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Komatsu is a promoter of environmental conservation, seeing it as a critical need for the public good. Utilizing the Komatsu Green Fund established in 1991, we are working on various programs aimed at two key objectives: earth greening and environmental beautification. Our earth-greening movement is embodied by a tropical forest restoration project in Indonesia, while the environmental beautification movement takes the form of planting flowers and trees throughout the country under a program known as “Floral Komatsu.”

“Earth Greening”: Employing Technology to Restore and Protect a Tropical Forest

Earth’s Tropical Forests: The Current Situation

The United Nations Food and Agricultural Organization (FAO) now estimates that the world’s tropical forest disappeared at a rate averaging 15.4 million hectares a year (approx. 40 percent of Japan’s land area) over the ten-year period from 1981 to 1990. The direct causes of its disappearance include excessive logging, slash-and-burn farming, and the collection of wood for use as fuel. However, there are also indirect causes arising from socioeconomic problems such as population growth, poverty, and the lack of established social systems in geographical regions where forests predominate. It is a problem for which there are no simple solutions.

A number of measures have been implemented or extended at various levels in order to treat the problem. Gradually, though, the world’s nations have come to recognize that global environmental issues such as the disappearance of forests are critical, and that they are tackled from a common, unified perspective. Accordingly, in recent years, there have been initiatives throughout the international community, notably by the United Nations and at NGO levels.



Lauan in a growth process at test plant (February 28, 1992)



Grown lauan (March 9, 2000)



Seedling laboratory

Restoring a Tropical Forest: Fulfilling Our Responsibility as a Corporate Citizen

In order to address growing concerns over the issue, Komatsu is developing technology that will help restore a tropical forest in Southeast Asia. This effort is one of the social contribution programs that we are implementing as a means of fulfilling our corporate responsibility.

Restoring a Tropical Forest with Lauan

Lauan, a dipterocarpaceous plant, is a key factor in the restoration of tropical forests in Southeast Asia. Lauan, a tree species that is very representative of the region’s tropical forest, can grow to a height of 50 meters and a diameter exceeding one meter. Found mostly in Southeast Asia, lauan has for many years played a central role in the region’s commercial logging industry. In fact, the tree is essential to the timber industry for the production of plywood and building materials. However, lauan has been disappearing at an alarming rate over the past several decades as a result of neglect in post-logging reforestation.

Indonesia’s Ministry of Forestry has been tackling the diminishing supply of lauan as a top-priority program under its national forestry plan.

To help restore the tropical forest, Komatsu decided to lead the development of a lauan reforestation technology through a joint project with the Research & Development Agency of the Indonesian Ministry of Forestry. The project was officially launched in 1991 at a project office we set up within the Research & Development Agency’s laboratory in Bogor, located in West Java Province.

Komatsu's Technological Contribution

Factors that are challenging the reforestation of lauan relate to the characteristics of the tree itself. Lauan trees generally bear fruit irregularly or once over a period of several years, and it is said that lauan seeds can be stored only for a very short period. Accordingly, the question of how to produce seedlings on a consistent basis has been the chief goal in the development of an effective silviculture method.

It is quite significant that the Komatsu reforestation project has successfully developed a technology by which to produce large quantities of lauan seedlings. Truly the first of its kind, this technology uses an environmentally controlled greenhouse. Within this greenhouse, the seedlings are grown via cuttage, a method that was formerly considered difficult. The achievement signifies an important first step toward the restoration of Southeast Asia's diminishing tropical forests. In 1997, we began conducting mass-production test demonstration in a local forest, and since then have produced several tens of thousands of lauan seedlings annually.

This technology is to be introduced to the branches of the Ministry of Forestry laboratories located throughout Indonesia, thus establishing production bases for lauan seedlings. At the same time, this technology has been adopted by another organization that is working to restore tropical forests. In 1999, it became the key technology in the lauan silviculture project—a project aimed at producing lauan seedlings—funded jointly by the Japan International Cooperation Agency (JICA) and the Malaysian Ministry of Forestry.

Toward Sustainable Resource Development

The next step is to conduct planting tests using the seedlings that we have produced. Komatsu has already made an agreement with the Indonesian Ministry of Forestry to conduct trial plantings in two locations—one in West Java Province on the island of Java, and the other in Riau Province on the island of Sumatra—covering an area of nearly 350 hectares (approx. 210,000 seedlings). So far, about 180 ha (approx. 100,000 trees) have been planted. In preparation for what will be the largest planting test of its kind ever conducted, we are now gathering key data toward the successful restoration of a tropical forest, including the growth rate of lauan in artificial plantations and the tree's adaptability to various soils.

As for the fiscal 1995 plantation project, the lauan seedlings have grown over the last four years to reach an average height of nine meters and a diameter of approximately 9 centimeters. Thanks to this and other planting projects, in 1999 alone approximately 50 tons of CO₂

were absorbed and eliminated from the environment.

Amid the rising global demand for the sustainable development of resources, Komatsu recognizes the world's tropical forests as a resource that can be developed for years to come. We will continue contributing in this regard by developing technologies aimed at the restoration of valuable resources.

Creating Beautiful, Earth-friendly Environments

Komatsu contributes to society through the planting of flowers and trees. Komatsu is the proud supporter of the Flower Association of Japan, a group that makes every possible effort to beautify the environment through projects such as the planting of cherry trees, consignment research on flowers and trees, competitions for flower-filled towns, and sponsorship of the Cherry Symposium.

Moreover, under the Floral Komatsu program our employees voluntarily plant flowers around their places of work. This program is intended not only to propagate flower seedlings but to encourage our people to work with local residents so that community beautification can be ensured. This is part of our ongoing effort to enhance environmental awareness.



Kirito River Park, Yamaguchi Prefecture

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