

Spate Irrigation: Setting Up Acacia Ehrenbergiana



Introduction

- Indigenous trees like *Acacia Ehrenbergiana* are important sources of livelihood for many rural and urban poor communities
- *Acacia Ehrenbergiana* can contribute to several commercially viable environmental rehabilitation
- **Why is it useful?**
 - It is one of the most drought-tolerant of the common African acacias occurring in belts that get about 50-300 mm rainfall
 - It produces the high quality honey, charcoal and *Qataran*



Best practices: Tihama Region, Yemen

- *Acacia Ehrenbergiana* (*Salam* tree) grows in the eastern Tihama about 20 km from the Red Sea between Wadi Mawr and Wadi Zabied on alluvial sands and silt
- The tree is generally grown for forestation and sand dune stabilization
- *Acacia Ehrenbergiana* woodland is used for fuel wood, and as a range land for goats, sheep and camels



Firewood and Charcoal Production

- **Firewood** – cut stems and leaves are commonly used by farmers housekeepers
- Farmers produce **charcoal** as a cash product by cutting old and some young *Salam* trees
- Charcoal is mainly used for smoking pipes and as a fuel in cooking some traditional Tihama food dishes and bread



Animal and Bee feeding, and Honey

- **Animal and Bee feeding** – most *Salam* plantations are used as range land for feeding sheep, goats, and camels
- The *Salam* flowers are much preferred by bees
- The tree is classified as a Legminosae
- Its leaves and buds are rich in nitrogen and considered to be good as animal fodder (especially for goats)
- **Honey** – during the flowering period of the *Salam* tree, beekeepers transfer their beehives from different sites to the *Salam* area to feed the bees
- The *Salam* honey costs about USD 30/litre



Qataran

- **Qataran** - is a black colored liquid medicine extracted from two types of *Salam* trees:
 - A thin and watery fluid. It is used as an animal medicine, in the treatment of insect and fungi parasites (lice, ticks and scabies) especially for camels. It is also used in the treatment of human skin diseases caused by parasites, especially on the scalp
 - A heavy and thick fluid and has a nice strong smell. It is used for painting wooden cups and preserving them and for other painting-related purposes as well, including painting of wooden ceilings and wooden furniture to protect them from insects, especially termites. The heavy *Qataran* fluid is also applied on the stems of fruit trees to protect them from insects and fungi.



Recommendations

- Grow *Salam* tree seedlings under shaded nurseries in polythene bags filled with mixed soil (25% sand and 75% clay)
- Keep seedlings in nursery for 4-6 month old and have a 40-50 cm stem height, then transfer to permanent fields
- *Salam* trees are usually randomly spaced, grown about 5 meters from each other
- In the nursery they should be irrigated every 3-7 days, depending on air temperature, with a quantity 270- 400 cm³
- In permanent fields the irrigation of *Salam* trees must take place at 15-20 days interval during the first year. In the second year, they should be irrigated once a month. After that, the *Salam* tree is self-dependent
- The growth of trees then depend on the rainy season