

Decision Tree

A CROP FOR THE FUTURE



Step 4
Managing
your trees

In this Guidance Note

In this guidance note, we outline the various timber products and yields that you can expect from your tree crop, with a focus on pine.

Timber products (pine)

Generally, four types of wood are produced from a pine crop:

- **Sawlogs:** logs with a diameter larger than 165mm at the small end, with a minimum length of 3.6m and a minimum age of 18 years.



- **Small sawlogs:** logs from first thinnings, with a diameter larger than 150mm and younger than 18 years, or logs from a second thinning and clearfell harvest that are between 150mm and 165mm in diameter.



- **Poles:** large, long logs (9m-13m) from final harvest.

- **Industrial wood:** logs for chipping with no minimum diameter, but a minimum length of 3m.



DECISIONTREEWA.COM.AU



Australian Government
Department of Agriculture,
Water and the Environment



SOUTH WEST
TIMBER HUB



Thinning & harvest

In most commercial operations, trees are selectively removed at two stages during the lifetime of the crop in order to make room for the growth of other trees. This selective removal of trees is known as 'thinning' and may also include pruning of some branches on the trees being retained.

The thinning process is done to ensure optimum growth of the remaining trees, so when a final harvest is undertaken, timber yield is maximised.

Expected growth rates and ages

The table below outlines the estimated ages of thinnings and harvest, factoring in different growth rates. The expected growth rate (or 'mean annual increment', MIA) is the average annual growth per year of the proposed planting, measured in tonnes per hectare per year (t/ha/year).

For pine, tonnes and m³ are equivalent.

THINNING/HARVEST TYPE	AGE OF TIMBER PLANTING FOR EXPECTED GROWTH RATE
First thinning	Generally at year 10, irrespective of expected growth rate
Second thinning	If expected growth rate is less than 12t/ha/year - year 20 If expected growth rate is greater than 12t/ha/year - year 18
Clearfell harvest	If expected growth rate is less than 22t/ha/year - year 27 If expected growth rate is greater than 22t/ha/year - year 25

*The figures in the table above and on the following page are estimates only. We encourage you to contact Wespine to discuss the growth rates, age at thinnings and harvest applicable to the tree crop on your property.





Decision Tree

A CROP FOR THE FUTURE

Yields

The expected yield of various timber products at first thinning, second thinning and clearfell harvest are outlined in the table below. Yields of each product are presented as a percentage of total production.

To convert these yields from a percentage to t/ha yield, multiply the percentage yield by the MAI and then the age of the timber. This age will be approximately 10 at first thinning, 8-10 at second thinning (the time between first and second thinning) and 5-9 at harvest (the time between second thinning and harvest).

MAI (tonnes/ha/ year)	Pine (%)											
	Sawlogs			Poles			Small sawlogs			Industrial wood		
	1st thin	2nd thin	Harvest	1st thin	2nd thin	Harvest	1st thin	2nd thin	Harvest	1st thin	2nd thin	Harvest
0	-	-	-	-	-	-	-	-	-	-	-	-
1	-	-	9	-	-	-	-	7	3	100	93	87
2	-	-	19	-	-	-	-	15	7	100	85	75
3	-	-	28	-	-	-	-	22	10	100	78	62
4	-	-	37	-	-	-	-	30	13	100	70	49
5	-	-	47	-	-	-	-	37	17	100	63	37
6	-	-	56	-	-	-	-	44	20	100	56	24
7	-	-	58	-	-	-	-	45	18	100	55	24
8	-	-	61	-	-	-	-	46	15	100	54	24
9	-	-	60	-	-	-	-	48	16	100	52	23
10	-	-	60	-	-	-	-	50	18	100	50	23
11	-	-	60	-	-	-	-	53	19	100	47	21
12	-	-	60	-	-	-	-	56	20	100	44	20
13	-	-	60	-	-	-	-	57	21	100	43	19
14	-	-	59	-	-	-	-	58	22	100	42	19
15	-	-	60	-	-	-	6	59	21	94	41	19
16	-	-	60	-	-	-	13	60	20	88	40	20
17	-	-	61	-	-	-	18	61	20	82	39	20
18	-	-	61	-	-	-	23	62	19	77	38	19
19	-	-	60	-	-	-	28	60	20	72	40	20
20	-	-	59	-	-	-	32	59	21	68	41	20
21	-	4	59	-	-	1	33	56	20	67	40	20
22	-	8	58	-	-	2	35	54	19	65	38	20
23	-	13	58	-	-	3	36	51	19	64	36	20
24	-	15	58	-	-	3	36	50	18	64	35	20
25	-	19	58	-	-	3	37	48	18	63	33	20
26	-	22	58	-	-	4	38	47	18	63	31	20
27	-	26	59	-	-	4	38	45	16	62	29	21
28	-	29	61	-	-	4	38	43	14	62	29	21
29	-	32	61	-	-	5	39	41	14	61	27	20
30	-	35	61	-	-	6	39	39	13	61	26	20
31	-	39	61	-	-	6	40	37	13	60	24	19
32	-	42	62	-	-	7	40	35	12	60	23	19
33	-	46	62	-	-	8	41	32	12	59	22	18
34	-	49	62	-	-	9	41	30	12	59	20	17
35	-	53	63	-	-	9	41	28	11	59	19	17
36	-	56	63	-	-	10	42	26	11	58	18	16
37	-	60	63	-	-	11	42	24	10	58	16	16
38	-	63	64	-	-	11	43	22	10	57	15	15
39	-	67	64	-	-	12	43	20	10	57	13	14
40	-	70	64	-	-	13	43	18	9	57	12	14

DISCLAIMER: The advice provided is general advice only. It has been prepared without taking into account your objectives, financial situation or needs. South West Timber Hub, and the Government of Australia, and their respective officers, employees and agents (Authors) do not make any representation or warranty as to the accuracy, reliability, completeness or currency of the information, representations or statements in this guidance note (including but not limited to information which has been provided by third parties); and accept no responsibility for the accuracy or completeness of any material contained in the guidance note.

Additionally, the Authors disclaim all and any guarantees, undertakings and warranties, expressed or implied, and are not liable to any person in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partly, on any information contained in this publication. The user must accept sole responsibility associated with the use of the material, irrespective of the purpose for which such use or results are applied and indemnifies the Authors in this regard. Material included in this information tool is made available on the understanding that it is not providing professional advice. If you intend to rely on any information provided, you should obtain your own appropriate professional advice.