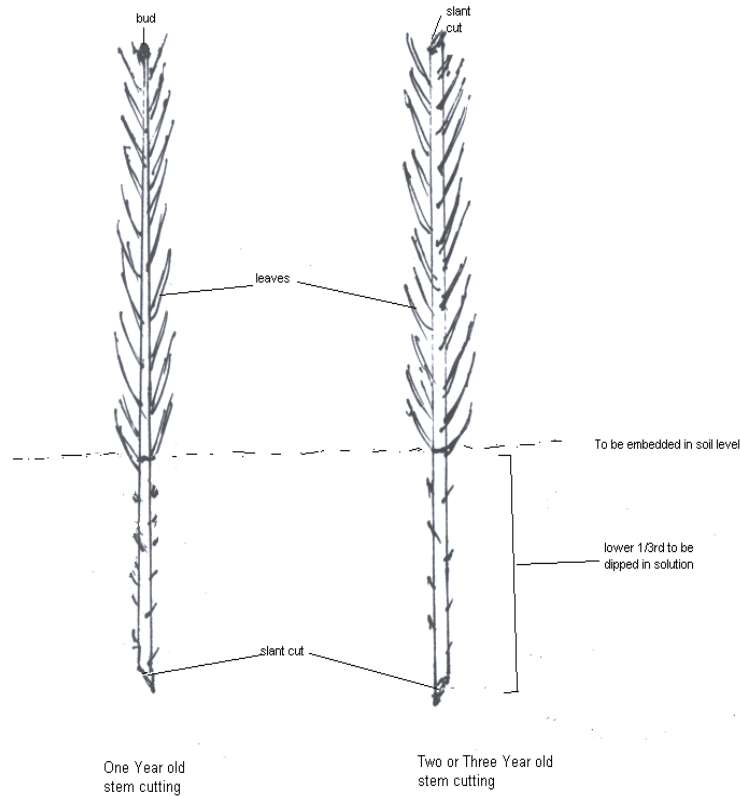


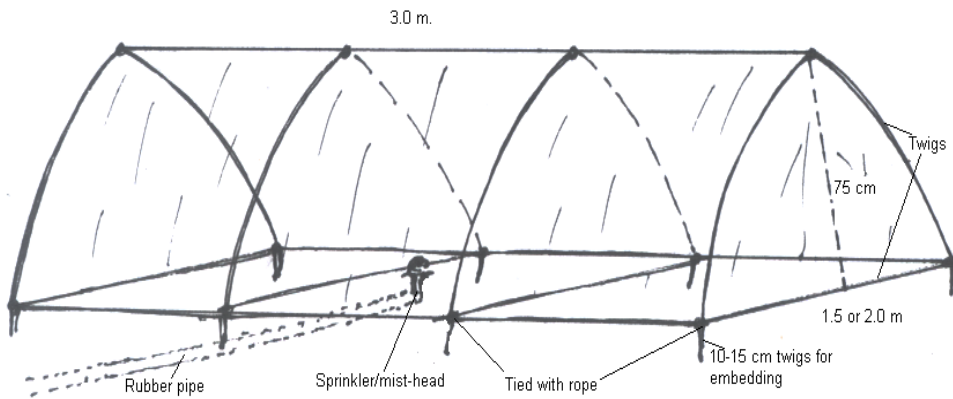
Hormone treatment for rooting stem cuttings in Yew (Rakhal), Buransh, Tejpatr & Indian Olives

PIHPFEM&L (JICA) Project,
PMU, SHIMLA

Taxus wallichiana (Yew, Rakhal)



RAKHAL STEM CUTTINGS (15 cm long)



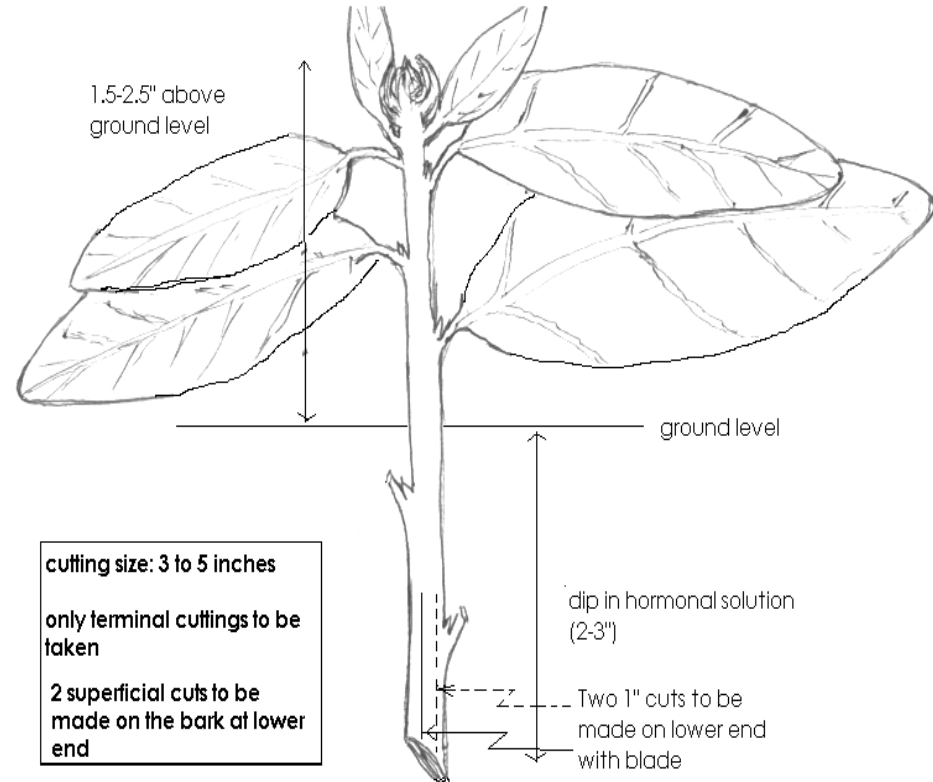
Small polythene house over the nursery bed



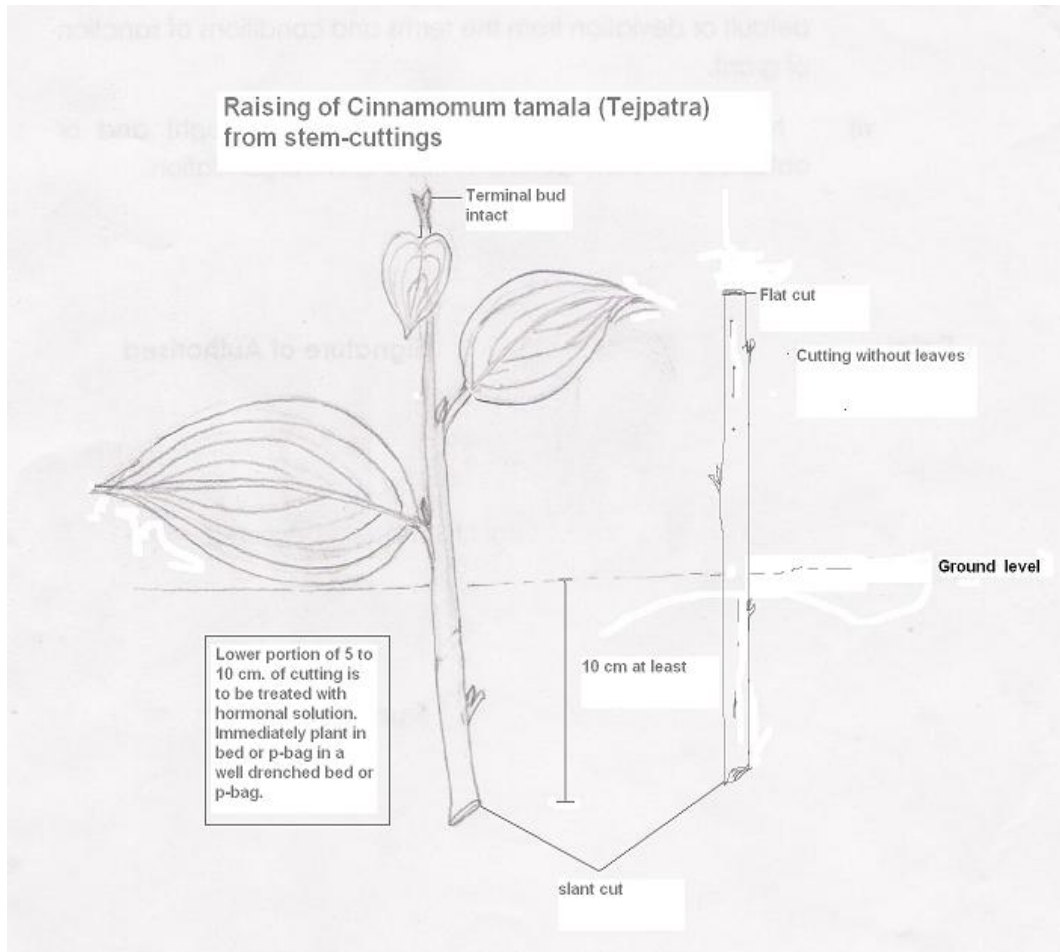
Rhododendron arboreum & R.campanulatum (Buransh)



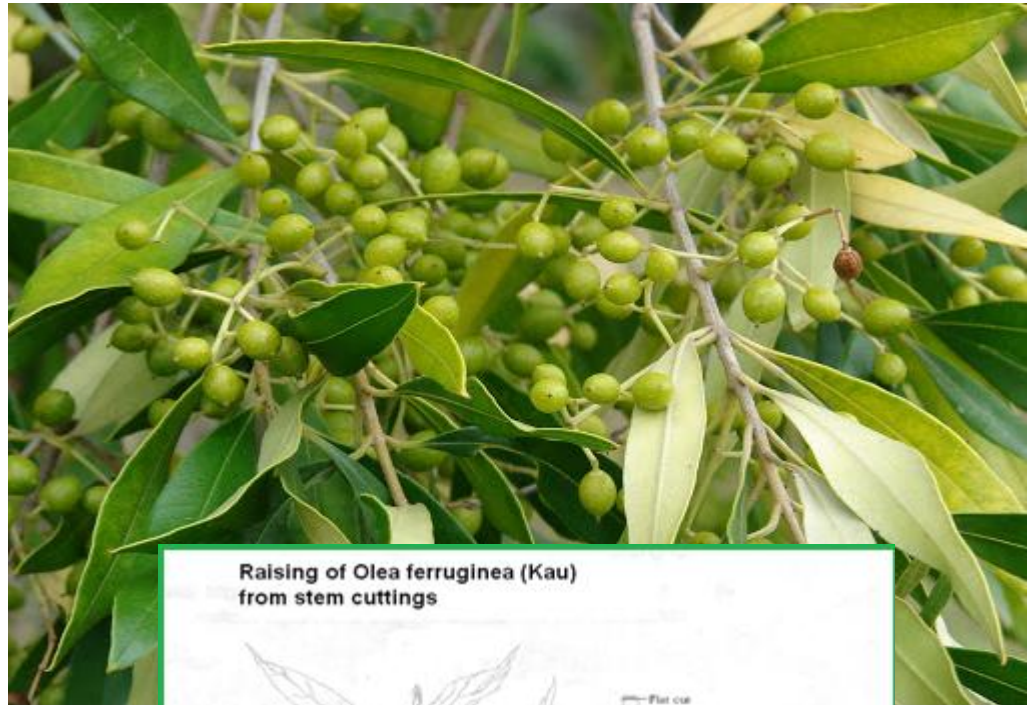
Planting of Rhododendron cuttings



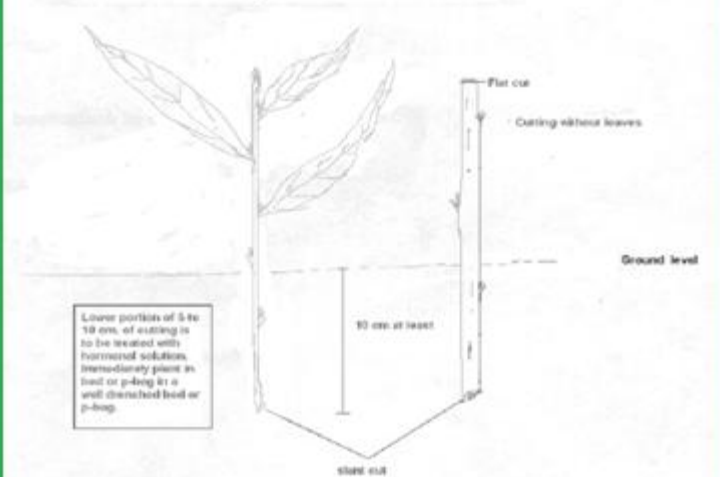
Cinnamomum tamala (Tejpatra)



Olea ferruginea & Olea cuspidata (Olives)



Raising of *Olea ferruginea* (Kau) from stem cuttings



Rooting Hormone

- Indole Butyric Acid (IBA) 1000ppm for **Yew (Rakhal)**
- IBA 1000ppm + Salicylic acid 1000 / α -Naphthol 1000 ppm for **Buransh**
- IBA 500ppm for **Tejpatr**
- IBA 1000ppm for **Olive**

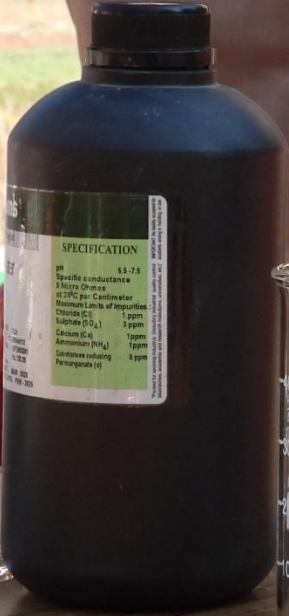


Preparation of Hormones

- Take 5 gm packing of IBA.
- Dissolve powder in 25ml of Ethyl alcohol.
- Add little more alcohol (5ml.) to make total volume 30ml. Put in a bottle and keep cap tightly shut.
- Take 5 gm weighed amount of salicylic acid or α -Naphthol powder and dissolve in ethyl alcohol. Make total volume 30 ml. and keep in a bottle with cap tightly shut.
- Store the above separately

Use of Hormones

- For **Yew (Rakhal)** cuttings use only IBA 1000ppm solution. For that, use 6ml of the above prepared IBA solution from the bottle and add distilled water to make the total volume 1ltr. Add 10ml of liquid soap solution (such as **Ezee** etc.) and shake vigorously.
- For **Buransh** cuttings, use 6ml of IBA 1000ppm solution and add 6ml of salicylic acid or α -Naphthol solution from the bottles and add distilled water to make the total volume 1ltr. Add 10ml of liquid soap solution (such as **Ezee** etc.) and shake vigorously.





Treatment of Hormone

- Take Rakhal terminal cuttings of the branches and first year growth is cut down with pruning scissors and remove leaves from lower 5cm portion and put in the IBA solution as shown below.
- Take Buransh cuttings of first and second year growth (25cm length) and remove leaves from lower 5cm portion and put in the IBA + SA/ α -N solution prepared above.



Period of Treatment

- During winter/spring season, the cuttings be treated with solution for 10-15 minutes before planting each cutting in 1 polythene bag containing soil mixture of humus: FYM: sand in 1:1:1 ratio.
- During raining/summer season, the cuttings be treated with solution for 2-3 minutes before planting each cutting in 1 polythene bag containing soil mixture of humus: FYM: sand in 1:1:1 ratio.
- After planting the cutting in bag, water the cuttings to keep bag soil wet for next 30 days and keep the bag in shade till leaves emerged.



Global Hydrogel Market
OPPORTUNITIES AND FORECAST,
2020-2027

Global Hydrogel Market is expected to reach **\$31.4 Billion** by 2027.

Growing at a **CAGR of 6.7%** (2020-2027)



**Potassium acrylate
perlite rock
agrisorb +**

Thank You