SAVING A TREE

A VALUABLE TREE UNDER THREAT



Intense or Incorrect **Tapping Practices**



Gravel Mining

A PROJECT TO DETERMINE HOW TO SUSTAINABLY HARVEST FRANKINCENSE

Sustainable harvesting must be applied to conserve frankincense trees and the livelihoods they support. Over the course of 4 years, the **Environment Society of Oman** studied the effects of tapping methodologies on yield

(2010 - 2014)

NATURALLY

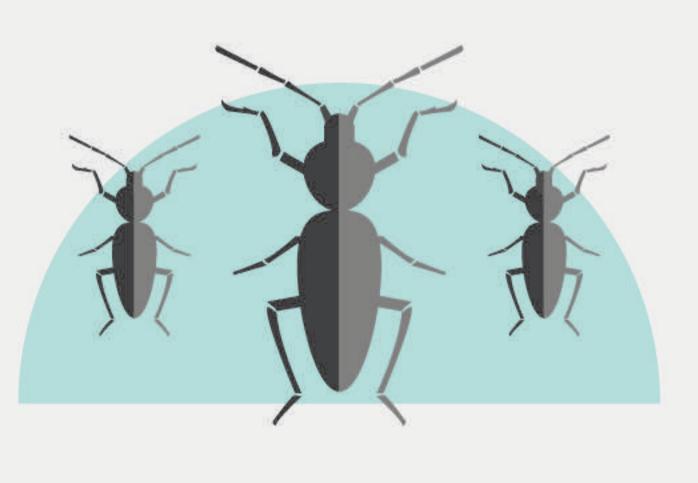
GROWN

TREES MONITORED

For more than 5,000 years, *Boswellia sacra* trees in Oman's Dhofar region have been tapped for a rare aromatic resin traded across Arabia, Africa and Europe, mostly known as frankincense (or olibanum). This much sought-after resin has been used for centuries in cultural ceremonies, but also as a cosmetic agent, and as traditional medicine to treat a variety of ailments.

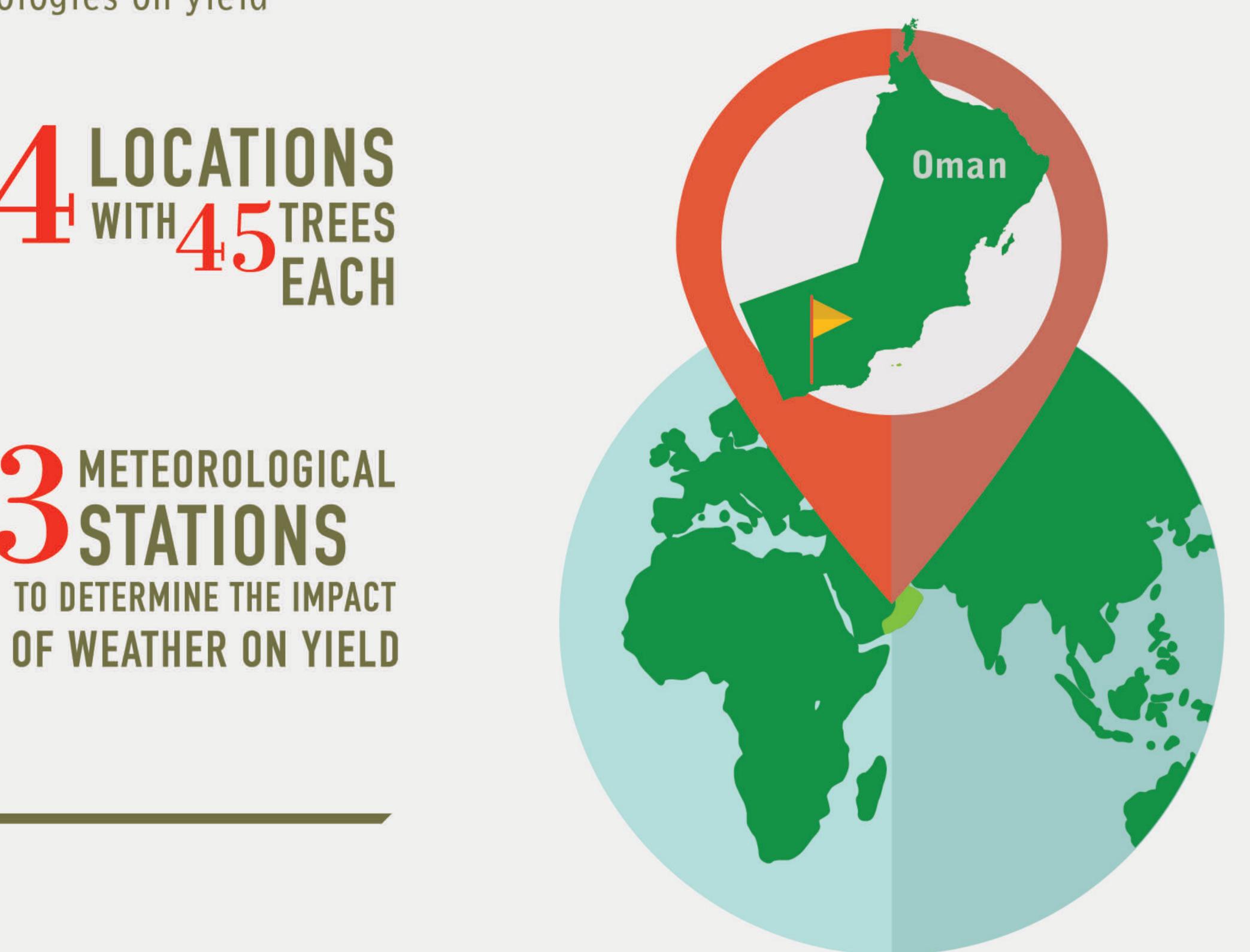
Frankincense is deeply meshed into the Omani identity, and its production persists to this day. But its future is unclear, with incorrect tapping practices and overgrazing - among other threats – placing frankincense trees at risk.





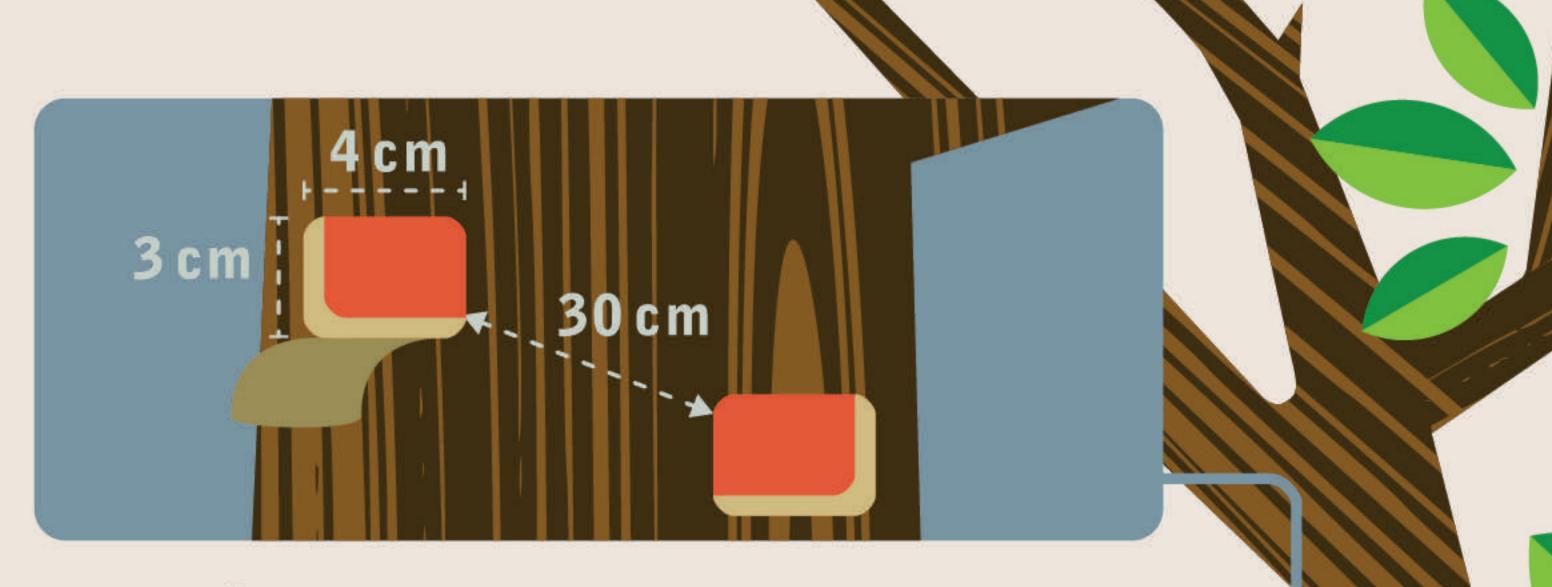
Insects

production and the wellbeing of trees. The project was led by Dr Mohsin Al-Amri and field assistant Badar Al-Shanfary, and is the first significant research of this kind in Oman.



HOW TO SUSTAINABLY HARVEST FRANKINCENSE TREES

The study has demonstrated how specific harvesting techniques can reduce the mortality of frankincense trees and increase their yield.



12 cm² cut size, barely shaving the external layer. Cuts about 30 cm distant from each other.

> March to April Trees can be harvested every 14 days.

APRIL

November to May Trees can be harvested every 21-28 days.

MAXIMUM YIELD

SEQU

9

S

RVE

A tree reaches its maximum yield productivity in the 3rd or 4th harvesting sequence, and in the 3rd harvesting year. The lower part of the tree trunk produces more resin compared to the upper parts of the trunk.

Outer red phloem nner xylem

Incisions should be limited to the outer red phloem, should not reach the inner xylem and should avoid branch nodes.



Tapping should stop 2-3 weeks before the rainy season.



Harvesting can be continual for **3 years**, followed by a 1-2 year rest period to allow scars to heal.

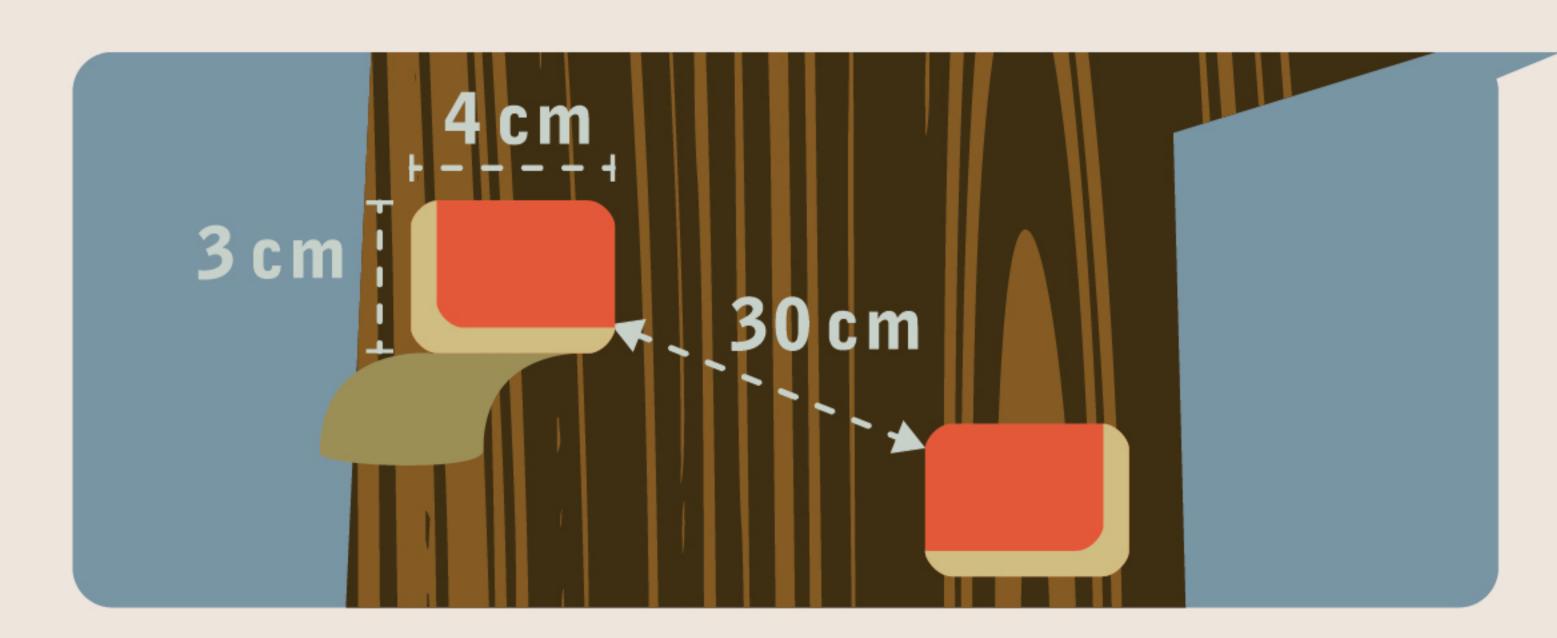


Research carried out by

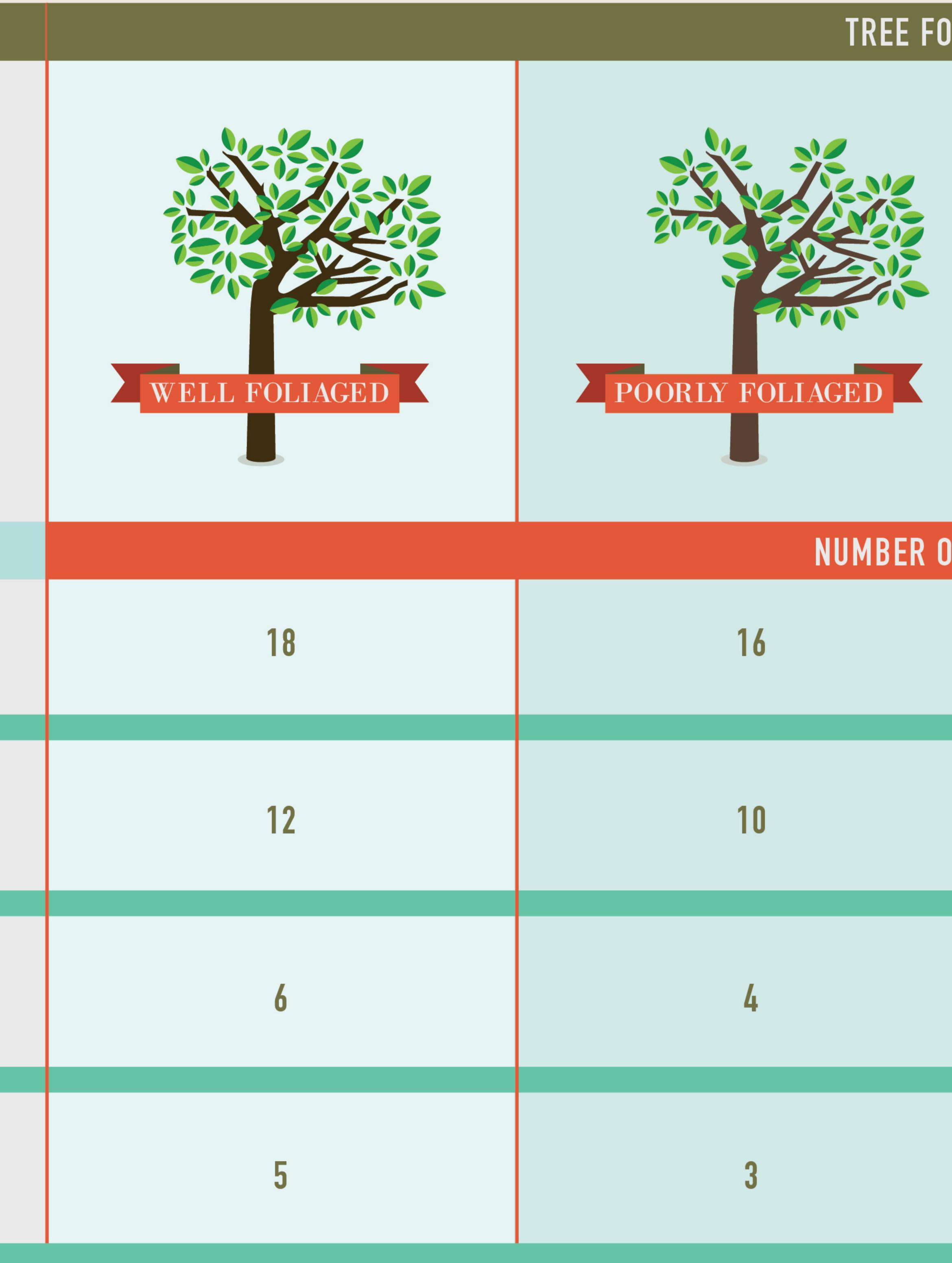


WHEN AND HOW TO TAP FRANKINCENSE TREES

TREE HEIGHT	TRUNK SIZE
S METER	> 80 CM
	50 - 80 CM
1-3 METER	30 – 50 CM
	< 30 CM



Tapping depends on three factors: Tree height, trunk size and tree foliage cover.



12 cm² cut size, barely shaving the external layer. Cuts about 30 cm distant from each other.

HARVESTING SEQUENCE November to May every 28 days

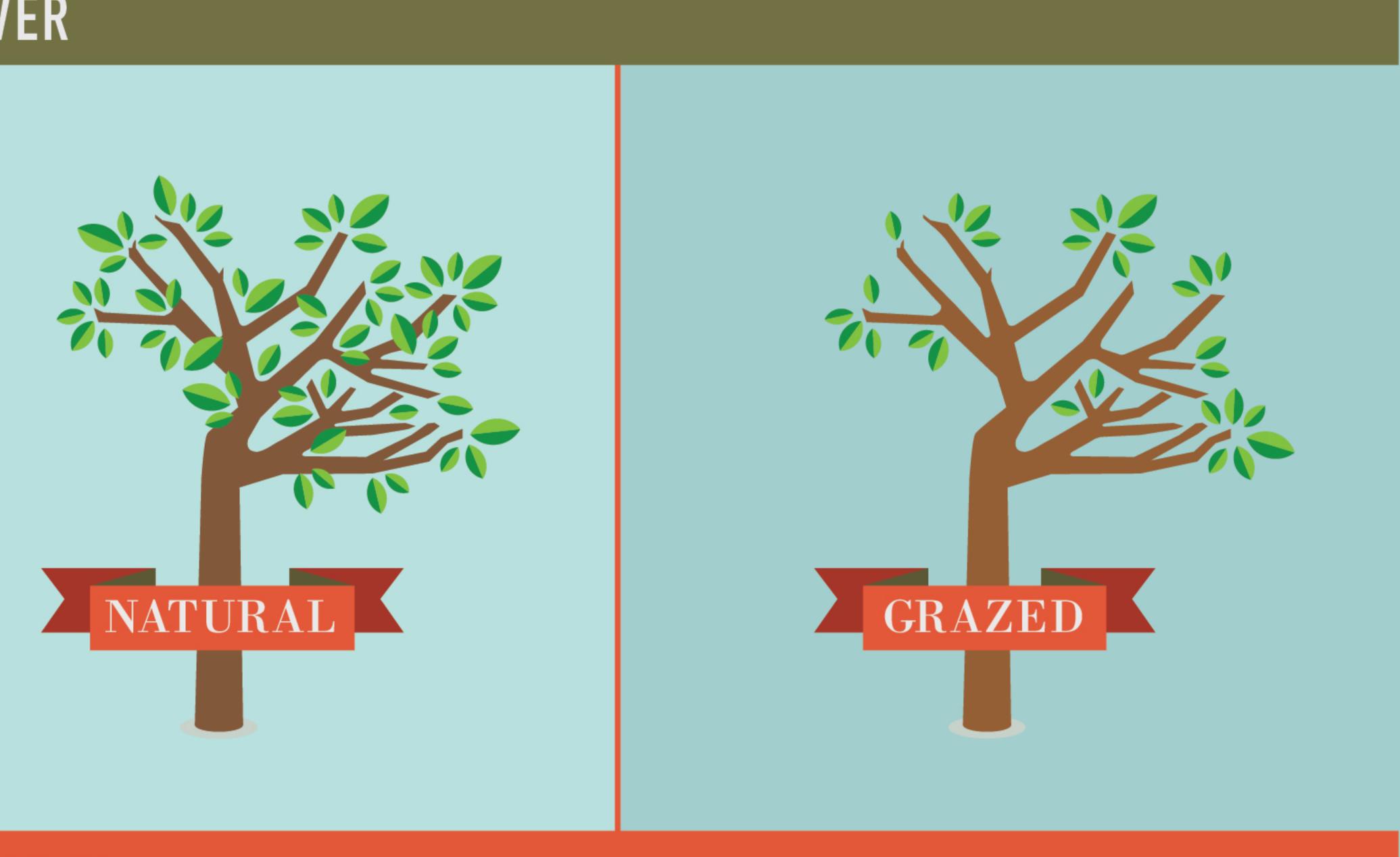
March to April every 14 days

START OF TAPPING November after Khareef (Monsoon) Anytime in areas non-affected by Monsoon

END OF TAPPING

End of May before Khareef (Monsoon) Anytime in areas non-affected by Monsoon

TREE FOLIAGE COVER



NUMBER OF TAPS (SPOTS)

16	14	10
10	6	5
4	3	2
3	2	1



Research carried out by



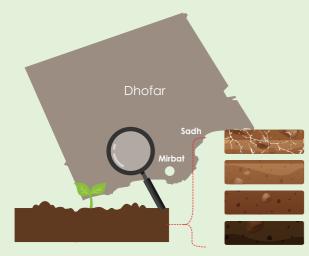
GENERAL NOTES



In each time of irrigation, the amount of water is equivalent to 60 liter approximately.



Add organic manure / compost twice a year.



Soils in different sites differ in texture. The irrigation program is therefore applicable to calcareous sandy soils with average annual precipitation ranging between 80 mm to 120 mm. This suits the areas of Sadah, Mirbat and most of the North draining wadis of Dhofar Mountains.



The frankincense tree can produce a canopy of 2 m when mature, so it should be planted at least 1-2 m from any walls.

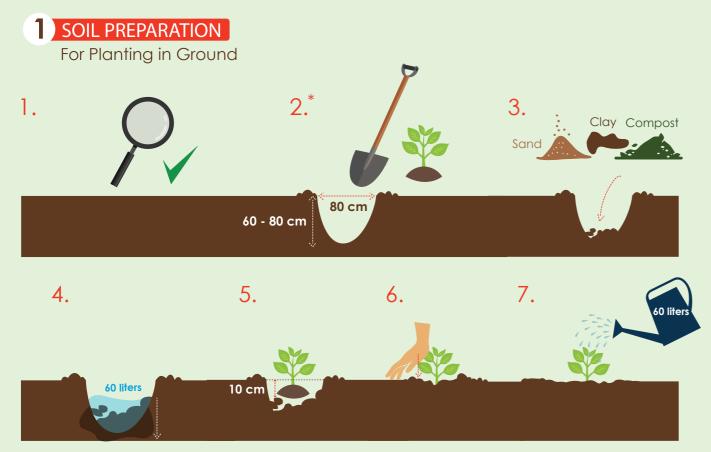


How to care for your frankincense tree: A Guideline for transplanting





Guidelines for transplanting frankincense trees (Boswellia sacra)



* Size of planting hole should be at least 50 cm bigger than the seedling





2 IRRIGATION FREQUENCY













This information has been contributed from: Engineer Salah Ajeeb Former Forestry Expert, Director General of Agriculture, Ministry of Agriculture and Fisheries Wealth Dhofar, Sultanate of Oman



P.S: plants in pots depend on the water applied and they cannot survive for long without irrigation. Depending on the season, the soil in the pot needs to be wet.

