

PROCESSING OF ARECANUT IN SUB HIMALAYAN TERAJ REGION OF WEST BENGAL - A CASE STUDY

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Introduction

Arecanut is an important plantation crop grown in tropical and subtropical climate of the world. It is used mainly for mouth freshening as a masticatory along with betel leaf as commonly known as Pan. Besides this, it is also a main ingredient of Gutkha and other value added product. Since, the ancient time, arecanut is being consumed by the people as raw, dry or in other forms. India leads in arecanut acreage and production in the world with a 396800 m ha area and 559200 tonnes production (2006-07). West Bengal also contributes a remarkable quantity of India's total arecanut production. In West Bengal, it is mainly cultivated in Jalpaiguri and Coochbehar Districts. About 90% of area and production of arecanut is mainly from Jalpaiguri district. Arecanut is mainly processed for dry chilli. But now a days, tender nut processing of arecanut is being popularized in arecanut growing areas of India. It has also been popular in West Bengal. A study was conducted in Jalpaiguri district about the different way of processing of arecanut in this district, mainly , Jalpaiguri, Alipurduar and Malbazar subdivisions. A total of ten processing units were visited and how they are processing the arecanut was studied.

The study reveals that the processing of arecanut depends on the availability of arecanut

of different stage in all the locations. In North Bengal, arecanut palms start flowering in the month of April-May and it requires almost 10-12 months of ripening. In this locality, arecanut is processed in three different ways. Tendernut processing, chilli processing and keeping of nuts under the soil (pit method) are the three ways of processing. Harvesting of arecanut starts from November onwards i.e. 8-9 months after flowering when, the nuts become semi matured. As per their opinion, tender nuts or semi matured nuts are processed and it continued upto February. After that, the matured nuts are harvested for making of chilli or nuts are being kept under the soil for further use. However, processing of arecanut at different stages depends upon the market availability of different type of processed arecanut. Still, the market of processed tender arecanut is more than the other processed arecanut. Hence, about 80% arecanut is processed at tender condition. Only 5% nuts are used for chilli making and 15% of nuts are processed as moja (processing through pit methods).

i. Tender nut processing

Immatured arecanuts are harvested at 8-10 months stage starting from November to February. Nuts are then boiled in water for 20 minutes. Dehusking of nuts and splitting of kernel is done afterwards. After splitting, again kernels

are boiled in water containing a mixture of caustic soda @ 100 g in 50 litre of water for 10 minutes. Then splitted kernels are kept in bower for sun drying. Sun drying process is continued for seven to ten days. The dry nuts are then placed in a closed poly house where sulphur is burned to produce fume/smoke and dry kernels are kept overnight (12 hours) for the increase of the outer color of the dry kernel which earns more money. According to the processor, the processed tendernuts are graded in different groups on the basis of size, shape and tenderness of the tender dry kernel.

Katuri

Katuri means the cut product or splitted kernel. After boiling, the nuts are dehusked and splitted into tow equal halves. Then the splitted kernels are sun dried for ten days in a specially bamboo made bower. Katuri is divided into two groups on the basis of hardness/softness of the kernel. One is Rutha (harder one) and another one is Chikni (softer one).

Rutha

The hard Katuri is called Rutha. Rutha is comparatively harder than the chikni. Though the age of the nuts are same but due to environmental factor some of the nuts are having the kernel which are little bit harder than the other one and harder one is separated as rutha. About 100 kg of nuts can give about 13 kg of Rutha.

Chikni

The softer dry kernels are called chikni. The softness is judged simply by pressing the kernels with a plier. These are having uniform size and shape. It is having the good market value than the Rutha. About 10.5 kg of chikni can be available from 100 kg of nuts after dehusked and drying.

Chikni is again processed to make Gulabi.

Chikni supari is kept in poly house for 12 hours. Sulphur fume is produced by burning of Gandhak (Sulphur) to make the colour of chikni as Gulabi i.e. pink in colour. Again it is graded as Chikni tipni and Tipni on the basis of softness, size and shape. The better one is graded as Tipni which fetches more money than the Chikni tipni (cracked or broken one). As per the producer's opinion, tipni is sold at a price of Rs.130/- per kg whereas, chikni tipni is sold at a price of Rs.115/- per kg.

ii. Challi

Matured ripe nuts are harvested during April-May. After harvest matured nuts are processed in two ways, sun drying and shade drying. Splitted or whole nuts are dried after harvest in sun light for seven days and then dehusked. On the other way, garland of nuts is made with the help of jute string and is hanged in shade. This is kept for two months. After that nuts are dehusked. The recovery percentage in these processes is 15-20 percent. The kernels obtained through shade drying are more white in colour and taste is better than the kernel obtained through sun drying. The drying process is depends upon the availability of sun light. The area experiences the monsoon rain during end of May. But there is occasional rainfall during this period also. If the sun light is not available during the period, the processors go for another processing method i.e. pit method.

iii. Pit Method (Moza)

A very common and widely acceptable kernel of arecanut for chewing in this locality is called Moja Supari. This supari has a great demand in Local as well as in North Eastern states of India, even in foreign country like Bhutan, Bangladesh and Nepal. The moja supari prepared in a special processing method. The matured arecanuts are stored in pit. The concep

Table 1 : Economics of different type of processed arecanut

Product	Quantity (Kg)	Avg. Rate (Rs/kg)	Processing Cost(Rs/100kg)	Avg. Total Cost (Rs)	Recovery %	Avg.Selling Price (Rs/kg)	Total Return (Rs)	Profit (Rs)	% of Profit
Tipini	100	5.5	300	850	12	130	1560	710	83.53
Chikni tipni	100	5.5	300	850	12	120	1440	590	69.41
Rutha	100	5.5	250	800	13	100	1300	500	62.50
Challi	100	8.0	150	950	18	65	1170	220	23.16
Moza	1000 nuts	360	50 / nuts	410	Full	Rs 75/100 pc	750	340	82.93

behind this is that after three to four months when the raw arecanut will not be available, these nuts may be used as like as raw nuts for chewing. The consumer's perception is that the stored nuts are better in taste as these are having less bitterness and as like as raw.

Method

A pit of 7-8 feet and 4 feet diameter is made. A polythene tube of almost same size with one end closed is placed into it. Matured nuts of upper bunches are kept inside the polythene tube. Lower bunches are not suitable as the nuts of the lower bunches are having less moisture percentage. More moisture is available in nuts of upper bunches. After that crushed raw turmeric @ 250 g per thousands nut and green mango pieces @150g per thousand nuts is spreaded over the nuts. The polythene tube is then tied and soil is filled up over it. As per their opinion, the turmeric powder is added to retain the colour of the nuts and to prevent any fungal attack. Though these are shrink, but the colour is retain after 3-4 months of storage in pit. The exudation of moisture from the mautred nuts remains inside the polythene tube. As per opinion of the processors, the nuts of Mohitnager variety is kept in this way for 2-2.5 months, whereas, other local type can be stored for 3-4 months. The moja supari can be prepared in other way also by using a one side closed cement ring of three feet diameter or the nuts may be kept in earthen pot. In both the cases, water has to be added regularly to keep the nuts moist throughout the process. After 2.5-4 months when moja supari is ready, these are taken out and sold in the market. Once it is ready, it has to be disposed immediately. So the processors make arrangement in small quantity with more number of units.

Economics

The economics was calculated on the basis of the discussion made with the processors. The demand of tipni and chikni tipni in Delhi market is more. So the processors produced more of this type of supari (about 80% of total nuts). The percentage of net profit of this type of processed nut is about 83.53% from tipni and it is about 69.41% and 62.5% for chikni tipni and rutha,

respectively. Only 23.16% profit is obtained from Cahlli making. Moja supari helps to get a profit of 82.93 percent. However, only 15% of the total quantity of nuts available in this region is processed in this method as the demand of this type of processed nuts is this much only. If the demand is increased then, the processor can use more nuts for moja supari and they can earn more money.

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