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SMALL-SCALE INDUSTRY.

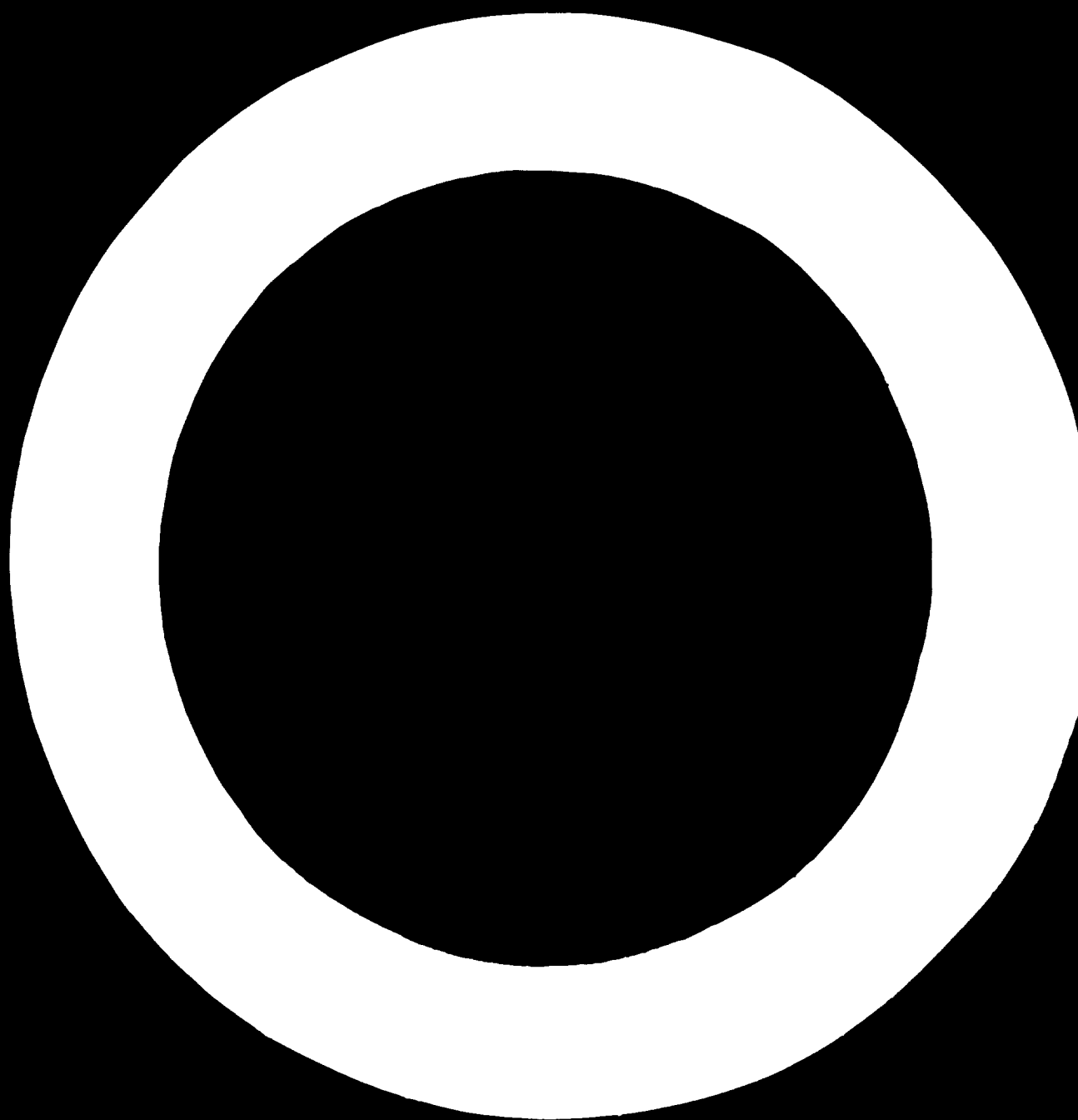
AN ACCOUNT OF TANZANIA'S EXPERIENCE, PLANS AND INTENTIONS  
IN THE FIELD OF SMALL-SCALE INDUSTRY AND EXTENSION SERVICES <sup>1/</sup>

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SMALL SCALE INDUSTRY

An account of Tanzania's experience, plans or intentions, in the field of small scale industry and industrial extension services:-

Background

Industries are an integral element in the social-economic structure at all stages of a country's development. Industrial development extends employment opportunities, raises incomes and the standard of living of the people, and helps to create a balanced economy. The development of small scale industry is as vital to the progress of developing countries as the development of large industry. It is with these considerations that the government of Tanzania has come to attach a special importance to the growth and development of small scale industry. In the overall industrial target as aimed by the Second Five Year Plan (period 1965/70 - 1974/75), plants categorised as small scale account for three-fifth of the projected new plants, 15 per cent of the proposed investment and will generate roughly 10 per cent of the resulting output, and account for about 15 per cent of the expected employment.

In 1965, hardly a year after Tanzania's first comprehensive and long term plan, "Five Year Plan for Economic and Social Development", the significance of developing Small Scale Industries alongside with industry in general and raising the standard of skill of the people as a whole was realized. To this effect the omission was corrected and plan for an accelerated development of small scale industries in Tanzania was prepared by the Ministry of Industries, Mineral Resources and Power and later incorporated in the 'Five Year Plan.'

Definition

A small industry, in the Tanzanian context, is a manufacturing unit of up to 25 persons working together, some as employers and some as employees, with a capital of, up to say 500,000 Tz. Shillings.

Importance

The importance of developing small scale industries could only be visualized in terms of the problems existing in industrialization.

These were:-

- i) Economic problems
  - ii) Technical problems
  - iii) Financial problems
  - iv) Intra-structural arrangements - self explanatory
  - v) Social problems
  - vi) Cultural problems
- 
- i) Economic problems - Meeting market needs in terms of price, quality, quantity, design trade terms and distribution methods.
  - ii) Technical problems - Low standard of skill, stereotype designs, obsolete technology and outdated plant and equipment.
  - iii) Financial Problems - Lack of sufficient working capital, costing, budgetary control and financial accounting arrangements.
  - iv) Social Problems - Wage and income differentials as between employees and employers on one hand, and urban and rural workers on the other and unsuitable working conditions.

- vi) Cultural problems such as changing trends away from the traditional handicrafts towards feeder industries to supply medium industries with components.

In the early stages of industrial development, the measures taken towards developing small-scale industries were by way of identifying in the Plan for "Accelerated Development of Small Scale Industries" salient proposals and trends to be taken in order to attempt to defeat pertinent problems.

**Objectives of the "Accelerated Development of Small Scale Industries":-**

- i) To create an agency which will assume the direct authority and responsibility for the development of Small Scale Industries.
- ii) To provide this agency with adequate funds and personnel of the right calibre for its purpose.
- iii) Through this agency to provide existing or prospective entrepreneurs with the necessary information, assistance facilities (in the form of accommodation and common plant and equipment), and participation in the equity capital not only initially to encourage them but also permanently to support them in their enterprises.
- iv) To ensure that the Ministry of Industries, Mineral Resources and Power is suitably geared to this development to be able to continue to provide the necessary guidance and assistance.
- v) It was also intended - although not through the above agency - that the development of cottage industries and handicrafts in rural areas should be embraced in the overall programme and it was primarily with this end in view that the Ministry's Cottage Industries Training Centre, which is already in operation, was projected.

Cottage Industries Training Centre

Location - Dar es Salaam

Date of commencement - 1967

Objective - To impart training in bamboo work, metal work, carpentry and weaving. A first batch of 13 trainees from all parts of the country, sponsored by the local councils underwent training under the supervision of a Japanese Expert and assisted by a local counterpart trained in Japan. In the course of their training some articles produced were widely appreciated and this created a nucleus around which the development of the bamboo industry could be geared. The trainees after completion of their course (1 year's duration), were expected to return to their respective regions and start training groups of local artisans to initiate a continuous dissemination of new techniques. Training in the other crafts mentioned above was started shortly afterwards.

At present training in handloom weaving, woodwork, smituy and sheetmetal work is being conducted under the supervision of experts from India who have been seconded to the government of Tanzania under SCAAP arrangements; and whereas the government of India is responsible for their salary and government provides accommodation and per diem allowances.

### Handloom weaving

18,000 Tz. Shs. worth of handlooms and accessories gifted to the government of Tanzania by the government of India have proved very useful over the last 2 years. There are 10 fly-shuttle frame loom with lever system of shedding, winding charkla, warping machine, jacquard - 200 hooks and Dobby - the details on size and specification are as in appendix I.

With the available equipment a class of up to 15 can be accommodated, although the largest class up to now has only been 10 trainees - present number of trainees is 15.

### Smithy and Sheet-metal Work

Details on machinery and equipment as in appendix II. The present number of trainees in this trade is 14.

### Woodwork

Details on machinery and equipment as in appendix III. Present number of trainees is 10.

### Bamboo Work

Details on machinery and equipment as in appendix IV. Present number of trainees is 5.

### Cottage Industries - Plans

1. From the very start, the Ministry of Industries, has in their plan establishment of six cottage industries training centres under state control. These training centres were to be set up in up-country stations like Mbeya, Tanga, Mwanza and Mtwara with facilities for admitting ultimately 300 artisans every year in different trades.
2. A project to assist the Monrovia church in setting up a centre at Tabora with training facilities for 45 trainees and a saw mill as service centre was by 1968 finalized.
3. Promotional activities
  - a) Establishment of ~~mezz~~ Industrial Workshops equipped with common service facilities at Singida, Usangi, Shinyanga, Rungwe, Tanga, Arusha, Songea and Bukoba to develop and promote metalwork, carpentry work, Bamboo work and Pottery etc. according to local needs.
  - b) An Industrial Estate for 20 small and medium units at Dar es Salaam equipped with an electroplating shop and heat treatment shop.

NATIONAL SMALL INDUSTRIES CORPORATION LTD.

Location - Dar es Salaam.

Commencement - End of 1967

Authorized Capital - £20,000 i.e. 1,600,000 Tz. Shs.

Equity - 80% National Development Corporation  
20% Workers Development Corporation

Staff:

1) Managerial	-	1 expatriate from India	
2) Professional	-	i) Metal work instructor	1 Local
		ii) Wood " "	1 "
		iii) Sales Staff	1 "
		iv) Accounts staff	2 "
		v) Supervisory staff	2 "

FUNCTIONS OF THE NATIONAL SMALL INDUSTRIES CORPORATION LTD.

- A. Promotive functions
- B. Commercial functions
- C. Administrative functions

A. Promotive functions

- i) Training through cottage industry centre in Dar es Salaam and introduce the same system in the regions, where as mentioned, trainees completing their exercises would be engaged. Also included in the general training is Business Management and Book-keeping.
- ii) Industrial Workshops and Common facility shops in trades like: Handloom weaving, Bamboo work, Pottery, Smithy and woodwork.
- iii) Industrial Estates comprising large medium and small units.
- iv) Supplies to Government Depots - Through artisans workshops.
- v) Marketing of artisans products; through existing channels. And organised marketing through show rooms.

B. Commercial functions

- i) Marketing
- ii) Supply of raw materials
- iii) Hire-purchase of machinery
- iv) Financial participation in projects

C. Administrative functions

- i) Regulatory and self-appraisal
- ii) Finance and accounts
- iii) Establishment and general administration

The National Small Industries Corporation established in 1967 a complex of Industrial Workshops at Kisarawe street, Dar es Salaam. containing:-

- a) 140 industrial workshop units (each unit measuring 12' x 10') rented to bonafide artisans at a nominal monthly rent of Shs.30.00. These units were occupied by 360 artisans i.e. (200 wood workers and 160 sheet metal workers) - number of artisans has now risen to 400.



- b) A Common Facility Workshop in Wood work with up to date machines, to be used by workshop artisans at nominal payment. This has proved quite useful especially in decreasing considerably the production times. A similar shop in metal work has also been erected.
- c) Raw materials bought in bulk and being supplied to artisans at nominal rates.
- d) The artisans have been trained to use the machines and equipment installed in the Common Facility Shops under the supervision of a wood and sheet metal expert lent to us by the Government of India under the SCAAP (Special Commonwealth African Assistance Programme).
- e) A scheme of hire-purchase has also been formulated and introduced. Under this scheme entrepreneurs are able to procure machinery on payment of 20% of the price of machines, through the National Small Industrial Corporation. The 20% balance being payable over a period of 5 years in Dar es Salaam, 7 to 10 years in other parts of the country depending on the level of their economy.
- f) A link with large buyers in the country, (e.g. parastatal organization and government departments), has been formed to obtain large orders of wood and metal work items for execution through the small artisans. This is to ensure production of quality at competitive costs and to solve marketing problems.

NATIONAL ARTS OF TANZANIA LTD.

In March 1970 the first subsidiary company of the National Small Industries Corporation, the National Arts of Tanzania Ltd., was incorporated. This subsidiary will function as a national channel for the export of quality wood-carvings to the overseas markets so that the sale of our world-famous carvings is promoted as a genuine Tanzanian product, and further the wood carvers' cooperative societies can participate directly in the advantages of such a national channel.

APPENDIX I.

ITEMS HANDLOOMS.	REED SPACE IN INCHES	Qty.
FLY-SHUTTLE FRAMES LOOM WITH LEVER SYSTEM OF SPINDLING.	68	1
	56	1
	54	3
	52	3
	36	2
LOCALLY MADE TABLE - LOOM 'FLY-SHUTTLE'	18	
WARPI'G MACHINE	-	1
JACQUARD 200 HOOKS	-	1
DOBBY	-	1

APPENDIX II.

LIST OF MACHINES FOR WOOD WORKING

(1) Band Saw Machine 18" - one	Shs. 4600/-
(2) Circular Saw Machine 12" - one	Shs. 3100/-
(3) Double Ended Grander 8" - one	Shs. 1000/-
(4) Mortising Machine $\frac{3}{4}$ " capacity - one	Shs. 5800/-
(5) Thickness Planing Machine 12" - one	Shs. 6400/-
(6) Jainter Planing Machine 9" - one	Shs. 3400/-
(7) Wood Turning Table - 36 one	Shs. 2500/-

**Total** 30000/-

Hand tools one set Shs. 500/-

If 20 Nos set required then Shs. 1000/-

40,000/-

LIST OF MODERN PRACTICAL BLACK SMITHY & SHEET METAL

S.NO	Description of Tools	Qty	Approx Cost
1	HandBlower 18" Dia	1 HM	350.00
2	Anvil 112 lb	1 HM	300.00
3	Ball Piece 45 lb 3/4 long	1 HM	125.00
4	Sledge Hammer 7 lb	1 HM	15.00
5	Ball Pan Hammer 2 lb	2 HM	25.00
6	Ball Pan Hammer 1/2 lb	1 HM	5.00
7	Ball Pan Hammer 1 lb	1 HM	5.00
8.	Cross Pan Hammer 1 lb	1 HM	4.50
9.	Square Face Hammer	2 HM	15.00
10	Creasing Hammer	1 HM	6.00
11	Flat Tongs	1 HM	8.00
12	Hollow Bit Tongs	1 HM	10.00
13	Square Section Tongs.	1 HM	12.00
14	Round Edge Platters	1 HM	25.00
15	Flattener	1 HM	20.00
16.	Side Cutter	1 HM	15.00
			<u>941.00</u>
17.	Hot cutting Chisel	1 HM	15.00
18.	Top & Bottom Swaging Tools	1 Set	140.00
19	V. Block Bottom Tools	1 HM	40.00
20	Hand Grinding Machine	1 HM	150.00
21	Hand Shearing Machine	1 HM	350.00
22	Spreaders	1 HM	7.00
23	Hack Saw Frame (Adjustable)	1 HM	15.00
24	Round Puncher set " to 1"	1 Set	25.00
25	Scale 24" Folded	1 HM	15.00
26	Out side in Side Calipers 8"	1 Set	25.00
27	Divider 12"	1 HM	15.00
28.	Scriber 12"	1 HM	5.00
29.	Scall 12"	1 HM	8.00
30.	Center Punch:O	1 HM	2.00
31	Ships Straight	1HM	12.00
32	Convved Ships	1 HM	15.00
33	Hand Vice 1 1/2" Jaw	1 HM	15.00
34	Grooving Set " to 1 1/4"	1 Set	10.00
35	Wooden Mallet "Round"	4 HM	30.00
36	Soldering Iron "Straight Copper Bit 12 oz	2 HM	25.00
			<u>1360.00</u>
37	Stake Half Moon	1 HM	50.00
38	Hatchet Stake	1 HM	75.00
39	Creasing Stake	1 HM	100.00
40	Comp list set of file: such as 2nd cut, smooth & Half Round 12"	1 Set	80.00
41	Rivet Set " to 1/4"	1 Set	15.00
42	Rivet Set " to 1/4"	1 Set	15.00
43	Pliers	2 HM	25.00
44.	Miscellaneous	-	100.00
			<u>1820.00</u>
	<b>GRAND TOTAL</b>		<b>4,121.00</b>

BAMBOO SECTION  
LIST OF MACHINERY AND HANDTOOLS

(A) MACHINERY.

- |     |                                  |
|-----|----------------------------------|
| (1) | Bamboo Cross Cutting Saw.        |
| (2) | Bamboo Sheath Peeling Machine.   |
| (3) | Self Bamboo Splitting Machine.   |
| (4) | Bamboo width sizing Machine.     |
| (5) | Bamboo Slicing Machine.          |
| (6) | Round Stick Making Machine.      |
| (7) | Rolling type polishing Machine.  |
| (8) | Bamboo mat making machine.       |
| (9) | Bamboo Hug & Cup making machine. |

The above mentioned list of machinery can be obtained from Overseas Technical Co-operation Agency, (OTCA) JAPAN.

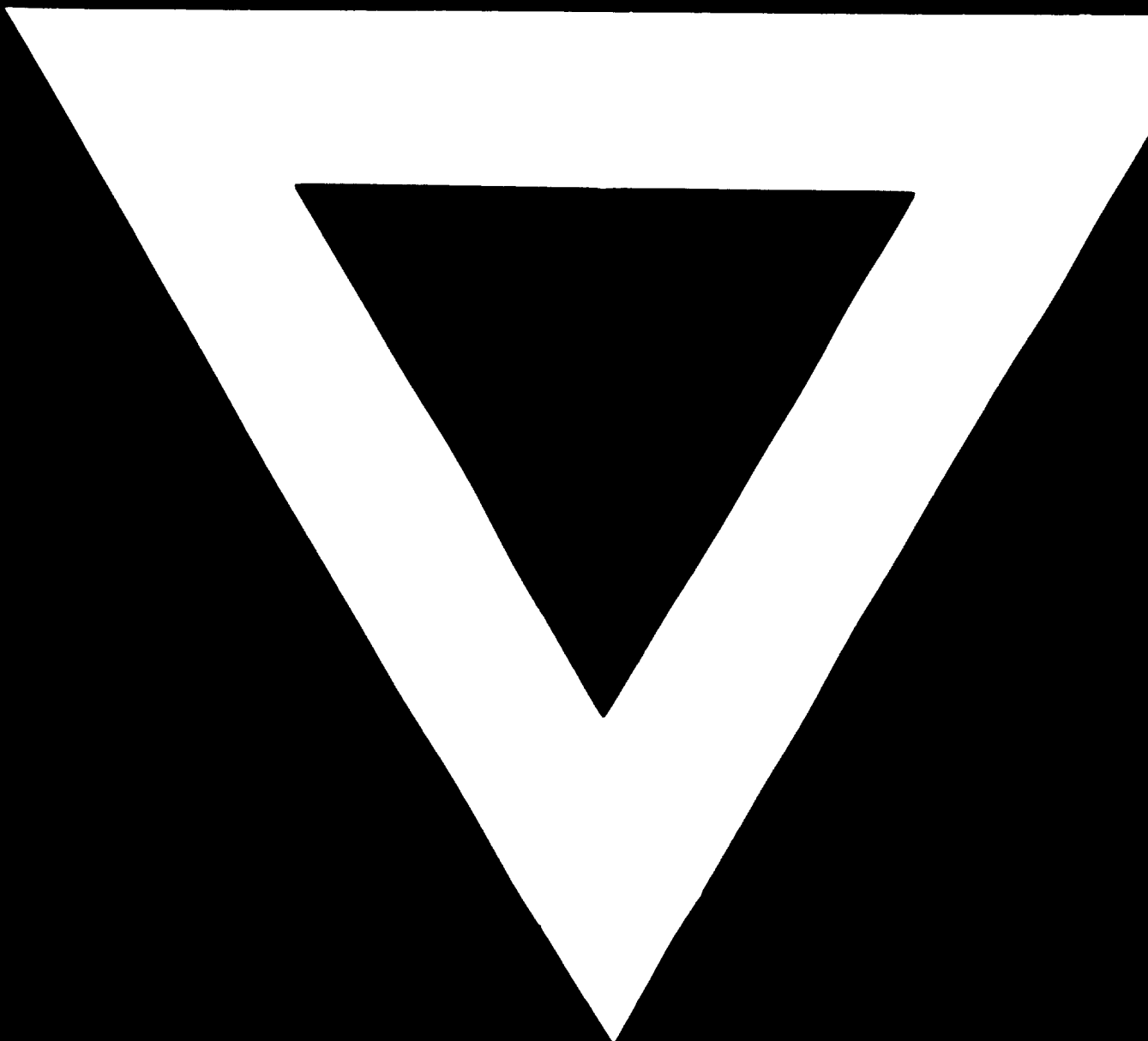
MANUFACTURERS:-

- (a) Takahashi Bamboo & Rattan Processing Machinery Company Ltd.,  
Takebayashi Cuuna JAPAN.
- (b) Sato Bamboo & Rattan Processing Machinery Company Ltd.,  
JAPAN.

(B) HANDTOOLS

PRICE PER UNIT

	<u>Each</u>	<u>Shs.</u>	<u>Cent</u>
1. Scraping Tool.....	"	15	00
2. Big Knife.....	"	7	00
3. Middle Size Knife.....	"	5	00
4. Small knife .....	"	4	00
5. Width Sizing Knives (one pair) .....	"	3	00
6. Cuppy knife .....	"	10	00
7. Shapping knife .....	"	6	00
8. Bamboo Middle knife.....	"	6	00
9. Bamboo Laddle .....	"	2	00
10. Hot Irong .....	"	10	00
11. Gimlet filat .....	"	3	00
12. " Triangle .....	"	3	00
13. " Square .....	"	2	00
14. Iron Hammer ..	"	5	00
15. Tong .....	"	7	00
16. Divider .....	"	10	00
17. In-side Callipers .....	"	7	50
18. Out-Side Callipers .....	"	7	00
19. Hair Tweezers .....	"	4	00
20. Round Stick (Rigo) Maker .....	"	20	00
21. Chisel.....	"	2	50
22. Hand Press .....	"	150	00
23. Hand Splitter .....	"	60	00
24. G. Clamp .....	"	5	00
25. Flat Prizing Tool .....	"	2	00
26. Sensors .....	"	15	00
		-----	
		370	00
		-----	



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