



PROJECT AIN8748

Informed forestry decisions, sustainable forest management  
and forest certification in smallholder forests in Vietnam

### Felling and transporting

Determine the direction of fall for the marked trees (yellow color):

- Fall into open areas to avoid damage to retained trees.
- Do not choose a direction that follows the slope.
- Choose the natural direction of fall for trees with a tilt of over 10°.
- Do not choose a direction towards areas with many exposed rocks.



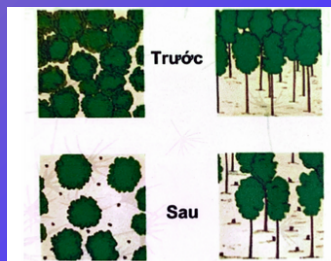
Fell trees marked for felling:

- Ensure that no one else is in the danger zone (approximately twice the length of the fallen tree)
- Determine the cutting position close to the tree's base, with the cutting height  $\leq$  50% of the tree's diameter.
- Perform the technique of opening the cutthroat so the tree can fall in the determined direction.
- Fell any broken trees (if any) due to the thinning process.

After felling, cut branches and tops left in the forest and transport the wood out of the forest lot. The bark should be stripped and left in the forest if it is not used.

### Forest cleaning after thinning

After thinning, cut back branches and tops to promote rapid decomposition and replenish nutrients for the soil



### Forest care after thinning

Annually check and cut vines across the entire area.

### Forest protection during transformation

- Have a plan to monitor the pests and diseases affecting forest trees. When detecting trees with diseases such as wilting, powdery mildew, etc., they need to be felled and removed from the forest for disposal. When detecting an outbreak (significant rate  $>10\%$ ), it is necessary to report to the leadership of the Cooperative and the relevant authorities in the area.
- Implement measures to prevent free-ranging livestock from entering the forest.
- Combat deforestation
- Implement and promote forest fire prevention according to regulations

## PROCESS OF THINNING PLANTED ACACIA FOR LARGE WOOD BUSINESS



USE FOR COOPERATIVES OR HOUSEHOLDS GROWING FORESTS  
PARTICIPATING IN THE FSC GROUP



### DETERMINING FOREST OBJECTS THAT MEET CONDITIONS FOR THINNING FOR LARGE WOOD BUSINESS

No.	Criteria	Requirements	
1	Soil layer thickness	≥ 70 cm (rock content < 50%)	
2	Seed source	Recognized by the Ministry of Agriculture and Rural Development	
3	Forest quality	<ul style="list-style-type: none"> <li>- Percentage of trees affected by pests &lt; 10%</li> <li>- Previously planted forest not suffering damage ≥ 30% due to windstorm breakage</li> <li>- Currently planted forest with trees broken by windstorm &lt; 5%</li> </ul>	
4	Current density (trees/ha)	1.300 – 1.700	> 1.700 – 2.200
5	Age of forest beginning to transform (years)	3 – 5	3 - 4
6	Growth of dominant height (m/year)	≥ 3,1	
7	Average growth of diameter at breast height (D1.3) (cm/year)	≥ 2,5	
8	Number of good trees to be retained	≥ 1,000 trees/ha, relatively evenly distributed across the forest plot	

### THINNING PROCESS FOR CONVERTING PLANTED ACACIA FORESTS TO PROVIDE LARGE WOOD

#### SUBMITTING A THINNING REGISTRATION APPLICATION TO OBTAIN A WOOD HARVESTING REGISTRATION CODE

- Forest owners who want to utilize thinning wood to sell certified wood chips must submit a harvesting registration application similar to the timber harvesting process for planted forests.
- The cooperative will issue a harvesting registration code (for thinning wood) to the forest owner once approved.
- The procedures for wood purchase contracts and product journey documentation for thinning wood will be carried out similarly to harvested timber.

#### THINNING TECHNIQUE

##### Thinning criteria:

Depending on the conditions of the forest plot and business objectives, a decision will be made to perform either one or two thinning operations, specifically as follows:

Current density	1.300 - 1.700		>1.700 - 2.200
Age for first thinning (years)	3-4	5	3-4
Thinning intensity	Not exceeding 50% of the current number of trees		
Density remaining after thinning (trees/ha)	900 ± 50	800 ± 50	1000 ± 50

**Second thinning:** Depending on the growth of the forest and business objectives, a decision will be made on whether to apply a second thinning. If the forest after the first thinning grows well for 3-4 years, with a rate of dead, fallen, and defective trees (not meeting the standards for large wood) of <5% per year, a second thinning can be applied with a remaining density of 650 ± 50 trees/ha for producing large diameter sawn timber; for planted forests with a density of 1,700-2,200 trees/ha.

##### Timing of thinning

Thinning should be done in the dry season. Thinning can also be done in the rainy season if weather conditions permit.

##### Marking thinning trees

Proceed to mark trees with poor quality, trees affected by pests, etc., using paint or tying with string.

##### Clearing underbrush before thinning

Clear all underbrush and cut climbing vines on the trees. Clear close to the ground (cut height < 10 cm).

