

Management of Agarwood Plantations & Implementation of CITES for Trade in Agarwood Products in Bangladesh



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Background Information

- Only *Aquilaria malaccensis* species found in Bangladesh.
- Naturally grows in north-east & south-eastern hills but now under threat of extinction.
- Experimental Plantation with other species started in early nineties.
- Total 5800Ha. Agarwood plantations were raised under Pilot plantation(2000-2005) & subsequent plantation project(2008-2011) by FD.
- Practice of raising in private home gardens for many years.
- Height about 20-25 m.& GBH about 2-2.5m
- Preferable rainfall min. 1800mm. & temp. 20-25°C.
- Preferable altitude about 500m and slope not more than 45°.
- Prefer good drainage condition.



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- Naturally agar formed after 20yrs & found only in 10% trees, artificially induced method applied locally & it is possible to get agar within 10yrs from almost 100% trees
- Singapore, China and Middle-East countries are main importer of agar oil & chips



Agar Trees in Bangladesh

- Scatteredly found in Moulavibazar, Chittagong & Chittagong Hill Tracts.
- Original seed source.
- Plantations are in all Forest Areas.
- Private pltns. are only in Moulavibazar dist.



Nursery & Plantation Mgt. Techniques

- Seed Collection & Sowing: June-July
- Seeds are collected from mother trees and sown in the seedbed or container within 24hrs.
- Before sowing, the seeds are soaked in water for 18-24 hrs.
- After 1 week, germination started & competed within 1 month
- 1 yr old seedlings are planted during rainy season
- Generally planted at an spacing of 2.75mx2.75m, but in home gardens it may be 1mx1m to 1.5mX1.5m spacing



N.B. Other procedures of nursery establishment and plantation raising & mgt. are similar to any forest species

Nailing & Agar Deposition

- Indigenous Method
- Nailing commonly used
- Chem. Kit method- not popular in BGD


Nailing Method-

- Nailing done from top to bottom at an age of 6-10 yrs in rows and 3-7 cm apart
- Nails are 5-15 cm long
- Agar deposited in injured areas around nail



Nail Removing & Chipping


- After 2-4 yrs of nailing, tress are felled, nails are removed and chips are made manually by using sharp axe and Dao (knife)



Agar Oil Extraction


Very crude & indigenous method -

- Water distillation
- Water-steam distillation
- Steam distillation



Collection of Oil

0.02-0.89 % oil can be extracted (BFRI,2009)



Implementation of CITES Rules

Signed: 1973
Ratified: 20 November 1981
Entered into force: 18 February 1982
Management Authority: Chief Conservator of Forests
Scientific Authority: Wildlife advisory Board

Legal Instruments In Force:

- Forest Act, 1927 (Last amended in 2000)
- Bangladesh Wildlife (Preservation) Order 1973 (Amended in 1974)
- Plant Variety Protection Act, 2003
- Bangladesh Forest Produce Transit Rule, 2011
- Imports and Exports (Control) Act, 1957
- CITES listed species are regulated as per CITES guideline

Proposed Bangladesh Wildlife Act, 2011, Categorized species of flora and Fauna according to CITES guideline

Agar Products Trade in Bangladesh



Agar Chips
Agar Oil



During 2010-2011, 100200.00 Kg(100.2 tons) of Agar Chips Exported From Bangladesh

Current Challenges

- No policy
- No Govt. initiative for commercial prodn.
- Lack of scientific technique for artificial induction
- Lack of scientific & efficient technology for prodn. of Agar oil
- Crude method causes misuse of resource & low quality

Thanks for Patient Hearing

