



AN IMPROVED SILVICULTURE STRATEGY FOR SUSTAINABLE FOREST MANAGEMENT

Introduction

Thuong Xuan is one of the seven poorest districts in Thanh Hoa province. In the district, there are more than 90,000 hectares (ha) of forest area, of which 12,000 ha have been used for *acacia mangium*. Acacia has been a popular plantation species in Vietnam because of its fast growth rate and short rotation times, which allows community members to harvest after approximately five years and sell to local buyers. However, due to traditional customs and limited knowledge and cultivation skills, many households, especially those from ethnic minority groups, focus on high density planting with the average of 2,500-3,000 trees/ha which reduces the growth rate and productivity of trees.

Project implementation

With the aim of improving economic returns, growth rates and livelihoods of local people in the area, USAID's Vietnam Forests and Deltas (VFD) project piloted an improved silviculture strategy emphasizing low plant density in Thuong Xuan.

Specific support from the project included:

- Working with local authorities to organize meetings with local people for pre-surveys to select 150 households with sufficient land area and labor to join the project model.
- Providing training courses for selected households with technical guidance and support on plantation, cultivation and cropping seasons to achieve the highest levels of productivity while increasing canopy coverage, preventing soil erosion and limiting greenhouse gas emissions..
- Collaborating with local commune authorities to supervise, and encourage people to implement project activities and providing additional support through regular household visits.
- Over one year of implementation, 191 people in seven villages (Ngoc Thuong, Luong Thinh, Ngoc Son, Luong Thien, Trung Thanh, Minh Quang, Minh Ngoc) in the district participated in local village meetings to receive an introduction on the improved silviculture techniques. Among them, 149 people joined the training courses to learn about this new planting model and 125 people applied the instructions and guidelines. After seeing the remarkable results and differences of tree growth rate after just a few months, many other households wanted to join in the project activities as well. To date, almost 65% of the total cultivation area of participants' *acacia mangium* forest has been adjusted to a lower plant density.



Beneficiary story:

Ms. Lang Thi Thuan is a local farmer living in Minh Quang village, Luong Son commune, Thuong Xuan district. Since the project came to her area, she is one of the locals who has participated in the training courses and followed the project model. In the past, she used to plant approximately 2,000 trees/ha leading to unhealthy tree growth rate and lots of diseases after one to two years. The habit of high-density planting was a deep-rooted tradition for not only Ms. Thuan but also many villagers in the area.



"At the beginning, I was very skeptical and afraid to cut down a large number of trees. However, I tried to persuade my husband to follow the instructions from the training course to reduce the plant density. After a few months, we both see remarkable changes in the tree growth. We used to plant 2,000 trees/ha but now it changes to 1,200-1,600 tree/ha. After the rainy season, I will try to adjust the plant density to a lower level to achieve the best tree growth", Ms. Thuan happily shared.

Ms. Thuan is one of many households successfully implementing the low density model in the area. With the project's support, most of the results are very good in terms of healthy tree growth which can be observed by sight. *"With VFD project support, we have seen good results in tree growth rate and wood quality. By observing these changes with their own eyes, many households are willing to join the project model. They also ask for more training courses to participate in the near future",* said Mr. Ha Van Ngoan, Vice Chairman of Luong Son commune.

The way forward

The low plant density model with good seeds and cultivating skills can increase productivity by 25% to 35% more than the traditional method. As a result, the average household income can increase from VND 65-70 million (USD \$2,900-3,100) to VND 80-90 million VND (USD \$3,500-4,000)/ha after 6-7 years. It is hoped that the initial results will lay the groundwork for future expansion in other mountainous areas in Vietnam. In addition, with improved skills and knowledge on managing plant density, the local will get better profits in the upcoming years which improve their livelihoods and living standards in the long term.