Yurtgan M, Baysal I, Küçük O (2022). **Fuel characterization and crown fuel load prediction in non-treated calabrian pine (*Pinus brutia* Ten.) plantation areas**
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Supplementary Material

Tab. S1 - Descriptive statistics of sample plots.

Statistics	Very young stands (n=5)				Young stands (n=5)				Middle aged stands (n=5)			
	Min	**Max**	**Mean**	**SD**	**Min**	**Max**	**Mean**	**SD**	**Min**	**Max**	**Mean**	**SD**
Number of trees measured	25	51	40.2	10.3	31	40	37.6	3.9	24	41	33.8	7.3
Crown closure (%)	70	90	83	7.6	80	95	90	6,1	85	95	91	4.2
Altitude (m)	590	710	622	50.4	590	710	622	50.4	595	715	687	51.8
DBH (cm)	5.0	17.1	8.9	2.7	5.0	24.5	11.5	3.9	5.3	25.6	14.8	4.4
Tree height (m)	2.7	9.8	6.0	1.5	4.5	14.0	8.3	2.0	4.8	16.6	11.5	2.3
Age (year)	10.0	23.0	17.7	3.2	18.0	27.0	21.4	2.2	16.0	28.0	24.2	2.8
Crown base height (m)	0.7	4.4	2.2	0.8	1.0	5.8	3.1	0.8	1.9	9.5	5.9	1.7
Crown width (m)	1.0	4.2	2.2	0.6	1.2	4.2	2.6	0.7	1.4	6.7	3.4	0.8
Bark thickness (mm)	1.2	4.4	2.5	0.7	1.3	4.9	3.1	0.7	1.8	4.8	3.3	0.6
Tree number (tree/ha)	1250	2550	2010	514.1	1550	2000	1880	195.6	1200	2050	1690	363.0
Basal area (m^2/ha)	8.0	21.0	13.9	5.1	20.3	26.8	23.2	2.6	25.1	39.0	32.9	6.5

Tab. S2 - Surface fuel characteristics for the studied stands (t ha^{-1}).

Surface fuel characteristics	Very young stands (n=15)				Young stands (n=15)				Middle aged stands (n=15)			
	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
Duff	1.45	8.74	5.09	2.71	3.28	20.96	11.11	6.90	17.89	21.91	19.42	1.35
Litter	6.79	8.37	7.55	0.62	5.68	9.10	7.40	1.27	6.74	11.01	8.70	1.80
Very thin	0.15	0.45	0.30	0.11	0.29	0.36	0.33	0.02	0.45	0.67	0.58	0.07
Thin	0.02	0.73	0.32	0.23	0.25	0.67	0.39	0.15	0.53	1.89	1.25	0.44
Medium	0.00	0.87	0.38	0.34	0.09	0.60	0.22	0.2	0.57	1.59	0.98	0.42
Thick	0.00	0.06	0.01	0.03	0.00	0.16	0.06	0.08	0.29	0.84	0.47	0.19
Very thick	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.43	0.53
Cone and bark	0.18	0.56	0.44	0.14	0.32	0.76	0.52	0.18	0.32	1.89	0.93	0.58
Total surface fuel load	11.75	17.65	14.09	2.24	11.38	29.82	20.03	7.46	27.81	35.27	32.77	2.59
Forest floor depth (cm)	1.7	3.1	2.4	0.5	2.8	3.2	3.0	0.1	2.9	5.1	3.6	0.8

Tab. S3 - Descriptive statistics of sampled trees for the determination of crown fuel load.

Statistics	Very young stands (kg tree^{-1})				Young stands (kg tree^{-1})				Middle aged stands (kg tree^{-1})			
	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
DBH (cm)	5.2	11.4	7.8	2.2	5.0	19.6	13.7	4.5	8.5	18.2	12.4	3.5
H (m)	3.9	7.3	5.3	1.1	5.6	12.0	8.6	1.7	8.1	12.6	10.8	1.5
A (year)	12.0	23.0	16.3	3.4	18.0	27.0	22.5	2.2	22.0	24.0	23.1	0.8
CBH (m)	1.1	3.4	2.0	0.7	2.1	5.0	3.2	0.8	4.6	6.5	5.5	0.6
CL (m)	2.0	4.9	3.3	0.9	2.7	7.0	5.4	1.4	3.1	7.1	5.3	1.6
CW (m)	1.4	2.8	2.1	0.5	1.8	3.6	2.9	0.6	1.7	4.6	3.1	1.0
BT (cm)	1.6	3.6	2.4	0.6	2.7	4.5	3.6	0.5	2.4	3.4	2.8	0.3

Tab. S4 - Quantitative descriptive data for crown fuel components in sampled trees.

Fuel type	Statistics	Very young stands (n=14)				Young stands (n=14)				Middle aged stands (n=8)			
		Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
Dead fuel (kg)	Needle	0.01	0.17	0.04	0.04	0.02	0.22	0.06	0.06	017	0.75	0.41	0.21
	Very thin	0.19	1.18	0.40	0.25	0.35	1.78	0.76	0.36	0.17	0.80	0.52	0.21
	Thin	0.22	1.03	0.41	0.23	0.53	2.87	0.97	0.62	0.29	1.13	0.69	0.27
	Medium	0.17	0.89	0.38	0.19	0.40	1.87	0.69	0.42	0.44	0.81	0.55	0.12
	Thick	0.11	1.60	0.39	0.37	0.12	5.17	1.42	1.29	0.74	4.23	1.68	1.17
	Very thick	0.0	0.0	0.0	0.0	0.0	1.83	0.23	0.57	0.0	0.34	0.07	0.12
	TDCFL	0.77	4.73	1.63	1.02	1.54	13.56	4.13	3.18	2.31	7.36	3.95	1.87
Live fuel (kg)	Needle	0.58	2.61	1.44	0.65	0.32	8.21	4.19	2.46	0.54	4.43	2.25	1.37
	Very thin	0.17	0.98	0.46	0.28	0.10	1.38	0.85	0.47	0.13	1.03	0.52	0.34
	Thin	0.28	1.75	0.79	0.47	0.20	3.87	2.04	1.16	0.37	2.43	1.22	0.78
	Medium	0.20	1.31	0.57	0.34	0.12	2.71	1.44	0.79	0.28	1.56	0.83	0.49
	Thick	0.21	2.78	1.3	0.91	0.03	6.78	3.59	2.05	0.45	6.14	2.67	2.15
	Very thick	0.0	0.43	0.04	0.11	0.0	4.79	1.78	1.78	0.0	1.51	0.40	0.61
	TLCFL	1.53	9.05	4.59	2.64	0.77	23.29	13.89	8.21	2.11	18.29	8.35	5.90
Dead and live fuel (kg)	Needle	0.59	2.62	1.48	0.65	0.35	8.25	4.25	2.47	0.72	5.18	2.66	1.57
	Very thin	0.40	1.68	0.86	0.41	0.45	2.69	1.61	0.64	0.30	1.79	1.04	0.54
	Thin	0.54	2.02	1.20	0.53	0.73	5.87	3.01	1.49	0.66	3.56	1.91	1.03
	Medium	0.47	1.59	0.95	0.42	0.63	4.04	2.13	1.02	0.73	2.37	1.38	059
	Thick	0.39	3.26	1.69	1.08	0.15	9.64	5.01	2.85	1.19	8.65	4.35	3.10
	Very thick	0.0	0.43	0.04	0.11	0.0	6.63	2.01	2.11	0.0	1.84	0.47	0.69
	TCFL	2.46	10.50	6.22	3.04	2.31	36.84	18.02	10.12	4.43	24.29	12.30	7.59

Tab. S5 - Parameters of the models used for the calculation of live tree crown fuels in trees with DBH >20 cm.

Fuel type	**Needle**	**Active fuel**
Model no.	4j	4k
Model	ln $live_{needle}$= a + b×ln *DBH*	ln $live_{active}$= a+b×ln *H*+c×ln *CW*+d×ln *CL*
Constant a	-1.391	-0.533
Coefficient b	1.019	-0.569
Coefficient c		1.292
Coefficient d		1.154
Adjusted R^2	0.663	0.868