Table S1. Biophysical characteristics (mean ± SE) of fuel biomass in the fire experimental sites.

Fuel characteristics	Climatic zones				Cropland categories			
	Sudanian	N	Sudano-Sahelian	N	LC	N	CC	N
	N = 45		N = 47		N = 43		N = 49	
Carbon content in biomass fuel (%)	53.65 ± 0.23 [a]	12	54.52 ± 0.27 [b]	12	54.08 ± 0.32 [a]	12	54.09 ± 0.27 [a]	12
Carbon content in ash fuel (%)	12.54 ± 0.36 [a]	12	13.65 ± 0.35 [a]	12	13.60 ± 0.35 [a]	12	12.39 ± 0.38 [a]	12
Moisture content in biomass (%)	9.60 ± 0.41 [a]	12	8.89 ± 0.34 [a]	12	9.32 ± 0.5 [a]	12	9.16 ± 0.27 [a]	12
Carbon loss (%)	91.40 ± 0.23 [a]	45	93.30 ± 0.21 [b]	47	88.47 ± 0.07 [a]	43	95.79 ± 0.06 [b]	49
Combustion Completeness (%)	96.2 8± 0.00 [a]	45	97.18 ± 0.00 [b]	47	93.03 ± 0.0 [a]	43	100 ± 0.00 [b]	49
Carbon remaining in postfire unburnt fuel (%)	3.71 ± 0.21 [a]	45	2.81 ± 0.20 [b]	47	6.96 ± 0.05 [a]	43	0.0 ± 0.0 [b]	49
Carbon remaining in postfire ash fuel (%)	4.88 ± 0.06 [a]	45	3.87 ± 0.02 [b]	47	4.55 ± 0.04 [a]	43	4.20 ± 0.06 [b]	49

Values with different letters indicate significant difference ($p < 0.05$, test of Wilcoxon) between climatic zone and cropland category; *n* = number of plots, SE = Standard Error.

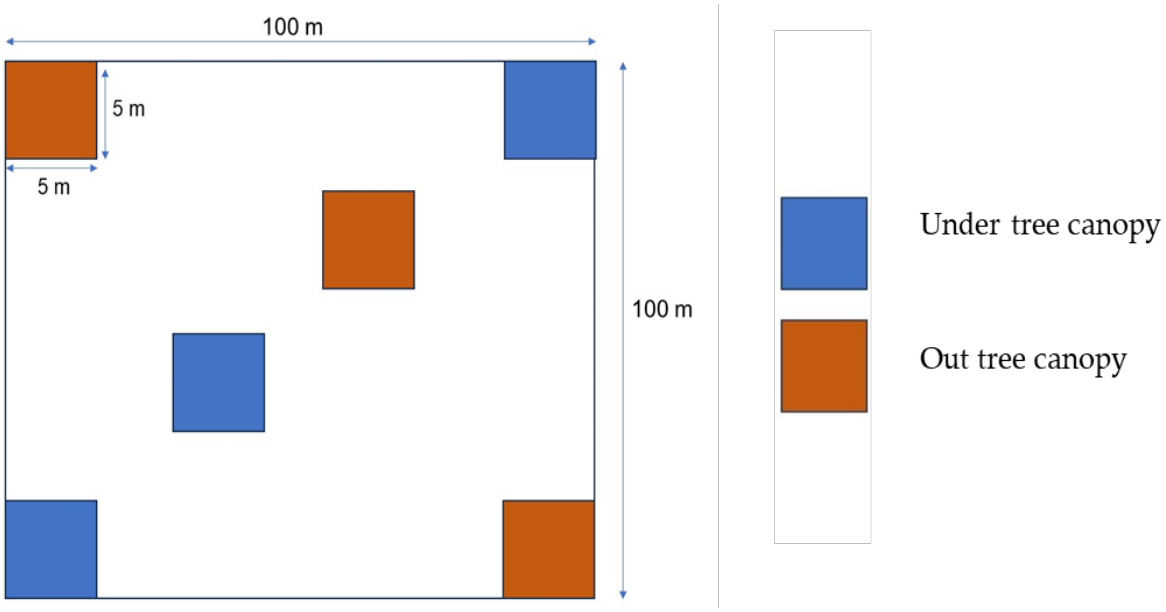

Figure S1. Experimental design showing subplots (5 m x 5 m) distribution within main plot (100 m x 100 m).