

Headline	Studies on karas trees help reduce agarwood theft, prevent extinction - FRIM		
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Studies on karas trees help reduce agarwood theft, prevent extinction – FRIM

KUALA LUMPUR: Studies on karas trees and the production of aromatic resin known as gaharu or agarwood, by researchers at universities and local research centres have reduced the issue of agarwood theft in natural forests thus protecting the species from extinction.

Forest Research Institute of Malaysia (FRIM) Natural Products Division, Herbal Product Development Programme research officer, Dr Abd Majid Jalil said the existence of the best karas trees and consistent production of quality agarwood through research have helped to overcome the issue.

"The high economic value factor, lack of production but high demand and indiscriminate felling of trees have resulted in lack of supply of natural forest resources in almost all countries.



"The large scale illegal felling of the Aquilaria species (karas and chandan trees) has led to the rapid destruction of the species in its natural habitat," he said in a statement yesterday.

According to him, the species has been listed in Schedule II, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to ensure the survival of the Aquilaria species is not threatened by trade in agarwood

products from wild trees in natural forests.

Abdul Majid said FRIM and the Forestry Department of Peninsular Malaysia (JPSM) act as the scientific authority to advise the Ministry of Natural Resources, Environment and Climate Change; Malaysian Timber Industry Board (MTIB), Sarawak Forestry Department and Sabah Forestry Department in matters related to the agarwood trade in Malaysia.

Meanwhile, a study by FRIM researchers also found that biological agents are the most economical, safe and effective method in optimising the formation of agarwood in karas trees compared to the old method of detecting the formation of agarwood through felling.

"This is a very simple approach but is harmful if there is no agarwood formation in the felled

trees and it will also have an impact on agarwood seekers in the forest, entrepreneurs in the fields and the environment," he said.

For the same purpose, researchers have also developed a technique to detect the presence of agarwood through sensor detection, wave frequency and x-ray technology, through differences in sound wave velocity, differences in wood density and significant differences in wood texture patterns.

He said through the technology, more karas trees that do not produce agarwood could be saved from being cut down.

In addition, Abdul Majid said FRIM has also carried out research and development to determine the quality of agarwood in a consistent manner by using scientific equipment

such as the gas chromatography (GC) and electronic nose (E-Nose) instruments.

In this way, the quality of wood and agarwood essential oil are compared and evaluated through a database of the main chemical components of agarwood that has been developed, and the uniqueness of the resulting aroma can be measured using an electronic sensor which is then translated into high or low value grades.

He said the results after using the GC and E-Nose scientific instruments are more consistent than through human experience and expertise.

"As a result of the study we are able to maximise the production of agarwood while maintaining environmental sustainability as well as providing profits to agarwood entrepreneurs," he said. — Bernama