

1 **Table S1.** Abbreviations used in the manuscript. For clarity, variables related to stand are
 2 depicted uppercase, while individual-tree variables are in lowercase.

Abbreviation	Explanation (units)
N	number of trees per hectare (stems·ha ⁻¹)
G	basal area per hectare (m ² ·ha ⁻¹)
Dg	quadratic mean diameter (cm)
Do	dominant diameter (cm)
Ho	dominant height (m)
H̄	mean height (m)
RS	relative spacing also known as Hart-Becking index (decimal)
SDI	Stand density index also known as Reineke's Stand Density Index (stems·ha ⁻¹)
SI	site index, defined as the dominant height that a stand reaches at 60 years, as determined by the site quality system developed by Rojo-Alboreca et al. (2017) ^[a] (m)
t	stand plantation age (yr)
dbh	diameter at breast height or 1.3 m above ground level (cm)
dub	diameter under bark at breast height or 1.3 m above ground level (cm)
di	diameter over bark of the stem every i-meter above diameter at breast height and every half meter below it (cm)
ht	total tree height (m)
v	stem volume (m ³)
hcb	height to live crown base (m)
cw	crown width (m)
bal	defined as the total basal area per hectare in trees that are larger than the subject tree (Wykoff, 1982) ^[b] (m ² ·ha ⁻¹)
balmod	defined as <i>bal</i> divided by G (decimal)
bar	defined as the ratio between the basal area of the tree and G (%)
rddg	defined as <i>dbh/Dg</i> (decimal)
rbdg	defined as <i>bar^{rddg}</i> (decimal)
id10	decadal <i>dbh</i> increment (mm)
idub10	decadal <i>dub</i> increment (mm)

3 ^[a] Rojo-Alboreca A, Cabanillas-Saldaña AM, Barrio-Anta M, Notivol-Paíno E, Gorgoso-Varela JJ, 2017. Site
 4 index curves for natural Aleppo pine forests in the central Ebro valley (Spain). MYB 23: 143.
 5 <https://doi.org/10.21829/myb.2017.231495>

6 ^[b] Wykoff W, 1982. User's guide to the stand prognosis model. USDA Forest Service, Intermountain Forest
 7 and Range.

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9 **Table S2.** Descriptive statistics for the two databases used (*n*, number of data; *sd*, standard deviation;
 10 *min*, minimum and *max*, maximum; SNFI: Spanish National Forest Inventories and DGA:
 11 Diputación General de Aragón, RS: Hart-Becking's index; SDI: Reineke's index; SI: Site
 12 index)

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Variable (unit)		SNFI (1993 and 2004)					DGA (2016)				
		n	mean	sd	min	max	n	mean	sd	min	max
Stand level	N (stems·ha ⁻¹)	104	758	507	14.1	2,228	58	1,056	570	176	3,200
	G (m ² ·ha ⁻¹)	104	11.74	8.77	0.57	33.63	58	23.9	11.5	6.2	58.9
	Dg (cm)	104	13.9	4.0	7.6	29.9	58	17.7	4.8	11.7	30.6
	\bar{D} (cm)	104	13.6	3.9	7.5	29.6	58	17.2	4.6	11.4	29.6
	Do (m)	104	-	-	-	-	58	23.6	5.8	16.4	38.4
	Ho (m)	104	7.52	2.36	3.0	15.07	58	10.01	3.01	6.2	19.1
	\bar{H} (m)	104	6.56	1.89	3.60	13.08	-	-	-	-	-
	RS (decimal)	104	0.77	0.69	0.2	4.09	58	0.37	0.14	0.16	0.81
	SDI (stems·ha ⁻¹)	104	296.6	213	13.7	809.7	58	556.7	244	153	1,280
	SI (m)	97	11.4	3.6	3.1	21.9	58	10.6	3.0	5.9	20.2
t (year)	97	40.5	24.9	11.8	76.5	58	56.4	10.7	24.1	91.5	
Individual-tree level	dbh (cm)	379	16.2	4.9	7.6	36.5	1,684	17.0	6.2	7.5	49.6
	dub (cm)	379	14.8	4.4	6.7	33.8	1,684	15.5	5.7	6.9	45.4
	ht (m)	379	7.22	2.1	3.0	15.0	515	9.39	3.06	4.1	20.4
	hcb (m)	201	1.31	0.82	0.1	5.0	515	4.51	2.68	0.0	15.5
	cw (m)	379	3.64	0.98	1.65	7.25	-	-	-	-	-
	bal (m ² ·ha ⁻¹)	379	5.06	5.54	0.0	27.62	1,684	15.4	10.8	0.0	58.2
	balmod	379	0.36	0.26	0.0	0.98	1,684	0.61	0.29	0.0	1
	bar (%)	379	0.31	0.56	0.05	7.07	1,684	0.12	0.1	0.01	1.51
	rddg (decimal)	379	1.16	0.24	0.63	2.1	1,684	0.97	0.24	0.31	1.96
	rbad (-)	379	0.28	0.58	0.03	7.07	1,684	0.12	0.09	0.02	1.96
	idub10 (mm)	-	-	-	-	-	348	19.9	14.8	2.3	105

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16 **Table S3.** Descriptive statistics for the tree mortality database based on DGA permanent plots (*n*,
 17 number of data; *sd*, standard deviation; *min*, minimum and *max*, maximum).

Variable (unit)		Plots WITHOUT natural tree mortality					Plots WITH natural tree mortality				
		n	mean	sd	min	max	n	mean	sd	min	max
Stand level	N (stems·ha ⁻¹)	42	1,041.8	548.4	176.0	2,711.1	16	1,093.6	638.9	512.0	3,200.0
	G (m ² ·ha ⁻¹)	42	21.0	9.8	6.2	42.5	16	31.4	12.4	15.7	58.9
	Dg (cm)	42	16.8	4.7	11.7	30.6	16	20.0	4.6	14.0	30.1
	Ho (m)	42	9.4	3.0	6.2	19.1	16	11.5	2.6	8.6	17.7
Individual- tree level	dbh (cm)	1684	17.0	6.2	7.5	49.6	36	14.2	6.3	7.8	35.7
	ht (m)	515	9.39	3.06	4.10	20.40	36	10.07	2.59	5.93	17.38

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21 **Table S4.** Descriptive statistics of the felled trees to construct the stem taper model (*n*, number of
22 data; *sd*, standard deviation; *min*, minimum, *max*, maximum.

Variable (unit)	Felled trees				
	n	mean	sd	min	max
di (cm)	718	15	2.5	0.2	43
dbh (cm)	48	16	4.4	6.4	28.2
ht (m)	48	11.2	2.4	7	15.5
v (m ³)	48	0.129	0.08	0.02	0.45

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27 **Table S5.** Yield Table for Aleppo pine plantations with an initial stocking (SI) at 20 years
 28 equal to 1500 stems/ha and Timber Production Objective (Model = PD_CFB_T30). **Main**
 29 **silvicultural characteristics:** Four low selective thinnings with weights of 50%, 30%, 25%
 30 and 20%, respectively. The first thinning is applied at 30 years and the rotation is 15 years.
 31 Note: In some cases, we have interpolated for the 5-year period, though eq. 7, 8 and 9 were built for
 32 a 10-year period. We assume that is not optimal, but we preferred to provide this for the sake of
 33 flexibility in the scenarios simulation. Thus, id10 was divided by 2; the probability of survival is
 34 raised to the power of 1/2; and in the case of the regeneration model, the stand attributes are temporarily
 35 simulated for 10 years before the objective age, and then, decision tree is applied.

36 **SI = 10**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	3.87	1500	8.5	8.5	14.5				1500	8.5	8.5	14.5	0.0	0.0	0.0
30	5.77	1499	10.4	12.8	33.2	750	9.0	11.9	749	11.7	8.0	21.3	0.8	7.0	0.0
45	8.14	749	15.5	14.1	53.0	225	14.2	13.0	524	16.0	10.5	40.0	0.6	10.8	0.0
60	9.96	523	20.4	17.2	79.3	131	18.9	16.7	393	20.9	13.5	62.6	0.9	15.1	0.1
75	11.38	392	25.9	20.7	108.6	78	24.6	19.4	313	26.2	17.0	89.2	0.9	20.2	0.1
90	12.49	312	31.6	24.4	139.9								0.9	25.2	0.2

37 **SI = 14**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	6.05	1500	11.3	15.0	40.7				1500	11.3	15.0	40.7	0.0	0.0	0.0
30	8.72	1493	13.4	21.0	84.3	746	11.5	30.0	746	15.0	13.3	54.3	7.2	9.3	0.1
45	11.78	742	19.5	22.1	123.0	223	17.8	30.0	520	20.2	16.6	92.9	4.1	13.9	0.3
60	13.97	515	25.2	25.7	169.4	129	23.3	35.6	387	25.8	20.2	133.8	4.3	19.0	0.7
75	15.58	383	31.2	29.3	214.1	77	29.6	38.2	307	31.6	24.1	175.9	3.3	24.9	1.1
90	16.79	304	37.0	32.6	254.7								3.0	30.3	1.6

38 **SI = 18**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	8.49	1500	14.4	24.5	94.4				1500	14.4	24.5	94.4	0.0	0.0	0.0
30	11.87	1475	16.4	31.2	173.3	737	14.1	61.8	737	18.5	19.7	111.6	25.5	12.0	1.1
45	15.51	725	23.2	30.8	229.0	218	21.2	55.9	508	24.1	23.1	173.0	11.8	17.1	1.5
60	17.98	498	29.4	33.8	290.8	124	27.3	61.8	373	30.1	26.5	229.1	10.0	22.7	3.0
75	19.72	367	35.6	36.5	342.5	73	33.9	61.5	293	36.0	29.9	281.0	6.8	29.0	3.9
90	20.99	288	41.4	38.7	383.5								5.8	34.7	5.1

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40 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 41 (m²·ha⁻¹). V = Stand volume with bark (m³·ha⁻¹).

42 **Table S6.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 43 to 1500 stems/ha and Timber Production Objective (Model = PD_CFB_T40). **Main**
 44 **sylvicultural characteristics:** Three low selective thinnings with weights of 60%, 30% and
 45 20%, respectively. The first thinning is applied at 40 years and the rotation is 15 years.

46 **SI = 10**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	3.87	1500	8.5	8.5	14.5				1500	8.5	8.5	14.5	0.0	0.0	0.0
40	7.42	1498	12.4	18.0	60.6	899	11.0	28.2	599	14.1	9.4	32.5	1.7	7.0	0.0
55	9.41	598	18.3	15.7	68.8	180	16.9	17.3	419	18.9	11.7	51.5	1.0	13.3	0.1
70	10.95	418	23.8	18.6	94.3	84	22.7	16.9	334	24.1	15.2	77.4	0.8	18.2	0.1
90	12.49	333	31.2	25.4	145.6								1.1	23.2	0.2

47 **SI = 14**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	6.05	1500	11.3	15.0	40.7				1500	11.3	15.0	40.7	0.0	0.0	0.0
40	10.87	1486	15.5	28.0	141.7	891	13.8	65.3	594	17.8	14.8	76.4	14.4	9.3	0.3
55	13.32	590	22.6	23.7	149.7	177	20.8	37.4	413	23.4	17.7	112.2	4.6	16.7	0.5
70	15.1	410	28.9	26.9	191.1	82	27.5	34.2	328	29.3	22.0	156.8	3.2	22.5	0.8
90	16.79	324	36.7	34.2	267.2								4.0	28.1	1.8

48 **SI = 18**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	8.49	1500	14.4	24.5	94.4				1500	14.4	24.5	94.4	0.0	0.0	0.0
40	14.46	1450	18.4	38.6	265.3	870	16.3	122.4	580	21.2	20.4	142.9	50.0	12.0	2.1
55	17.26	569	26.5	31.4	260.7	171	24.4	65.7	399	27.3	23.4	195.1	10.7	19.9	2.3
70	19.21	392	33.3	34.1	312.6	78	31.7	56.3	313	33.7	27.9	256.3	6.7	26.4	3.0
90	20.99	306	41.2	40.8	404.1								8.0	32.4	6.0

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50 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 51 (m².ha⁻¹). V = Stand volume with bark (m³.ha⁻¹).

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54 **Table S7.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 55 to 1500 stems/ha and Timber Production Objective (Model = PD_CSS2_T45). **Main**
 56 **sylvicultural characteristics:** Initial systematic thinning at 45 years and a second systematic
 57 thinning 20 years later (25%) and a third systematic thinning 15 years later (20%).

58 **SI = 10**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	3.87	1500	8.5	8.5	14.5				1500	8.5	8.5	14.5	0.0	0.0	0.0
45	8.14	1498	13.3	20.9	77.6	936	12.3	40.5	562	14.9	9.8	37.1	2.1	7.0	0.0
65	10.48	554	20.6	18.4	89.2	138	18.6	17.8	415	21.2	14.6	71.3	7.9	13.7	0.4
80	11.78	414	26.0	21.9	119.0	83	23.5	19.1	331	26.5	18.3	99.8	1.5	19.8	0.2
90	12.49	330	29.9	23.1	133.0								0.8	25.2	0.2

59 **SI = 14**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	6.05	1500	11.3	15.0	40.7				1500	11.3	15.0	40.7	0.0	0.0	0.0
45	11.78	1482	16.6	31.9	175.3	926	15.2	90.9	556	18.6	15.1	84.4	17.9	9.3	0.3
65	14.56	525	25.3	26.3	180.5	131	22.7	35.8	394	26.1	21.0	144.7	30.4	17.1	3.8
80	16.02	389	31.3	30.0	224.6	78	28.3	36.2	312	32.0	25.0	188.5	4.6	24.4	1.5
90	16.79	309	35.4	30.5	239.0								2.3	30.6	1.3

60 **SI = 18**

Stand Age	Main crop before thinning					Crop removed			Main crop after thinning				Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	8.49	1500	14.4	24.5	94.4				1500	14.4	24.5	94.4	0.0	0.0	0.0
45	15.51	1438	19.4	42.6	315.2	899	17.8	163.4	539	21.8	20.2	151.8	61.9	12.0	2.6
65	18.63	482	29.4	32.7	291.8	120	26.5	58.0	361	30.3	26.1	233.7	57.8	20.1	13.6
80	20.19	353	36.1	36.1	346.0	71	33.2	58.1	283	36.7	30.0	288.0	7.9	28.5	4.5
90	20.99	279	40.3	35.6	354.0								3.7	35.3	3.5

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62 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 63 (m²·ha⁻¹). V = Stand volume with bark (m³·ha⁻¹).

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66 **Table S8.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 67 to 1500 stems/ha and Timber Production Objective (Model = PD_CSS2_T60). **Main**
 68 **sylvicultural characteristics:** Initial systematic thinning at 60 years, a second systematic
 69 thinning 20 years later (25%) and a third systematic thinning 15 years later (20%).

70 **SI = 10**

Stand Age	Main crop before thinning					Crop removed		Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	3.87	1500	8.5	8.5	14.5				1500	8.5	8.5	14.5	0.0	0.0	0.0
60	9.96	1497	16.2	31.0	141.4	935	15.0	74.2	561	18.1	14.5	67.2	3.3	7.0	0.0
80	11.78	542	23.6	23.6	128.8	136	21.3	25.8	407	24.3	18.8	103.0	18.8	16.7	1.9
95	12.81	404	28.7	26.2	154.5	81	26.1	25.0	324	29.3	21.9	129.5	2.5	22.7	0.5
100	13.1	323	30.9	24.1	145.9								0.6	28.0	0.2

71 **SI = 14**

Stand Age	Main crop before thinning					Crop removed		Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	6.05	1500	11.3	15.0	40.7				1500	11.3	15.0	40.7	0.0	0.0	0.0
60	13.97	1472	19.7	44.9	293.6	920	18.1	152.6	552	22.1	21.2	141.0	28.4	9.3	0.5
80	16.02	500	28.1	31.0	234.1	125	25.3	46.7	375	29.0	24.7	187.4	51.4	20.3	10.9
95	17.13	369	33.8	33.1	265.5	74	30.9	43.9	296	34.4	27.5	221.6	5.9	27.2	2.6
100	17.43	294	36.0	30.0	245.2								1.3	33.1	0.9

72 **SI = 18**

Stand Age	Main crop before thinning					Crop removed		Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	N	Dg	V	N	Dg	G	V	N	Dg	V
20	8.49	1500	14.4	24.5	94.4				1500	14.4	24.5	94.4	0.0	0.0	0.0
60	17.98	1404	22.4	55.5	478.1	877	20.5	248.4	526	25.2	26.3	229.7	96.2	12.0	4.0
80	20.19	447	31.8	35.6	345.2	112	28.7	69.1	335	32.8	28.4	276.1	79.1	23.3	29.0
95	21.34	327	38.3	37.6	382.0	65	35.8	66.5	262	38.8	31.0	315.5	8.4	31.1	6.2
100	21.66	260	40.6	33.6	346.0								1.9	37.4	2.1

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74 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 75 (m²·ha⁻¹). V = Stand volume with bark (m³·ha⁻¹).

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77 **Table S9.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 78 to 1500 stems/ha and Soil Protection Objective (Model = PT_CDS_T45). **Main silvicultural**
 79 **characteristics:** Four systematic thinnings with weights of 10%. The first clear is applied at
 80 45 years and the rotation is 10 years.

81 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0
45	8.1	1498	13.3	20.9	77.6	65.2	150	13.3	7.8	1348	13.3	18.8	69.9	58.6	2.1	7.0	0.0
55	9.4	1323	15.0	23.3	100.7	66.1	132	15.0	10.1	1191	15.0	21.0	90.7	59.5	25.0	11.1	0.9
65	10.5	1162	16.7	25.3	122.0	65.8	116	16.7	12.2	1046	16.7	22.8	109.8	59.2	28.8	12.5	1.5
75	11.4	1016	18.4	26.9	140.9	64.6	102	18.4	14.1	915	18.4	24.2	126.8	58.1	29.4	13.9	2.1
90	12.5	874	21.0	30.3	173.6	65.1									40.8	15.3	3.8

82 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0
45	11.8	1482	16.6	31.9	175.3	83.3	148	16.6	17.5	1334	16.6	28.7	157.7	75.0	17.9	9.3	0.3
55	13.3	1262	18.2	32.7	205.1	79.2	126	18.2	20.5	1136	18.2	29.4	184.6	71.3	71.6	13.7	5.6
65	14.6	1070	19.9	33.2	228.8	74.8	107	19.9	22.9	963	19.9	29.9	205.9	67.3	66.3	15.1	7.2
75	15.6	906	21.7	33.6	247.8	70.3	91	21.7	24.8	815	21.7	30.3	223.0	63.3	57.1	16.6	8.2
90	16.8	747	24.7	35.9	284.1	67.5									68.6	18.2	12.8

83

84 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 85 (m²·ha⁻¹). V = stand volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 86 density index (%).

87

88 **Table S10.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 89 to 1500 stems/ha and Soil Protection Objective (Model = PT_CDS_T60). **Main silvicultural**
 90 **characteristics:** Three systematic thinnings with weights of 10%. The first clear is applied
 91 at 60 years and the rotation is 10 years.

92 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0
60	10.0	1497	16.2	31.0	141.4	82.3	150	16.2	14.1	1347	16.2	27.9	127.3	74.0	3.3	7.0	0.0
70	11.0	1296	17.6	31.4	158.0	78.1	130	17.6	15.8	1166	17.6	28.2	142.2	70.3	51.0	13.6	3.3
80	11.8	1120	19.0	31.6	171.7	73.9	112	19.0	17.2	1008	19.0	28.5	154.6	66.5	46.5	14.7	3.8
100	13.1	931	22.0	35.3	213.3	73.2									76.8	16.0	8.1

93 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0
60	14.0	1472	19.7	44.9	293.6	101.8	147	19.7	29.4	1324	19.7	40.4	264.2	91.6	28.4	9.3	0.5
70	15.1	1202	21.0	41.6	295.9	89.5	120	21.0	29.6	1082	21.0	37.4	266.3	80.5	122.0	16.5	16.4
80	16.0	993	22.5	39.3	298.2	80.1	99	22.5	29.8	894	22.5	35.4	268.4	72.1	88.7	17.6	14.9
100	17.4	774	25.8	40.5	334.2	73.6									120.1	19.0	25.1

94

95 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 96 (m²·ha⁻¹). V = stand volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 97 density index (%).

98

99 **Table S11.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 100 to 1500 stems/ha and Soil Protection Objective (Model = PT_CDB_T45). **Main**
 101 **sylvicultural characteristics:** Four low selective thinnings with weights of 20%. The first
 102 thinning is applied at 45 years and the rotation is 10 years.

103 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0
45	8.1	1498	13.3	20.9	77.6	65.2	300	10.3	8.8	1198	14.0	18.4	68.8	55.2	2.1	7.0	0.0
55	9.4	1189	15.7	23.1	100.2	62.9	238	13.5	14.3	951	16.2	19.6	85.8	52.2	9.7	12.5	0.4
65	10.5	943	18.1	24.3	118.0	58.9	189	15.6	17.0	754	18.7	20.6	100.9	48.9	8.4	14.6	0.6
75	11.4	748	20.7	25.2	133.6	54.8	150	18.6	21.1	598	21.2	21.1	112.5	45.1	6.2	17.2	0.7
90	12.5	592	24.6	28.2	163.7	53.3									6.5	19.8	1.1

104 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0
45	11.8	1482	16.6	31.9	175.3	83.3	296	12.7	19.4	1186	17.4	28.2	155.9	70.7	17.9	9.3	0.3
55	13.3	1155	19.0	32.8	206.7	76.6	231	16.2	29.1	924	19.7	28.1	177.7	63.7	30.2	15.4	3.1
65	14.6	902	21.5	32.8	227.0	69.1	180	18.5	32.6	721	22.2	27.9	194.4	57.4	22.6	17.7	3.4
75	15.6	706	24.3	32.7	243.1	62.5	141	21.8	38.5	565	24.9	27.5	204.6	51.4	15.2	20.5	3.4
90	16.8	550	28.5	35.1	279.3	58.8									14.8	23.2	4.6

105

106 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 107 (m²·ha⁻¹). V = stand volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 108 density index (%).

109

110 **Table S12.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 111 to 1500 stems/ha and Soil Protection Objective (Model = PT_ CDB_T60). **Main**
 112 **sylvicultural characteristics:** Three low selective thinnings with weights of 10%. The first
 113 thinning is applied at 60 years and the rotation is 10 years.

114 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0
60	10.0	1497	16.2	31.0	141.4	82.3	299	12.7	16.4	1197	17.0	27.2	125.0	69.5	3.3	7.0	0.0
70	11.0	1176	18.4	31.2	157.7	74.8	235	15.8	22.7	941	18.9	26.5	135.1	62.1	20.9	15.2	1.7
80	11.8	927	20.5	30.6	167.5	67.1	185	17.8	24.4	741	21.1	26.0	143.1	55.6	14.6	17.1	1.7
100	13.1	723	24.7	34.6	210.7	65.2									18.6	19.6	3.0

115 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality		
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI	N	Dg	V
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0
60	14.0	1472	19.7	44.9	293.6	101.8	294	15.1	32.9	1177	20.7	39.6	260.7	86.2	28.4	9.3	0.5
70	15.1	1122	21.9	42.1	300.8	87.7	224	18.6	42.3	898	22.6	36.0	258.5	73.0	55.1	18.4	9.4
80	16.0	865	24.1	39.3	299.7	75.7	173	20.8	43.6	692	24.8	33.4	256.1	62.8	33.2	20.4	7.6
100	17.4	654	28.4	41.4	343.2	69.6									37.7	23.0	11.8

116

117 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 118 (m²·ha⁻¹). V = stand volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 119 density index (%).

120

121 **Table S13.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 122 to 1500 stems/ha and Biodiversity Enhancement Objective (Model = BD_CS60_T45). **Main**
 123 **sylvicultural characteristics:** First very strong systematic thinning with a weight of 60%.
 124 Two more moderate systematic thinnings (20% weight). The first thinning is applied at 45
 125 years and the rotation is 20 years.

126 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality			Regeneration	
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI max	N	Dg	V	Qsp	Qsp/Jsp
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0	No	No
45	8.1	1498	13.3	20.9	77.6	65.2	899	13.3	46.6	599	13.3	8.4	31.1	26.1	2.1	7.0	0.0	Yes	Yes
65	10.5	336	20.5	11.1	53.7	24.3	67	20.5	10.8	269	20.5	8.9	43.0	19.4	263.3	11.5	9.8	Yes	Yes
85	12.2	267	28.7	17.3	95.8	28.8	53	28.7	19.2	214	28.7	13.8	76.7	23.1	1.7	18.0	0.2	Yes	Yes
90	12.5	213	31.0	16.1	91.4	25.2									0.5	24.9	0.1	Yes	Yes

127 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality			Regeneration	
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI max	N	Dg	V	Qsp	Qsp/Jsp
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0	No	No
45	11.8	1482	16.6	31.9	175.3	83.3	889	16.6	105.2	593	16.6	12.8	70.1	33.3	17.9	9.3	0.3	Yes	Yes
65	14.6	269	26.1	14.3	98.6	25.8	54	26.1	19.7	215	26.1	11.5	78.8	20.7	324.3	14.6	28.9	Yes	Yes
85	16.4	211	37.4	23.3	176.3	31.2	42	37.4	35.3	169	37.4	18.6	141.0	25.0	3.5	23.3	1.0	Yes	Yes
90	16.8	168	40.0	21.2	164.1	26.9									0.9	33.0	0.6	Yes	Yes

128

129 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 130 (m²·ha⁻¹). V = wood volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 131 density index (%).

132

133 **Table S14.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 134 to 1500 stems/ha and Biodiversity Enhancement Objective (Model = BD_CS60_T60). **Main**
 135 **sylvicultural characteristics:** A first very strong systematic clear with a weight of 60%. A
 136 more systematic and moderate thinning (weight of 20%). The first thinning is applied at 60
 137 years and the rotation is 20 years.

138 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality			Regeneration	
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI max	N	Dg	V	Qsp	Qsp/Jsp
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0	No	No
60	10.0	1497	16.2	31.0	141.4	82.3	898	16.2	84.8	599	16.2	12.4	56.6	32.9	3.3	7.0	0.0	Yes	Yes
80	11.8	298	23.9	13.4	73.1	25.9	60	23.9	14.6	238	23.9	10.7	58.5	20.7	300.9	14.3	21.2	Yes	Yes
100	13.1	236	32.7	19.9	118.8	29.8									2.0	21.3	0.4	Yes	Yes

139 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality			Regeneration	
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI max	N	Dg	V	Qsp	Qsp/Jsp
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0	No	No
60	14.0	1472	19.7	44.9	293.6	101.8	883	19.7	176.2	589	19.7	18.0	117.4	40.7	28.4	9.3	0.5	Yes	Yes
80	16.0	243	29.3	16.4	124.2	26.9	49	29.3	24.8	194	29.3	13.1	99.4	21.5	345.5	17.6	53.3	Yes	Yes
100	17.4	191	41.0	25.2	202.8	31.4									3.8	26.4	1.6	Yes	Yes

140

141 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 142 (m²·ha⁻¹). V = wood volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 143 density index (%).

144

145 **Table S15.** Yield table for Aleppo pine plantations with an initial stocking at 20 years equal
 146 to 1500 stems/ha and Biodiversity Enhancement Objective (Model = BD_CX50_T45). **Main**
 147 **sylvicultural characteristics:** First strong mixed thinning with a weight of 50%. Two more
 148 moderate systematic thinnings (20% weight). The first thinning is applied at 45 years and the
 149 rotation is 20 years.

150

151 **SI = 10**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality			Regeneration	
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI max	N	Dg	V	Qsp	Qsp/Jsp
20	3.9	1500	8.5	8.5	14.5	38.2				1500	8.5	8.5	14.5		0.0	0.0	0.0	No	No
45	8.1	1498	13.3	20.9	77.6	65.2	745	13.2	39.4	753	13.2	10.4	38.2	32.5	2.1	7.0	0.0	Yes	Yes
65	10.5	625	18.2	16.2	79.6	39.2	125	18.2	15.9	500	18.2	12.9	63.7	31.4	127.3	12.4	5.6	Yes	Yes
85	12.2	489	24.1	22.2	125.0	42.8	98	24.1	25.0	391	24.1	17.8	100.0	34.2	11.1	16.6	1.2	Yes	Yes
90	12.5	389	25.6	20.0	115.4	36.6									2.9	21.8	0.6	Yes	Yes

152 **SI = 14**

Stand Age	Main crop before thinning						Crop removed			Main crop after thinning					Mortality			Regeneration	
	Ho	N	Dg	G	V	%SDI	N	Dg	V	N	Dg	G	V	%SDI max	N	Dg	V	Qsp	Qsp/Jsp
20	6.1	1500	11.3	15.0	40.7	53.6				1500	11.3	15.0	40.7		0.0	0.0	0.0	No	No
45	11.8	1482	16.6	31.9	175.3	83.3	737	16.4	89.0	745	16.4	15.8	86.2	41.5	17.9	9.3	0.3	Yes	Yes
65	14.6	464	22.5	18.5	129.1	37.5	93	22.5	25.8	371	22.5	14.8	103.3	30.0	281.1	15.5	28.5	Yes	Yes
85	16.4	356	30.8	26.5	204.6	41.8	71	30.8	40.9	285	30.8	21.2	163.7	33.4	15.0	20.5	3.4	Yes	Yes
90	16.8	281	32.8	23.8	187.4	35.6									3.6	27.8	1.7	Yes	Yes

153

154 Ho= dominant height (m). N = tree density (trees ha⁻¹). Dg = quadratic mean diameter (cm). G = basal area
 155 (m²·ha⁻¹). V = wood volume with bark (m³·ha⁻¹). %SDI = stand density index also known as Reineke's stand
 156 density index (%).

157