

GUIDELINES

TAKING CARE, HARVESTING AND PROCESSING SUGAR AND ALCOHOL FROM NYPA PALM' S SAP



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I. INTRODUCTION

Nypa Palms (*Nypa fruticans*) can be found everywhere in Southern Vietnam. This plant is considered to have both economical and ecological values to coastal people.

Nypa palms can grow in both fresh and brakish water. They can be found inland, as far as the tide can deposit the palm's floating seeds. Nypa is adapted to muddy soils along rivers and estuaries. It is unusual in having an underground stem which branches to form new above-ground plants (Franklin, 1999).



Nypa forest in Tra Vinh
(Rufford project, 2005)



Nypa's flowers in
the blossom

(<http://mangrove.nus.edu.sg/guidebooks/text/1068.htm>)



Nypa's fruits
(Le Thi Thu Ha, 2004)



Nypa's trunks
(Le Thi Thu Ha, 2004)

II. VALUES AND USES OF NYPA PALMS

- **Direct products:**



Old leaves for thatching or roofing houses



Young leaves for wrapping cigarettes



Sugar - making from Nypa's sap



Alcohol – making from Nypa's sap



(<http://mangrove.nus.edu.sg/guidebooks/text/1022a.htm>)

Nypa's seeds as a tasty dessert



- **Other uses of Nypa palms:**



(Nypa palms in Tra Vinh, Rufford project, 2005)

Nypa ecosystem plays very important roles in protecting coastal regions, preventing coastal line from storms, floods and also soil erosion.

According to the coastal people in Tra Vinh, nypa forest helps to reduce up to 40% of storm or flood' impacts to local residents.

Now, many households keep their nypa area for the unique purpose of preventing floods and soil erosion.

Nypa ecosystem provides fish resource (fishes, shrimps, crabs...) to local communities who are living along the rivers.

Moreover, Nypa forest is ideal habitat of water living resources for their nursery processes.



(Catching fish in nypa forest in Tra Vinh, Rufford project, 2005)

- **Experiences of Thailand in extracting nypa resource:**

- Most of people in coastal regions in Southern Thailand have their own nypa areas. They plant nypa palms for extracting sap to produce nypa sugar, alcohol and also vinegar. Annually, Thai people collect good nypa seeds and plant them to expand their nypa forest. They also extract nypa's leaves for thatching houses and wrapping cigarettes.
- Each household who are living around Pak Phanang River Basin in Southern Thailand can earn approximately 20 million VND per year (~1,350USD/year) from selling nypa alcohol and nypa sugar. In addition, those people achieve about 5million VND/year (~350USD/year) from fish catching within nypa forests.
- In Southern Thailand, each 1,000m² of nypa palms can provide around 2,357-3,096 liters of sap. People need 5-6 liters of sap to produce a liter of alcohol. (Narit, 1996, Le Thi Thu Ha, 2004).

III. EXTRACTING NYPA PALM'S SAP

1. Requirement

Sap is come from the peduncles of the nypa palms. Nypa sap has ivory colour, light sweet taste.

With the following conditions, nypa sap should be collected:

Nypa palms are around 3-4 years old.

Nypa palms in a good condition of development (leaves are not be cut or just some old leaves)



2. Collect nypa sap

Step 1: Tools' preparation

Bottles, plastic pipes or bamboo pipes (Pictures 1, 2)



Plastic bottles



Bamboo pipes

Prepare sliced mangrove woods (*Rhizophora species*) (pictures 3, 4)



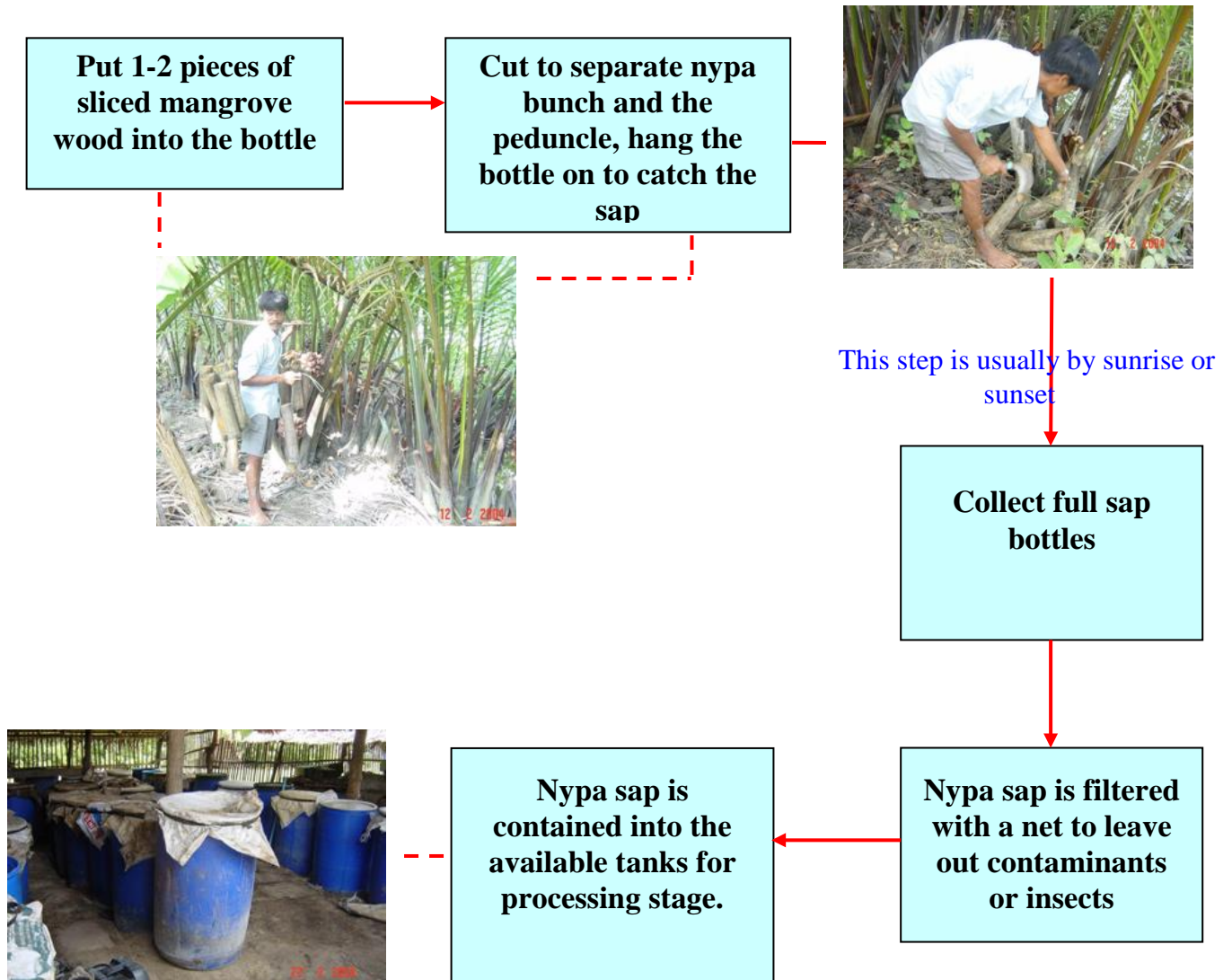
Sliced mangrove wood



Mangrove wood

Step 2: Contain nypa sap

In Thailand, nypa farmers usually put 1-2 pieces of sliced mangrove wood (*Rhizophora Apiculata*) into the bottle or bamboo pile which is used to contain nypa sap. These sliced mangrove woods have been used to control the acidity that has in nypa sap while deposit the contaminants.



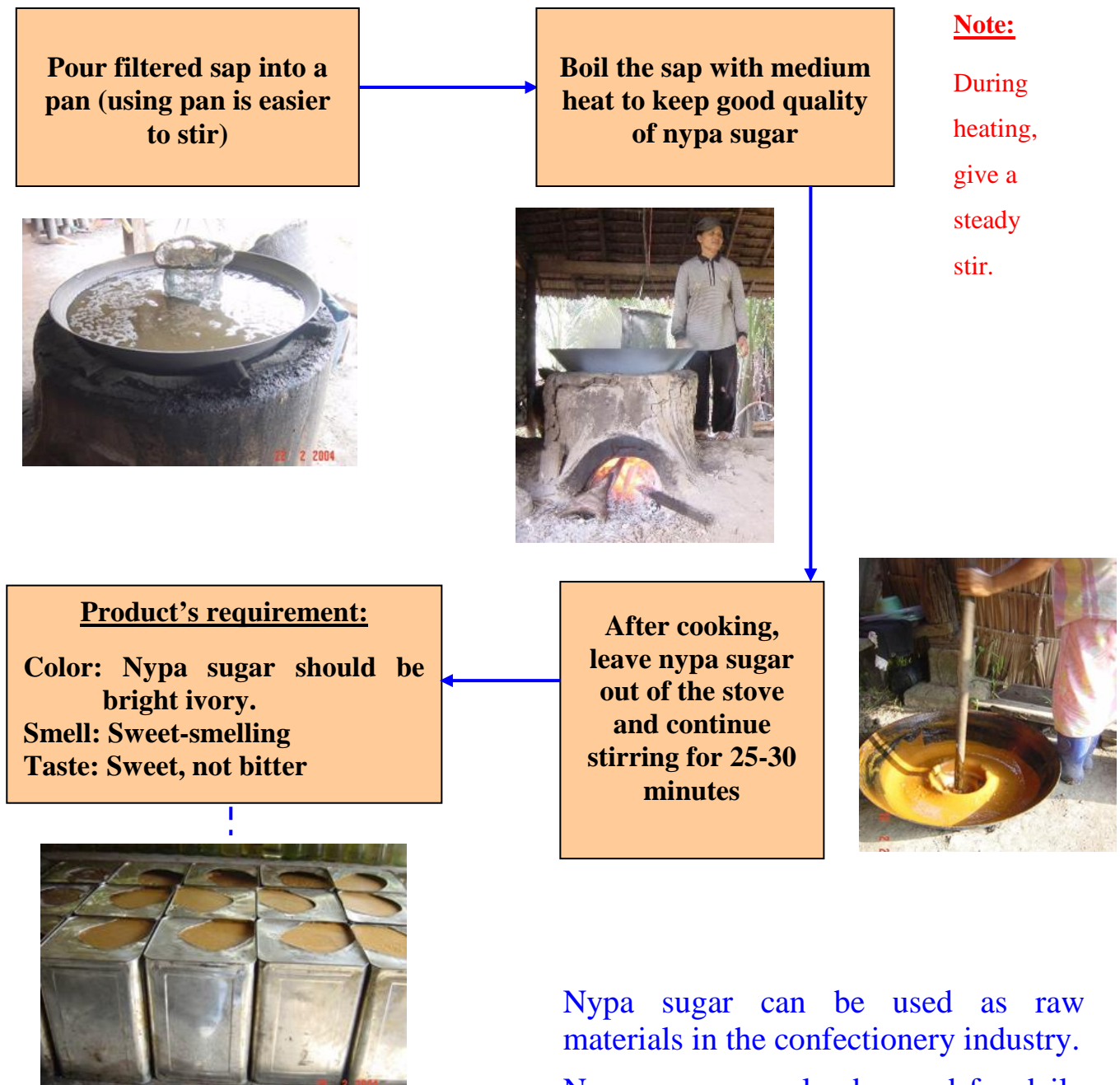
IV. PROCESSING SUGAR FROM NYPA SAP

Step 3.1:

In Southern Thailand, sugar made from nypa sap has become a “new industry” for rural people in almost coastal regions. This “industry” plays a significant role in improving household’s livelihood.

Processing sugar from nypa sap is a simple stage. Nypa sap is cooked for 1-2 hours (depending on the volume of sap).

Several steps of processing nypa sugar are summarized as following:



Nypa sugar can be used as raw materials in the confectionery industry.

Nypa sugar can also be used for daily cooking.

V. PROCESSING ALCOHOL FROM NYPA SAP

Step 3.2:

Preparing tools, equipments, collecting nypa sap as well as filtering to release contaminants are same as step 1 and 2 that shown above.

To process nypa alcohol from nypa sap, several stages are as follow:

