

Concluding Remarks

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Ladies and gentlemen, distinguished guests and participants,

At the end of the Symposium on silvicultural technologies, I have the honor of conveying my thanks to all the participants. We were extremely happy to hold, for the first time, an International Symposium in the newly constructed building of the Forestry and Forest Products Research Institute. On this occasion, significant and important reports have been presented giving rise to animated discussions. I am deeply grateful to all the participants in the Symposium for their interest and enthusiasm in silvicultural technologies.

Undoubtedly, forestry activities started with the felling of trees so as to supply timber needed for human activities. Yet such logging operations are obviously leading to the disappearance of forests without which forestry activities would necessarily become meaningless.

Fortunately trees do regenerate. Yet after felling trees, it takes a long time before logging can be resumed. Only trees of poor quality appear or sometimes regeneration does not take place. As a result, forestry activities become difficult or even cease completely. Therefore if forestry activities are to continue, regeneration of forests must be secured and silvicultural technologies have an important role to play in enabling the reproduction of a large amount of trees of good quality within a short period of time. In particular, technology of natural and artificial regeneration of forests has become important and fundamental.

Forests cover approximately a third of the surface of the earth, out of which 2/5 are found in the tropics. Recently a large number of scientists has recognized the ecological importance of these tropical forests for the earth. These forests should be utilized more efficiently so as to contribute to the people's welfare.

It is therefore necessary to develop reliable methods of regeneration so as to perpetuate the incomparable diversity of the tropical forests.

Research on regeneration techniques which has just begun is necessarily incomplete. The fact that many problems remain to be solved was pointed out in the reports presented at the present Symposium, along with the need for a more scientific approach to the techniques of regeneration.

There is a saying in Japan which goes as follows: "The right operation for the right tree on the right site". Such principle should govern the management of forests. This implies the development of techniques adapted to the soil and environmental conditions of a region.

In this sense, I am very pleased to hear from what has been said at the present Symposium that the researchers and scientists from the respective countries have endeavoured to devise original techniques suited to each region. Moreover, in order to develop such techniques, it is essential to exchange information about the results of investigations carried out in each country.

In this sense, the present Symposium has played a major role. On that occasion, the enhancement of exchange of views and information on silvicultural technologies should strengthen cooperation in research.

During the Symposium, there were debates as to whether it is preferable to adopt artificial or natural regeneration, clear cutting or selection cutting, pure stand or mixed stand, short-term or long-term rotation. However, as the selection of either method varies depending on the nature of the soil or of the tree species, and on the socio-economic conditions of the region, therefore the decision to be made should rest on the principle mentioned above, namely "the right technique for the right tree on the right site".

In particular, as tropical forests represent ecosystems characterized by a diverse composition of species and by a complex structure, silvicultural technologies should match such diversity and complexity.

Such studies should be undertaken in the future. Even in the case of land use and development, there were discussions as to whether land should be allocated to forestry or agriculture.

We believe that, depending on the regions, the taungya system, namely agro-forestry or agri-silviculture which combines forestry and agricultural activities should be actively promoted. Furthermore, under the tropical conditions, there are ecological and sociological reasons for establishing such methods. To realize such objectives, it will be necessary for both forestry and agriculture experts and scientists to cooperate. In this respect hope is being placed on the activities pursued by the Tropical Agriculture Research Center.

During the Symposium problems pertaining to damage caused by insects and pests were briefly taken up. In forests which are in harmony with natural ecosystems, human intervention usually tends to disturb this natural equilibrium. As such disruption is likely to be associated with unusual occurrence of diseases and pests, further investigations in the field of pure and applied science should be conducted.

Also topics relating to provenance and tree species were discussed during the Symposium and the principle already mentioned previously, namely, "the right technique for the right tree on the right site" should be applied, owing to the importance of developing tree species adapted to the soil and climate conditions.

To achieve such objective, tests on provenance and tree species should be carried out systematically worldwide.

Although a large number of experiments on reforestation of pine tree are being undertaken in every country, seed production poses important problems. To overcome these constraints is one of our major preoccupation and any form of action is urgently needed.

The diversity of species composition of tropical forests suggests the existence of an irreplaceable wealth of breeding materials.

Therefore the need for partial preservation of the natural forests as a receptacle of genetic resources should be emphasized. I am convinced that this Symposium will be the starting point to enable the future generations to exploit rich forests essential to mankind.

I would like to take this opportunity to express my sincere thanks to the Tropical Agriculture Research Center as well as to all the participants in this Symposium.

I would like at the same time, to ask for further collaboration in the development of silvicultural technologies so as to meet the people's requirement for trees and forests.

Thank you.