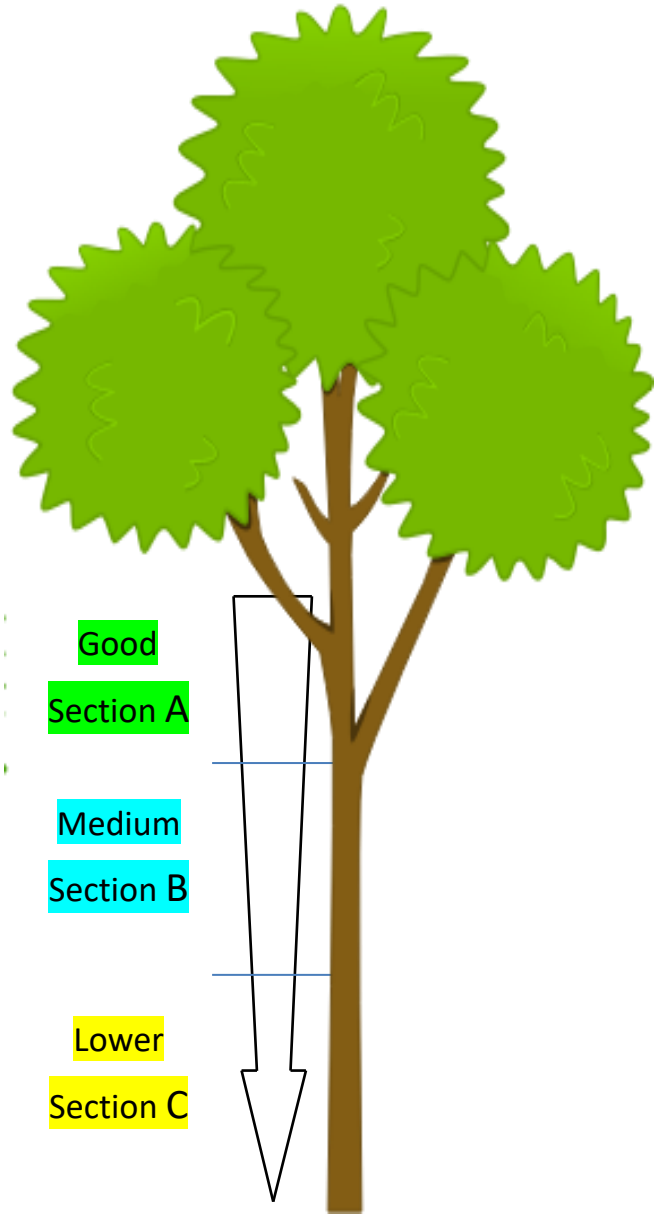
Sustainable way of harvesting old tree

Important fact to know about multi-stage inoculation …



If you were to inoculate entire tree at the ***same time***, ***regardless*** by using Agar-WIT or Bamboo stick, you will notice ...

Higher grade of resinous wood is formed at the TOP, and its quality reduces as it progressing downwards to the BOTTOM,

Tree may die if being too much stressed by external inoculation at one go,

You need to do inoculation in ***stages***, starting from lower level to higher level in 3 to 6 months interval, for 2 reasons NOT to kill the tree and to get even quality of resinous wood

There is NO shortcut to get work done fast but at lesser yield in return.

To induce an entire tree, we must have an understanding of the nature of the agarwood tree, especially the large trees that are very old.

A good way, if we planted the trees, should start stimulating them from the beginning, not very big and then repeat the accumulated stress until the tree grows bigger.

But if we already have a big tree and want to do it all. We must first understand that those part closest to the branch near the leaf will accumulate resin first and therefore have better grade at the same waiting time.

That means if we do the whole tree at the same time and then wait a few years then cut it down to be processed and sold. We have to accept that we will get good grade wood only for the top of the tree near the leaves. And from the half of the tree down, most of them are low grade or white wood.

This is because big trees are tall and have leaves only on the top of the tree ... So the idea is … to drill the big tree by stressing on the lower part, not more than three meters from the ground first. By repeatedly stressing at intervals 3 months apart in each interval, starting at 50cm height x20cm width, and then in the next round add new holes between the original holes. Then, after one or two years, move up to the top of the tree by drilling at same intervals as was done in the bottom of the tree. In this way, you will get wood that is consistent grade throughout the tree and has a worthwhile amount of oil throughout the tree.

In addition to dripping method, If the distance between the hole to the hole is very close, then I don't suggest to "drip", but will apply it with chopsticks soaked in solution or toothpick soaked in solution until there is no space to drill .... Some people may have questions that the tree will die??? The answer is no, because we leave a break every 3 months, the trees will create new wood to fight to bypass the water and nutrient supply routes. Because, the nature of tree is trying to survive.

Argument ... Is this method is considered good ?

As far as I am concerned ...

0. We need old tree to produce “Woodchip” and younger tree is sufficient to produce oil.

1. I will suggest to leave old tree for woodchips, it will be a waste to cut old tree for oil extraction.

2. Leave the lower and middle trunk untouched, drill the brances and / or upper trunk in 2 rounds at 6~12 months interval.

3. If you were to stress the branches ONLY, you should NOT have to chop down the entire tree in next decades.

4. You may use higher dosage at the branches on purpose, YET you will NOT kill the tree.

Roots produce best quality of harvest (provided if you manage to stress the roots, without stressing any other portions of the tree) [woodchips]

Root is the portion always getting lessor food if the "SINK source" available elsewhere of the tree.

Therefore inoculate the root without stressing any other parts of the tree is strictly recommended, avoiding competition in food distribution.

This photo serves as a reference, it does not imply appropriate way of root stressing.

Thank you.

What is the purpose of planting Agarwood trees?

If planting agarwood trees is for the purpose of fulfilling forestation, then, please proceed with any species without hesitation.

If planting agarwood trees is for the purpose of making dollars, then, i suggest you this potential species to maximize your profit, ie ” Kynam or Kinam or Qinan “.

In agarwood business, traditional Aquilaria species require longer time to harvest in order to deliver marketable quality (>15 years for incense application).

Kynam in China is harvested in relatively shorter time (3 + 2 = 5 years for handicrafts purpose, beads / pendants).

In China, commercially there is no time to leave the cultivated kynam tree to grow any longer to harvest.

In Malaysia, Propagation of Kynam started in 2018. I was told about Kynam in 2017 … but it took me 2 years to believe when I saw Kynam in China in 2019.

What is the purpose of planting Agarwood trees?

Understand that Agarwood trees planting has just bloomed in Philippines 2 years ago.

Regardless, what species you choose, it may not yield much difference in quality in cultivation purpose.

Assuming 3 species are easily to obtain in Philippines, namely Cumingiana Malaccensis and Crassna. They require longer time to become mature.

As an investor, instead of awaiting same period of time, kynam planting is highly recommended.

Locally in Malaysia, Kynam is sold Usd20 ~150 / seedling depends on its ordering quantity. My cheapest offer Usd18/ seedling @ minimum 1000pcs.

For Kynam propagation outside of Malaysia, I suggest mass grafting in your country.

Pls refer to following link … https://gaharujinkou.com/kynam/faq/

Password … 999

Price range of Agarwood seedling in each country				
	Native seedling (Usd)	Height of seedling (cm)	Kynam seedling (Usd)	
India	1 ~ 2	120	NA	
Thailand	0.22 ~ 0.34	60	NA	
China	0.56	120	3.5	
Malaysia	1.79 ~ 2.68	60	20 ~ 150	Malaysia is claimed to be at least 10 years behind than Thailand
Philippines	3.53 ~ 8.82	60	NA	Let me assume that Philippines is another 10 years behind than Malysia

From the chart, Philippines is just exploring into Agarwood industry, therefore seedling is sold at premium price. Identically, Malaysia just started in Kynam planting, our price is ~20X expensive than China. The proverb quotes … Early bird always has the meal.

Kynam Vesus Traditional species			
		Kynam	Traditional
Seedling		20	3
Stressing method	Only drilling	2	30 ~ 50 (8 ~ 10 years tree)
	Drilling + Inoculation	0	
Expecting years of harvest		6	10
Difficulty to harvest		Low	Medium to High
Quality of harvest		High	Low
Cost per tree (Usd)		**22**	**43**

In Thailand, 15-year tree is the minimum age to produce marketable quality woodchips.

Factory 9 ... Ms Mai (Bo rai)

- Expected 50 ~ 70 oil distillation plants in Bo rai / Trat.
- Impact of pandemic covid has made the oil dropped and woodchip increased in demand. Personally i felt oil dropped by 10% compared to 2019.
- Gas consumption for 25kg-pot and 50kg-pot is about the same.
- Input cost to produce 1 liter oil ~ Thb100,000 for a family-scale upto 10 distillation pots (self-employed salary exclusive)
- 15 ~ 20 15year-trees to produce 1,000ml oil (83tola), this gives 4.7tola (Thb2,000~2,300/tola) and in addition to ~200gm of woodchip (Thb55,000/kg) in average per tree. Woodchip cleaning fee Thb10,000 ~ 12,000 /kg.

One **15-year** tree will produce …

Income ..

Oil ..		Woodchip ..		Gross income ..
	+		=	
4.7 tola * Thb2,000		200gm * Thb55,000		Thb20,400

Expenses ..

Oil production ..		Woodchip cleaning ..		Expenses ..
	+		=	
Thb5,662		Thb2,200		Thb7,862

Therefore, net income ..

20,400 – 7,862 = Thb12,538

- Oil (Thb3,738), 30%
- Woodchip (Thb8,800), 70%

Comparison chart of agarwood chip cleaning in few countries ..

Country	Malaysia	Thailand	China
Type of Agarwood	Wild agarwood	Plantation agarwood	Plantation Kynam
Time taken to clean wood (woodchip gm / man-day). From process 2 to 4.	200 ++	50 ++	1000 ++

Malaysia being 10 years behind than Thailand in Agarwood industry ..

.. and I presume Philippines is another 10 years behind than Malaysia.

I strongly encourage kynam propagation in Philippines.

Yes ... The initial investment is huge, you may end up in USD20,000 for the 1st 1000 seedling. But the return remains attractive, that is for sure.

Thank you.