

MSME International Conference

Topic: New R & D Equipments for Plantation (Rubber)

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Topics to be covered:

- 1. Advance Rubber Tapping Tool**
- 2. Rubber Latex Yield Enhancer**
- 3. Modern Rubber Smoke House**

Rubber in Meghalaya (Brief Overview)

- ▶ Rubber tree cultivation in Meghalaya is a significant aspect of the state's economy, supporting rural livelihoods and contributing to India's overall rubber production. The state's hilly terrain and climate conditions make it well-suited for rubber cultivation, with Meghalaya contributing 9,100 tons (18300 Hectares land) to India's total production.
- ▶ Here's a more detailed look at rubber tree plantation in Meghalaya:
- ▶ 1. Importance of Rubber Plantation:
 - Rubber is a major plantation crop in Meghalaya, alongside areca nut and cashew nut.
 - It plays a crucial role in the rural economy and provides livelihood opportunities for many farmers.

Meghalaya's rubber industry supports its rural economy and provides livelihoods for many farmers.

► 2. Growing Conditions and Practices:

- Rubber trees thrive in well-drained, acidic soils and require high rainfall (200-300 cm annually) and warm temperatures (20-35°C).
- Rubber is grown in loamy soil, often in sloping or undulated areas, avoiding water stagnation.
- After budding, the budded plants are planted on farms with appropriate spacing and maintenance. (450 to 500 trees per hectare)

► 3. Planting and Maintenance:

- **Land Preparation:** Land needs to be cleared, ploughed, and leveled, with proper drainage channels established.

- ▶ **Planting:** Seedlings are planted in rows with appropriate spacing
- ▶ **Pruning:** Pruning is necessary to maintain the tree's shape and promote optimal latex production.
- ▶ **Intercropping:** Rubber can be intercropped with other crops during the early years to improve income.
- ▶ 4. Tapping and Harvesting:
 - ▶ **Tapping:** Latex is collected by tapping the bark of the tree, a process that involves controlled wounding. When the Circumference of the tree reaches 18-20 inches.
 - ▶ **Processing:** The collected latex is processed into rubber.

We have developed innovative solutions to empower the Rubber Growers, with an experienced team of 15 years in this sector.

THE RUBBER INDUSTRY IS IN DANGER

WHAT IS ITS REASON ?

- Unscientific Tapping by Traditional JEBONG knife is damaging the Tapping life of a RUBBER Tree



Risks Associated with Traditional Tapping Tool

High risk of carpal tunnel syndrome of Tapper
The repetitive wrist flexion and ulnar deviation required for rubber tapping can lead to carpal tunnel syndrome.



• Risk of damaging the tree:

Making the wrong cut to the tree can damage or kill it. Damage in cambium due to uncontrolled tapping on A & B panel forms a lot of tumours on the tapping surface, which makes the task of the tapping very difficult again on C & D panel. The edge of Traditional tapping knife stuck on the tumour and often leads the damage of the tapping tool and the tool needs to be replaced. The uncontrolled tapping causes the high risk of Tapping panel Dryness. When the tapping surface of A & B panel got damaged in the beginning of tapping, the yield will be comparatively less while tapping on C & D panel.



Decrease of Tapping life of Rubber trees

With the traditional tapping the rubber tree loses 3mm tapping surface in each tapping, which is 24 inches in a year and within 20 years the tapping life of the finishes.



Tapping damage of Rubber Tree



Cambium and Wood damage



Formation of Tumour on the tapping surface of the rubber tree



**Tapping Panel Dryness of
Rubber tree is the result
of bad tapping by
Traditional JEBONG tool**



**In a nutshell:
The Villain behind the
destruction of the Rubber
Industry is Traditional
JEBONG Rubber Tapping
knife**



The solution is Advance Scientific Rubber tapping tool RUBEX

A tapping tool with stainless
steel blade replacement



Advance Rubber Tapping Tool RUBEX

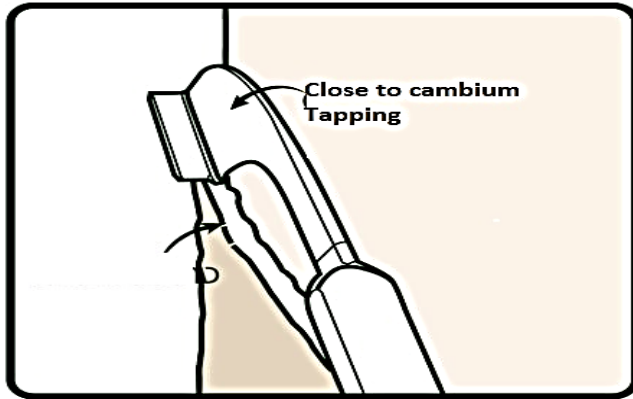


Traditional Tapping tool VS RUBEX

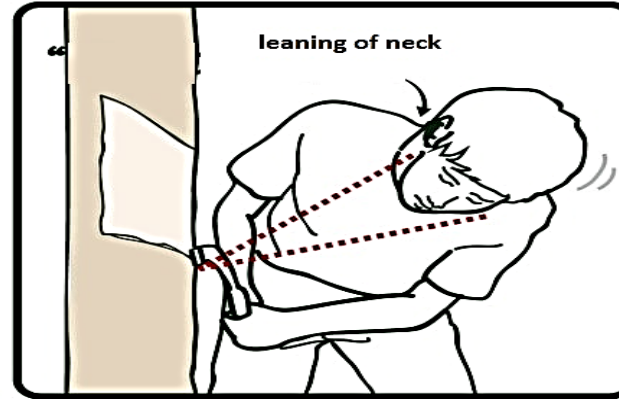


Tapping with
Traditional
Jebong Knife

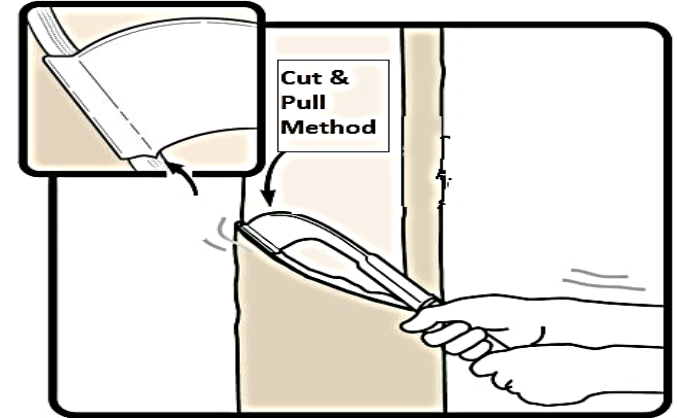
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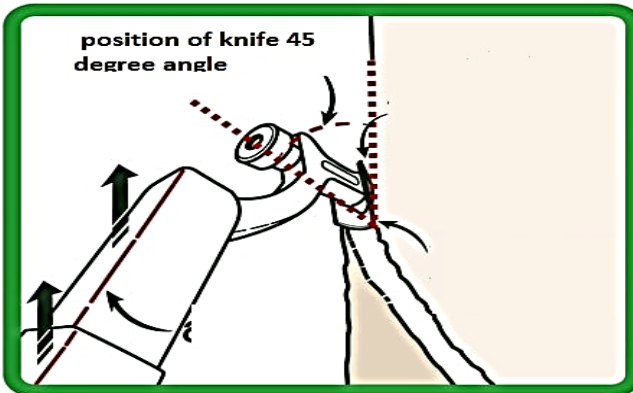


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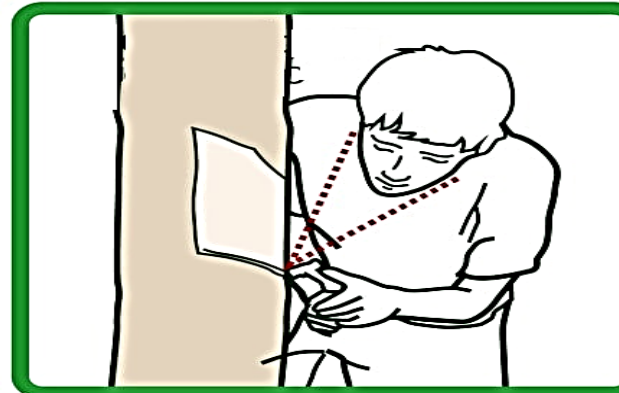


Tapping with
modern
tapping knife
RUBEX

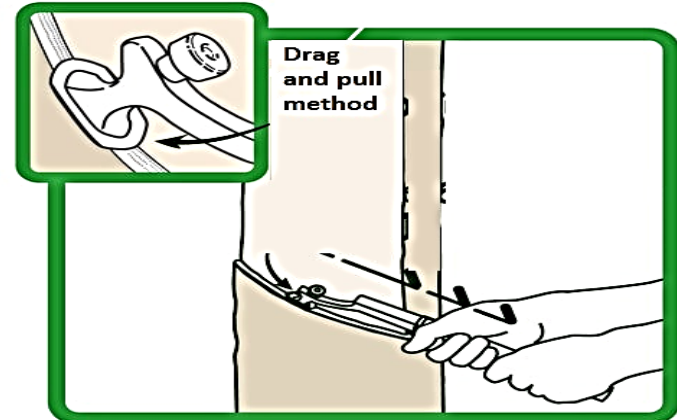
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The saliant features of RUBEX rubber tree tapping tool:

1. No need to sharpen the blade daily, tapping by sharp blade resulting 10%-15% more latex.
2. As the RUBEX Rubber tapping knife cuts in a thin surface of only 1 mm. saves valuable bark consumption, which prolongs the age of the rubber tree by three times (Equal to 50 years). Less wound created on tree during tapping resulting faster healing.
3. The knife solves the problem of lack of skilled manpower as it can be used by anyone and the result will always be 1 mm cut.
4. The protector of the knife protects the damage of cambium of the tree during tapping

5. Ease of tapping with RUBEX rubber tapping knife, the tapper will not feel stiff thus making the tapping job enjoyable resulting a tapper can tap more trees in less time in comparison with Jabong tapping knife.

6. The adjustable blade gives freedom to adjust the knife on any surface.

7. The tapping method by RUBEX rubber tapping knife at a normal level- just place the blade at 45° and just drag it along and shave the skin without lifting the handle with very less physical effort which makes the tapping job enjoyable in comparison with the tapping style of Jabong tapping knife- to cut the skin by strokes (frequently lifting the knife), It is very difficult to maintain a cut of 1 mm thick skin, by lifting the knife with each strokes even for the skilled tappers.

Advantages of RUBEX tapping tool

1. Satisfactory Latex Yield.
2. Guards against bark injury.
3. Regulates bark consumption.

With the RUBEX tapping the rubber tree loses .75 to 1 mm tapping surface in each tapping, which is only 8 inches in a year. The tapping life of the tree expands up to 50 years.

4. Easy to use by anyone who is not a skilled tapper.
5. Prolongs the economic life of rubber plantations

But while tapping with the RUBEX Rubber tapping knife cuts in a thin surface of only 1 mm , which prolongs the age of the rubber tree by three times (Equal to 50 years) of tapping and provides 10 to 15% more rubber as well. Because using a sharp blade to tap, the rubber tree can give more latex. Also, the knife solve is the problem of lack of skilled manpower as it can be used by anyone and the result will always be 1 mm cut because the knife has a deep tapping protector that controls the knife not to cut too deeply, helping to save the tapping surface. Easy or thin tap get more latex.





RUBEX RUBBER TAPPING KNIFE

User Manual

1



Easy to assemble

2



Tapping with normal depth

3



Adjust blade to right for thick tapping

4



Adjust blade to left for thin tapping

5



Tap the rubber tree upwards

6



Tap the rubber tree downwards

7

Position the tapping knife about 40 degree from the Tapping panel. Ensure the upper-side of the knife pointed away from the stem. Tap downward following the trace to complete the Tapping.

Remarks:- For new tapper, slowly shave downward for 1-2 cm. You can draw a longer cut as your tapping skill gets improved

RUBEX Tapping knife reduces the damage of the bark



8

Improve tapping posture

Posture of Tapping with RUBEX Tapping knife



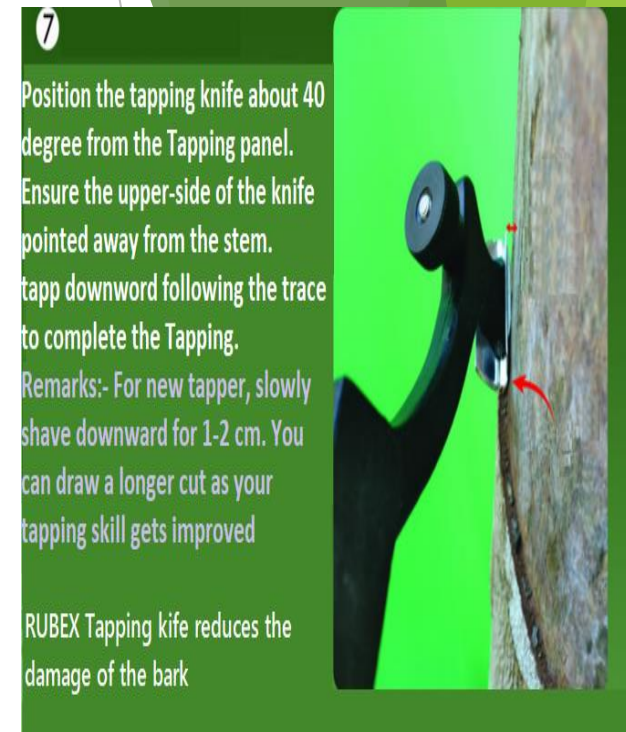
Using RUBEX Tapping knife no need to tilt your neck to see the tapping point

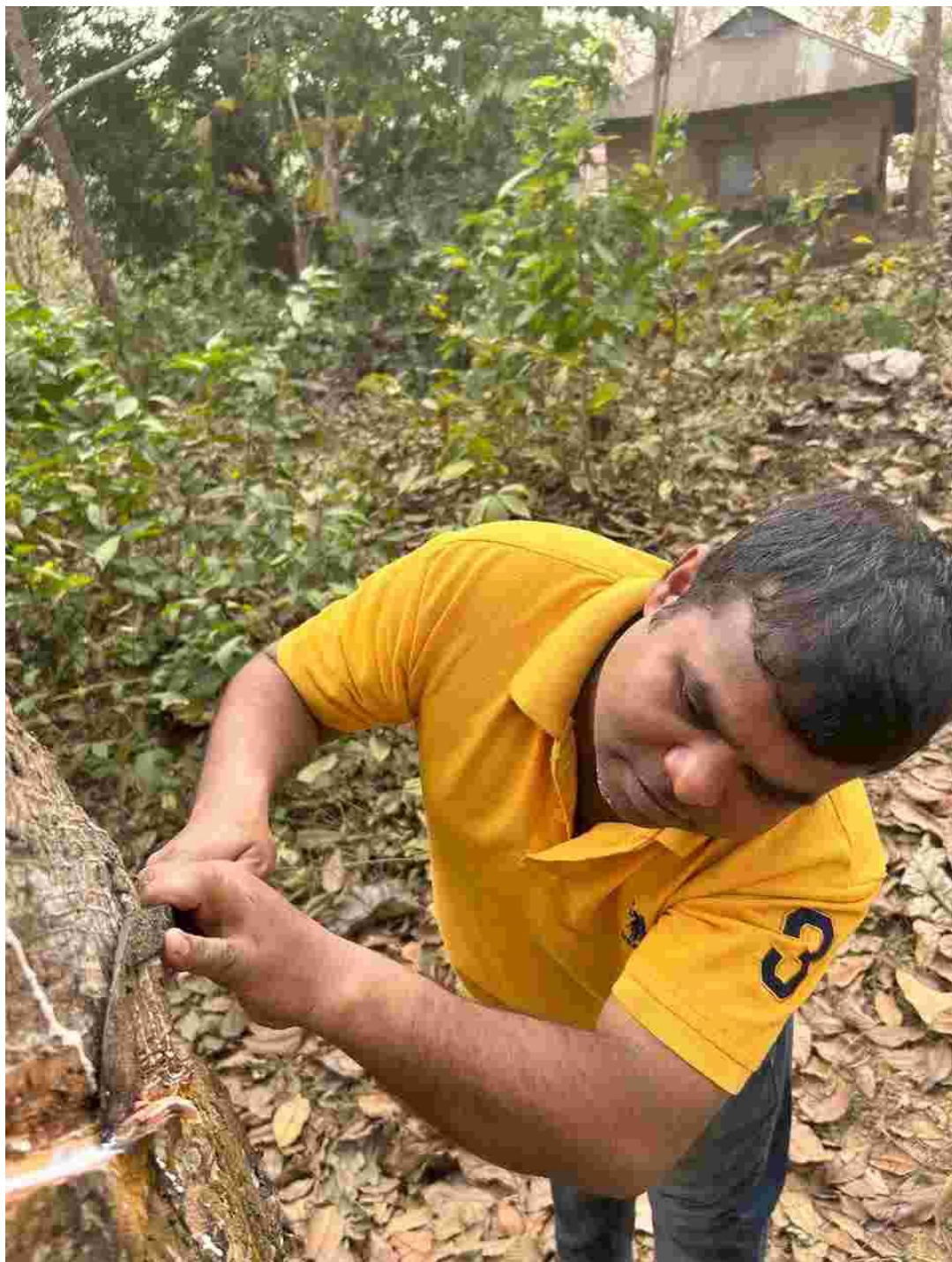
Posture of Tapping with JEBONG Tapping knife



Using Jebong knife you have to tilt your neck to see the tapping point

Positioning the blade- looking for the right tipping point for Jabong rubber tapping knife. The tapping method of old-styled knife, it has to be placed close to the trunk. But for RUBEX Rubber tapping knife, it will not be possible to tap when placed close to the trunk as the blade part will fall off the edge. the knife needs to be inclined about 45° or the age has to point upwards there is a gap between the tree and the blade where we can look for the right point to tap between them. This facilitate, the tapping which is different from the use of an old-style knife because putting the blade completely close to the trunk makes us lean in the neck, thereby feeling stiff, but for the RUBEX Rubber tapping knife. In knife, we can look at the gap between the blade and the tree. we can tap at an upper position and then simply drag it downwards without having to lean the neck. The tapping method at a normal level - just place the blade at 45° and just drag it along and shave the skin without lifting the handle





**Demonstration
of Advance
Rubber Tapping
Tool
RUBEX**



Rubber Latex Yield Enhancer VITEX



Advantages of Rubber Latex Yield Enhancer VITEX

1. Increase the production of latex 50 % to 100 % .
2. Increase and maintains Dry Rubber Content (DRC)
3. Cures and prevent tapping panel dryness.
4. Free from any harmful ingredients.
5. Very safe & easy to use.
6. Environment Eco Friendly.

Modern Rubber Smoke House



Advantages of Modern Smoke House

1. Assured production of high grade rubber sheet RSS I, RSS II, RSS III, RSS IV (Ribbed Smoke Sheet)
2. Upgradation of lot rubber sheets into smoke sheet RSS IV, RSS V
3. Consumption of 1/10 th volume of firewood in comparison with traditional smoke house.
4. Less manpower involved.
5. Very low maintenance cost.
6. Very high return on investment.
7. Very easy to operate and maintain.

Demonstration of Advance Rubber Smoke House



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THANK YOU