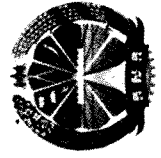
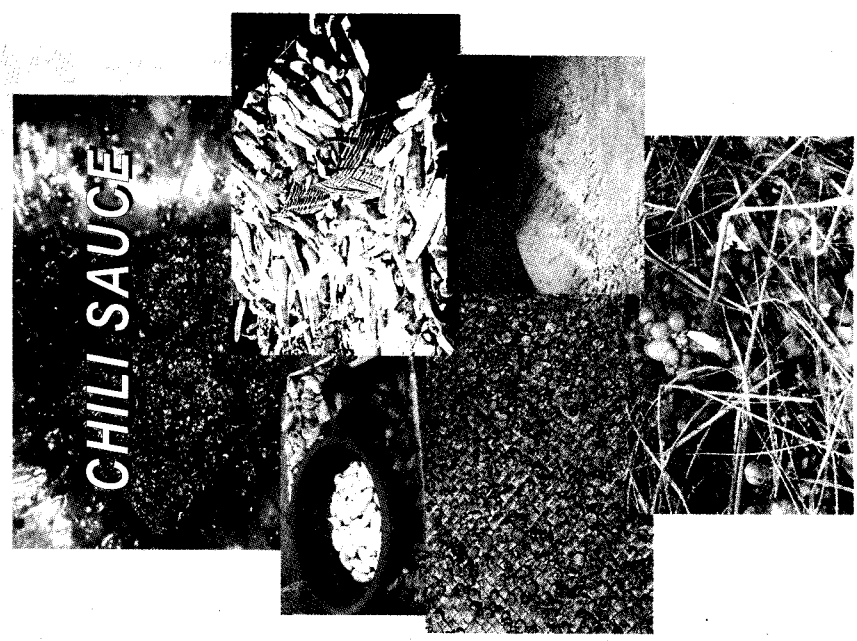


AB9

AB9



OUTLINES OF SMALL SCALE PROJECTS For AGRO-BASED FOOD PRODUCTS



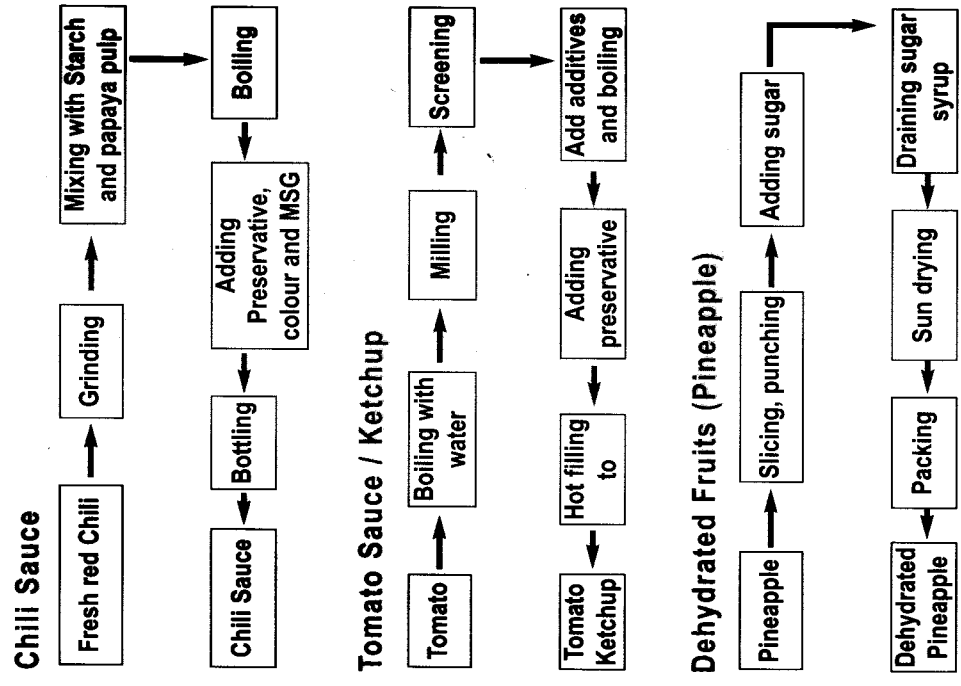
CHILI SAUCE

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MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES
IN COLLABORATION WITH THE FOOD AND AGRICULTURE
ORGANIZATION OF THE UNITED NATIONS

TCP/CMB/2901
May 2004

Vegetable Products

Product Process Flow Diagram

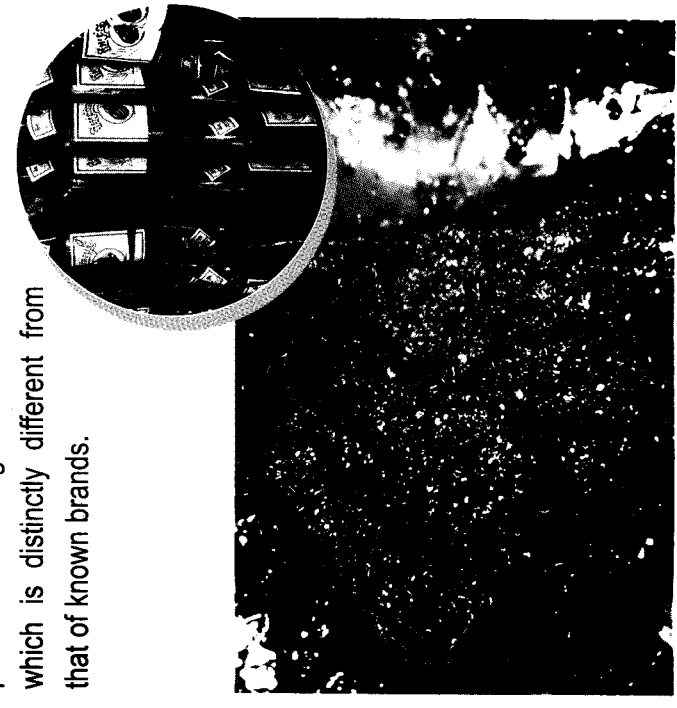


Papaya pulp is added some times to chili sauce to give body, colour and sweeter taste instead of sugar and starch. Some processors add MSG to enhance the flavour and taste. Spices and salt are added according to taste. Fruit pulp is mixed with starch and sundried in layers. Dried pulp is cut in to pieces and packed. The product is similar to a fruit bar in shape and has a consistency like toffee.

Fruit processing is ideally suited to areas where agro-climatic conditions are favourable for growing a variety of fruits spread over both the summer and winter cropping seasons ensuring raw material flow for higher capacity utilization without having to resort to cold storage. Tomato, for example, could be processed into various edible forms thereby minimizing the unsettling effects of distress prices at harvest.

Processed forms of fruits, distinct from preserved forms, are considered as convenience foods for which demand tends to rise with increasing population and higher average incomes.

Small scale producers could price their products competitively at a lower level than that of branded products and still make a satisfactory profit. The strategy is to aim at the price-sensitive segment of the market which is distinctly different from that of known brands.



Basic Hygiene - Precautions for Food Processing

- The presence of rodents, insects, and other animals in the facility should not be allowed because they are sources for the contamination of food with foreign material, filth, bacteria, etc.
- The facility and grounds should be free of uncut weeds, brush or tall grass.
- Improper storage of unused equipment or materials, presence of litter, waste refuse and stagnant water should be avoided.
- Unhygienic conditions in and around the shop floor can allow contamination to enter the food processing plant airborne, adherence to personnel clothing and other means
- All persons, in food preparation and handling should wear clean outer garments, and conform to hygienic practices
- Persons affected by disease in a communicable form, or while affected with boils, sores, infected wounds, or other sources of microbiological contamination, should not work in the food factory.

Process water must be of high quality as it becomes a part of or affects the quality of the product

NOTE

1. The estimates are based on standardized values for several cost items such as wages, rental for space, utilities, input-output ratios, sale price etc. and as such may not be accurate with reference to a given production circumstance and location
2. The outlines are meant to give an idea of available avenues of profitable investment and the likely profitability. Those interested in pursuing any selected activity are advised to make accurate estimates of cost and revenue with reference to their local circumstances, using this guide if necessary, to assess likely returns before embarking on investment.
3. Those interested in starting any activity could approach DAI at the following address for assistance.



No.242, Preah Norodom Blvd, Sangkat Tonle Basac, Khan Cham Karmon, Phnom Penh.
E-mail: dai-maff@camnet.com.kh
Phon/Fax: (855) 23 213 145

Profitability Estimate

Requirements		Unit
Equipment - see list	794	000 Riel
Unskilled workers	1	No
Semi-skilled workers	1	No

Production Capacity		
Per day	350	0.75L jars
Per year of 250 days	87500	0.75L jars
% utilisation assumed	75	% /yr

Costs per year		
Rent	1080	000 Riel
Semiskilled	1916	000 Riel
Unskilled workers	1095	000 Riel
Electricity	0	000 Riel
Other utilities	1125	000 Riel
Transport	0	000 Riel
Repair and maintenance	60	000 Riel
Others	0	000 Riel
Distribution	33006	000 Riel
TOTAL A	38282	000 Riel

Raw materials - see list	39270	000 Riel
Packing	87281	000 Riel
TOTAL B	126551	000 Riel

Revenue and Profit		
Market Unit Price Riels	3000	Riel/unit
Revenue	196875	000 Riels
Cash Profit per year -		
Revenue minus A and B	32042	000 Riels
Cash Profit per month	2670	000 Riels

Activity: Manufacture of pickle Cucumber			
Capacity: 350 Jars/Day (750 ml/jar),400 g Drainage weight and 200 ml seasoning water			
Equipment	Unit	Rate Riel	Cost Riel
1 pH-meter, Hanna	1	140000	140000
2 Pasteurized pot	2	200000	400000
3 Oven	2	15000	30000
4 Scale, max 50 kg	1	60000	60000
5 Plastic basin (50 L)	5	8000	40000
6 Earth Jar (100 L)	8	8000	64000
7 Plastic bottle(25 L)	5	12000	60000
Total			794000

Raw materials			
Ingredient	Percent	Quantity day (Kg)	Cost Riel
1 Cucumber	67	140	154000
2 Sugar	2	4.2	5880
3 Vinegar	8	16.8	42000
4 Salt	6	12.6	7560
5 Water	0	0	0
Total			209440

Packaging			
Description	Unit	Quantity/day	Cost Riel
1 Jars, 750ml	Set	350	455000
2 Labeling	piece	350	10500
Total			465500

Utilities			
Description	Unit	Quantity/day	Cost Riel
1 Charcoal	Kg	15	5250
2 Water	m ³	1	750
Total			6000

1 Unskilled and 1 semiskilled worker needed

Note: The pasteurized pot is local made.