

## Sustainable Resin Tapping Methods Developed By FRI

Rosin is widely used to produce adhesives, paper sizing agents, printing inks, detergents. Turpentine is usually the raw material of varnishes, perfume, disinfectants, cleaning agents and others.

### Rill Method

- It's a new method, standardised by FRI, Dehradun,.
- One inclined rill is made on either side of central groove through which resin flows into a cup fixed at the base of blaze.
- Average width of rill is 5-6mm. Total number of rills in 8months is 32.



### Bore-Hole Method

- Bore Hole method is a new method which involves drilling holes into the wood to open maximum number of resin ducts.
- Holes of 2.5cm diameter are drilled to a depth of 10cm.
- A spout is tightly fixed in the hole and a polythene bag is attached to the spout for collecting resin,



*Pinus roxburghii* trees were selected for developing effective and non-harmful resin tapping technique in Mussoorie Forest Division (Magra Compartment). The site was divided in three plots on the basis of altitude in the selected compartment. One site selected at FRI in Champion Seth Block for demonstration purpose. Result indicated that top plot (1800-1900m ) gives Av. resin yield 1.058 kg in per tree, middle plot (1640- 1740m) gives Av. resin yield 1.795 Kg and bottom plot (1530 – 1630m) gives Av. resin yield 1.614Kg. Champion Block site -2 gives Av. 2.349 Kg resin. Best Resin Yelder Trees at Champion Block FRI Dehradun in Bore Hole Method of Tapping was tree no 11 which gives 6.500 gm oleoresin. On the basis of diameter classes best resin yield found in diameter class 40-49 cm compared to other classes such as 50-59cm and 60 above. The total resin yield was slightly high in rill method of tapping compared to bore hole method of tapping. Presently, these methods have been adopted by state forest departments in pine growing regions.