

Additional file 4

Variables, aspects of structural diversity and correlations with other calculated variables of the comprehensive list of structural attributes, derived from NFI₂₀₀₂ data for whole Baden-Württemberg (forest type 'BW').

Aspect	Variable	N cor (≥ 0.6)	Correlates with
Growing stock	DBHq	7	volume ha ⁻¹ of trees DBH > 40 (0.87), mean tree age (0.86), basal area ha ⁻¹ standard deviation (0.84), basal area ha ⁻¹ (0.82), DBH standard deviation (0.78), volume ha ⁻¹ of trees DBH > 60 (0.68), number diameter classes (0.61)
Uneven-agedness	DBH sd	7	basal area ha ⁻¹ standard deviation (0.84), DBHq (0.78), variation coefficient DBH (0.77), mean tree age (0.72), number diameter classes (0.7), volume ha ⁻¹ of trees DBH > 40 (0.67), basal area ha ⁻¹ (0.61)
Vertical heterogeneity	Height sd	1	variation coefficient mean tree height (0.93)
Occurrence of large living trees	VolTrees40	9	basal area ha ⁻¹ (0.89), DBH (0.87), basal area ha ⁻¹ standard deviation (0.78), mean tree age (0.77), number diameter classes (0.7), volume ha ⁻¹ (0.7), biomass ha ⁻¹ (0.69), DBH standard deviation (0.67), volume ha ⁻¹ of trees DBH > 60 (0.62)
Deadwood downed	DW d mDM	5	deadwood number ha ⁻¹ downed (0.98), deadwood downed volume ha ⁻¹ (0.97), number deadwood types (0.7), deadwood volume ha ⁻¹ (0.67), deadwood number decay classes (0.65)
Deadwood standing	DW st mDBH	1	deadwood number ha ⁻¹ standing (1)
Regeneration	SR Reg	7	shannon-index regeneration (0.86), species richness regeneration 2 (0.83), shannon-index regeneration 2 (0.69), variation coefficient DBH (0.69), evenness regeneration 2 (0.68), species richness regeneration 1 (0.65), cover ratio regeneration (0.64)
Compositional heterogeneity	SR	4	shannon-index DBH ≥ 7cm (0.93), bark (0.84), food (0.78), evenness DBH ≥ 7cm (0.78)
Decay classes	N DC	6	number deadwood types (0.97), deadwood volume ha ⁻¹ (0.95), deadwood volume ha ⁻¹ s (0.74), deadwood downed number ha ⁻¹ (0.66), deadwood downed volume ha ⁻¹ (0.66), deadwood downed mean diameter (0.65)
Bark diversity	Bark-div.	4	species richness (0.84), shannon-index DBH ≥ 7cm (0.76), food (0.67), evenness DBH ≥ 7cm (0.63)
Diversity of flowering and fruiting trees	Flower-div.		species richness (0.78), shannon-index DBH ≥ 7cm (0.72), bark (0.67), basal area ha ⁻¹ standard deviation (0.63), , mean tree age (0.63), number diameter classes (0.63), basal area ha ⁻¹ (0.6), evenness DBH ≥ 7cm (0.6)