.4. Furniture and joinery industries have for a long time suffered from lack of an industrial policy to cover location, manufacturing and trade. Consequently, the quality and price of products vary considerably. Although the workmanship in a number of workshops is quite good, there are still a lot of technological problems to be overcome in order to increase output and improve the quality of products. To point out a few, the machinery used are too old and outmoded to promote faster working and good quality products. The majority of machinery are over 35 years and spare parts for them are not, therefore, readily available. Sawn timber, too, in a number of cases, is used green thus rendering poor workmanship. The furniture industry also suffers from lack of adequate raw materials to maximize production.

4.5. For a long time furniture and joinery workshops have been established in an haphazard manner. It is therefore difficult to point out at any given time what development trends there are. However, the Wood Industries Corporation is planning to expand the manufacture of furniture and joinery items by establishing large workshops in Kampala city and Jinja Municipality. The demand for good furniture is very high.



5. LABOUR

5.1. Prior to 1972 most of the wood working industry in Uganda was in the hands of the departed non-citizen Asians. Since then, Ugandans who took over business have been learning new skills. However, these skills are not so easy to acquire, especially in highly technical business such as woodworking industries. Such skills are particularly lacking in the primary wood processing sector. Where a few skills exist the people possessing them are thin on the ground.

5.2. Government attaches great importance to vocational training of workers. Consequently two vocational training centres have been established with the assistance of the International Labour Organization (ILO). Training at these centres is given to persons in various trades. Industry is taking maximum advantage of these facilities in order to get their employees trained in various skills. A number of persons drawn from all sectors of the economy including the woodworking industry have been sponsored for training at the ILO training centre, Turin.

5.3. Higher technical education is offered locally through Institutes, Colleges and the University. There are five technical Institutes which draw their candidates from O Level Certificate holders and offer training in carpentry and joinery, bricklaying, mechanics, electrical installation, fitting, turning and plumbing. On successful completion of a two year course, candidates are awarded the City and Guilds certificate in the relevant craft. The Uganda Technical College offers technical courses leading to the award of the Ordinary Technician Diplomas and the Higher Technician Diplomas of City and Guilds. Makerere University, offers courses in various engineering disciplines leading to the award of the Bachelor of Science degrees. Professional engineers are also trained in other East African Universities and abroad. However, these are few on the ground and the woodworking industry like other industries, suffers from lack of adequate experienced technicians and engineers.

6. IMPORT OF WOODWORKING MACHINES

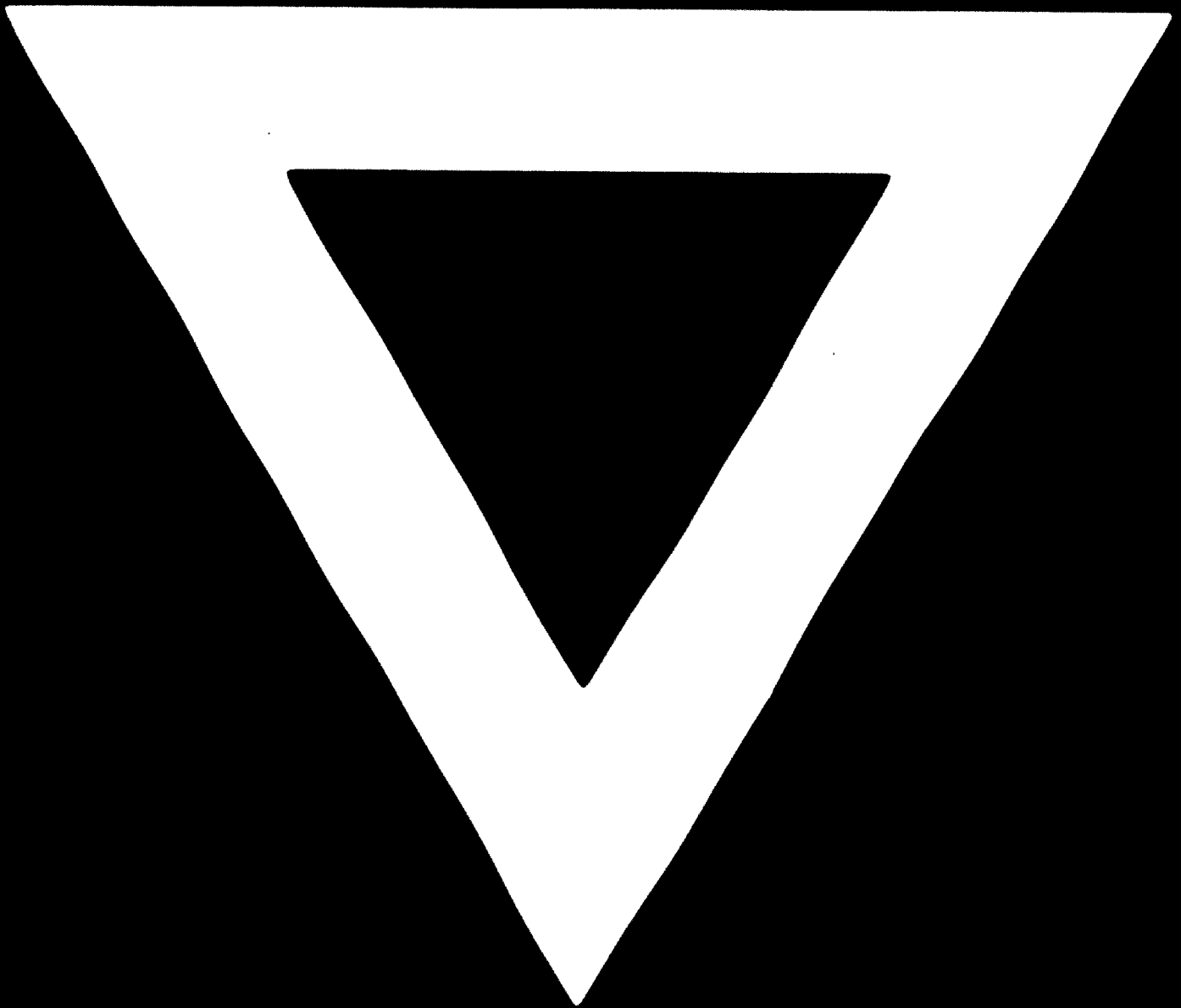
6.1. In the past woodworking machines were being imported into this country from a number of countries in Europe, America and Asia. The majority of the machines originate from the United Kingdom, West Germany, Holland, Italy, the United States of America and India. Today, new machines are being imported from other countries in Europe and Asia.

6.2. Importation of machines and other commodities is authorized by Government through the Central Bank and the Uganda Advisory Board of Trade. The Board is responsible for issuing the relevant import licences after the necessary foreign exchange has been allocated to the importing firm or company.

6.3. After sales services are offered by various manufacturing and sales agencies provided the necessary immigration formalities are fulfilled.



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