

January 9, 2025
Idemitsu Kosan Co.,Ltd.

**Commencement of trial plantation of non-edible oilseed tree crop
Pongamia, which is a potential feedstock for SAF through HEFA
technology, in Queensland, Australia,
and Investment in Terviva, an agriculture innovation company
specializing in Pongamia**

Idemitsu Kosan Co.,Ltd. (Head Office: Chiyoda-ku, Tokyo; Representative Director, President and Chief Executive Officer: Shunichi Kito; hereinafter "Idemitsu Kosan") will launch a trial plantation in Queensland, Australia from this January of the naturally non-edible oilseed tree crop Pongamia, to evaluate its suitability as a potential feedstock for Sustainable Aviation Fuel (hereinafter "SAF") using HEFA^{※1} technology. The trial plantation will be conducted in collaboration with Terviva, Inc. (Head Office: California, USA), which has over 10 years of research achievements and cultivation capabilities with Pongamia and Stanmore Resources Limited (Head Office: Brisbane, Australia). As a part of this initiative, Idemitsu Kosan has also conducted an investment in Terviva. Through this trial plantation, Idemitsu Kosan will verify long-term cultivation methods for Pongamia, as well as the optimization of the entire supply chain from cultivation to oil extraction and SAF production. Additionally, Idemitsu Kosan will explore the creation of carbon credits from Pongamia trees through afforestation, the production of pellets from Pongamia shells for biomass power plants, and the use of pressed Pongamia oilseed cake as livestock feed, among other uses beyond feedstock for SAF.



Terviva nursery



Pongamia seeds and oil



Pongamia, a leguminous plant distributed in Southeast Asia and Oceania, is a highly efficient non-edible oilseed tree crop that does not compete with food crops. The oil extracted from Pongamia oilseeds through pressing is expected to be usable as a feedstock for SAF production using HEFA technology. However, because Pongamia has historically not been domesticated as a crop, the know-how for producing and cultivating superior Pongamia varieties is key to achieving consistent high yields of crude oil. From an initial set of Pongamia tree genetics selected over 15 years ago from Australia, Terviva has spent the last 15 years conducting extensive research on thousands of planted acres to narrow down to the very best performing genetics, with optimal nursery propagation

and farming methods, to maximize Pongamia yields across different soil and environmental conditions.

Idemitsu Kosan identified Terviva as the leading company in Pongamia technology and has now invested in Terviva. With Terviva's help, Idemitsu Kosan will start a trial plantation in collaboration with Stanmore Resources Limited., one of the largest metallurgical coal resource companies in Australia on land surrounding Stanmore's South Walker Creek mine. Through this trial planting, Idemitsu Kosan will verify the optimal cultivation methods for Pongamia, especially in non-agricultural area, as well as the quality of the extracted oil, its economic efficiency, and the optimization of the supply chain from cultivation to SAF production. Additionally, Idemitsu Kosan will also examine the potential for creating carbon credits through afforestation.

Idemitsu Kosan aims to establish a supply system for 500,000 kL of SAF annually. Towards this goal, Idemitsu Kosan plan to produce 250,000 kL of SAF annually using HEFA technology at Tokuyama Complex in FY2028. Considering the potential future supply and demand tightness and price fluctuations of various feedstock, Idemitsu Kosan is working to secure feedstock that can be supplied stably over the long term. The cultivation and oil utilization of Pongamia, a non-edible oilseed tree crop, is considered promising as a measure to secure feedstock for the long-term stable and economical production of SAF using HEFA technology. Idemitsu Kosan start this trial plantation with plans to expand to commercial scale plantations in the future.

※1 HEFA (Hydroprocessed Esters and Fatty Acids)

Technology and process for producing SAF from hydroprocessed esters and fatty acids obtained by hydrotreating of vegetable oils and other materials. Certified as "ASTM D7566 Annex 2," the international standard for SAF.

■ Characteristics of Pongamia

- It grows naturally in tropical and sub-tropical areas such as India, Southeast Asia, and northern Australia, and also in some areas in southern Okinawa.
- It is resistant to high heat and drought, and can be grown in the relatively saline soil near coastal areas.
- As member of the legume family of plants, it can create its own nitrogen fertilizer, which is important for plant growth. Over time, its root biomass and nitrogen fixation improve the soil on which it grows.
- Crude pongamia oil and meal are not edible and do not compete with food crops.
- The oil yield per unit of planted area is higher than that of other oil crops. Therefore, the CO2 emissions per unit of energy supply (CI value) are less than half that of soybeans.

■ Terviva, Inc.

Terviva is an agriculture innovation company headquartered in California, USA, which works with farmers in Florida, Hawaii, India and Australia, has been conducting test cultivation and research and development of pongamia since 2010. Through these efforts, the company has achieved results such as developing superior non-GMO varieties with high oil yields, establishing best cultivation methods, and developing co-products from pongamia oilseeds. Together, Terviva has identified how to maximize value from Pongamia, which minimizes the cost of production of crude oil for biofuel.

■ Stanmore Resources Limited.(ASX: SMR)

Stanmore Resources Limited controls and operates the South Walker Creek, Poitrel and Isaac Plains Complex metallurgical coal mines as well as the undeveloped Eagle Downs, Lancewood, Isaac Downs extension projects, in Queensland's prime Bowen Basin region. Stanmore Resources holds several additional high-quality prospective coal tenements located in Queensland's Bowen and Surat basins. The Company is focused on the creation of shareholder value via the efficient operation of its mining assets and the identification of further development opportunities within the region. More information about Stanmore can be found at stanmore.au

- For Inquiries on this subject -

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