

## CINNAMON- A POTENTIAL SPICE CROP IN NICOBAR ISLANDS

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The Andaman and Nicobar Islands comprises 572 Islands at the juncture of the Bay of Bengal and Andaman Sea. The topography of the Island is undulating and climate is congenial for plantation crops like coconut, arecanut and horticultural crops like tropical fruits and spices. In terms of livelihood, about 50% of the population is directly dependent on Agriculture & allied activities. In the Island, 6% of the non-forested land, is used for agricultural production and plantation crops occupy a major share. Spices are important crops in the Island as they are grown as intercrops in plantation based cropping system. At present, spices are grown in an area of 1369 ha with production of 3436 MT in Andaman and Nicobar Islands (Directorate of Economics and Statistics, A & N Administration, 2014-15). Andaman and Nicobar are the two distinct Islands separated by 150 km wide Ten Degree Channel. The Nicobar group of Island is the tribal dominated region represented by the tribes Nicobarese, Great Andamanese and Shompens. The Nicobari tribes are distributed in all the Nicobar group of Islands. The Nicobar Islands come under the humid tropics with an average annual rainfall of 3000 mm. Coconut and arecanut are the major crops in the Nicobar Island which supports the livelihood of tribals. Spices like black pepper, cinnamon, clove and

nutmeg are grown as intercrops in plantation based cropping system. Spices are grown in a limited area in Nicobar group of Islands when compared to Andaman Islands. Spices are grown in an area of 25.45 ha with production of 22.38 MT (Directorate of Economics and Statistics, A & N Administration, 2014-15). The Ranchi settlers show larger interest to grow spices commercially in Nicobar region. During the pre -tsunami period, cinnamon was widely distributed and one of the major spice crops in Nicobar region. Cinnamon bark extraction was done by the tribes and settler population for marketing their produce. However, there was a huge loss for cinnamon plantation in Nicobar during tsunami. During post tsunami period, the seedlings of cinnamon are supplied for cultivation by Department of Agriculture, Andaman and Nicobar Administration and ICAR-CIARI through NHM and MIDH schemes. The tribes are cultivating the cinnamon seedlings in their backyard and to a smaller extent under plantation crops. The bark extraction from cinnamon is done for domestic utilization. Trainings on cultivation of spices and processing techniques are imparted by ICAR-CIARI and Department of Agriculture, Andaman and Nicobar Administration in collaboration. One year old seedlings are

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planted at a distance of 3x3 m during monsoon (June-July). When the plants are two years old they are coppiced during the onset of monsoon to a height of 15 to 20 cm from the ground level. The stump is then earthened up with soil, which encourages the development of side shoots from ground level. The side shoots take two years for attaining the bark extraction stage. New flushes started in two year old shoots are selected for bark extraction due to the better circulation of sap between the wood and corky layer. Bark peeling is done by locally available dau and small knife. They follow the traditional way for bark extraction. The shoots with 1 -1.25 m length and 12.0-13.0 cm thickness are cut for bark extraction. These shoots are bundled after removing the leaves and terminal shoots. The peeling of the bark was done immediately as bark peeling becomes difficult if stored for a longer time. For bark extraction, the rough surface of the shoot is scraped using a dau (sharp surface). Due to this, the sap exudate from the shoots. If the sap exudates completely it is difficult to scrap the bark hence they use the wooden handle of the dau to scrap again which prevents the loss of sap exudates from the bark. This helps in easy peeling of the cinnamon bark and the quality of the peels are maintained with colour retention. After peeling, the peeled barks are dried in a ventilated room. After drying the barks are packed in airtight polythene bags. Commercial cultivation of cinnamon in Nicobar Islands is very less as compared to the Andaman Islands, due to the following constraints

- \* Existing coconut plantation in Nicobar Islands are not based on proper spacing. Intercropping cinnamon is hence difficult in plantation based cropping system

- \* High labour cost is involved for bark extraction in cinnamon.
- \* The young generation do not have the skill for bark extraction. Even if trained their efficiency is less.
- \* Since tourists are not accessed to Nicobar Islands, marketing of the produce becomes difficult though it is by default organic product.
- \* The bark produced in the Nicobar Island is only utilized within their Island and there is no commercial buyer.
- \* Lack of Proper marketing channels and market intelligence among the inhabitants of Nicobar Islands.
- \* Large scale drying of cinnamon bark is not possible due to the non-availability of advanced drying techniques. Only natural drying is done for the produce.
- \* Unexpected cyclones during the drying season of cinnamon bark affects the quality of cinnamon bark due to improper drying and microbial contamination.

#### **Strategies for area expansion of cinnamon in Nicobar**

- \* Establishment of nucleus seed garden for cinnamon in Nicobar will enable the production and supply of planting material in large quantity.
- \* Skill development training programmes are to be organized especially for tribal women for cultivation and processing of cinnamon.
- \* By default the Nicobar Island is organic, hence if steps are taken for organic certification of cinnamon bark, marketing opportunities will increase.
- \* For production of cinnamon bark with superior quality, mechanized dryers are essential.



Cinnamon grown in Nicobar Islands



Cinnamon bark extraction by tribal farmers in Nicobar

- \* Cottage industries are to be encouraged involving tribal women and various value added products may be prepared from cinnamon to establish continuous demand for cinnamon in the brand name of Nicobar organic cinnamon.
- \* Transport and market opportunities should be created for Nicobar Cinnamon to mainland.
- \* Small scale oil extraction unit may be established in Nicobar region which may create additional employment opportunities and area under cinnamon will be expanded.

Proper extension activities through intensive training to enhance the knowledge of the inhabitants of Nicobar region on technology adoption and promotion of community level approach or women empowerment through self help groups will provide potential scope for intensive cultivation of cinnamon in the existing plantation crops and their processing and value addition. This will in turn enhance the livelihood opportunities of the tribal population of Nicobar region.