TABLE S1. List of functional traits measured in the 36 studies comparing co-occurring trees and lianas. The functional traits are organized by plant economics spectrum. Only traits measured at the individual level are considered.

Plant economics spectrum LEAF TRAITS (SLA) Specific Leaf Area; (LM) Leaf Mass per Area; (LA Leaf Area; (LS) Leaf Size; (LW) Leaf weight; (Lth) Leaf Thickness; (LL) Leaf Life Span; (LTD) Leaf Tisst Density; (LWC) LEAF Water content; (LDMC) Leaf du matter content; (CCmms) Leaf construction cost per unit du mass; (CCmms) Leaf construction cost per unit du mass; (CCmms) Leaf Construction cost per unit leaf area; (MCmms) Leaf Maintenance cost per unit teaf area; (Pl) Petio length; (A; A), Leaf/sapwood area ratio; (DW/SW) Leaf du weight to saturated fresh weight; (Clard) Pre turgor loss lends to saturated fresh weight; (Clard) Pre turgor loss lends to saturated fresh weight; (Clard) Pre turgor loss lends a maximum leaf CO2 assimilation capacity per unit leaf area; (Amms maximum leaf CO2 assimilation capacity; (And Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance; (water vapour; (GC ₁) Guard cell length; (Sd) Stomatic density; (c/ca) intercellular to atmospheric carbon dioxic ratio; (K) Leaf specific hydraulic conductivity; (WU Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (PPUE) Photosynthetic (N _{mmax}) Maxed and magnesium content; (K _{mmax}) Mass based nitrogen content; (Ca _{mmax}) Maxed magnesium content; (Ca _{mmax}) Maxed magnesium content; (N _{mmax}) Area based magnesium content; (Ca _{mmax}) Maxed magnesium content; (N _{mmax}) Area based magnesium content; (Ca _{mmax}) Maxed acalcium content; (Ca _{mmax}) Maximum rate of electro	off e y y y a;
Thickness; (LL) Leaf Life Span; (LTD) Leaf Tisst Density; (LWC) LEAF Water content; (LDMC) Leaf the matter content; (CC _{mass}) Leaf construction cost per unit den mass; (CC _{area}) Leaf construction cost per unit leaf area; (MC _{mass}) Leaf Maintenance cost per unit day mass; (MC _{area}) Leaf Maintenance cost per unit day mass; (MC _{area}) Leaf Maintenance cost per unit Leaf area; (PI) Petici length; (A; As) Leaf/sapwood area ratio; (DW/SW) Leaf day weight to saturated fresh weight; (C _{leaf}) Pre turgor loss lest hydraulic capacitance; (Fps) specific force to punch; (A _{mas}) Maximum net leaf CO2 assimilation capacity per unit leaf mass (A _{sat}) Light saturated leaf CO2 assimilation capacity; (A Photosynthetic nitrogen use efficiency; (gs) Stomats (A _{sat}) Light saturated leaf CO2 assimilation capacity; (A Photosynthetic nitrogen use efficiency; (gs) Stomats conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomats density; (c,/c _a) intercellular to atmospheric carbon dioxic ratio; (K _L) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PWUE) Photosynthetic Nitrogen-use efficiency; (PmuE) Photosynthetic Nitrogen-use efficiency; (Pmass) Mass based nitrogen content; (N _{mass}) Area based potassium content; (M _{mass}) Area based means used magnesium content; (M _{mass}) Area based magnesium content; (C _{amass}) Mass based magnesium content; (C _{amass}) Area based calcium content; (C _{amass}) Mass based magnesium content; (C _{amass}) Mass based calcium content; (e y y n; a) e
Density; (LWC) LEAF Water content; (LDMC) Leaf dimatter content; (CC _{nress}) Leaf construction cost per unit dimass; (CC _{nress}) Leaf construction cost per unit dimass; (CC _{nress}) Leaf dimintenance cost per unit dymass; (MC _{nress}) Leaf Maintenance cost per unit dymass; (MC _{nress}) Leaf Maintenance cost per unit Leaf area; (Pl) Petiol length; (A _i , A _s) Leaf/sapwood area ratio; (DW/SW) Leaf dimeight to saturated fresh weight; (C _{leaf}) Pre turgor loss lea hydraulic capacitance; (Fps) specific force to punch; (A _{nna}) Maximum net leaf CO2 assimilation rate; (A _{nresa}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{nnass}) maximum leaf CO2 assimilation capacity per unit leaf mas (A _{nna}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (c _i /c _{ia}) intercellular to atmospheric carbon dioxic ratio; (K _i) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PPUE) Photosynthetic Nitrogen-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Area based potassiun content; (M _{area}) Area based potassiun content; (K _{nrea}) Area based potassiun content; (M _{gmass}) Mass based nitrogen content; (M _{gmass}) Mass based anginesium content; (M _{gmass}) Mass based calcium content; (N _{gmass}) Mass based calcium content; (C _{amass}) Area based potassiun content; (C _{amass}) Area based potassiun content; (C _{amass}) Area based potassiun content; (C _{amass}) Mass based calcium content; (C _{amass}) Mass	y y n; a) e
matter content; (CC _{mass}) Leaf construction cost per unit de mass; (CC _{area}) Leaf Maintenance cost per unit leaf are: (MC _{mass}) Leaf Maintenance cost per unit dry mass; (MC _{are}) Leaf Maintenance cost per unit Leaf area; (Pl) Petiol length; (A ₁ :A ₈) Leaf/sapwood area ratio; (DW/SW) Leaf dweight to saturated fresh weight; (C _{leaf}) Pre turgor loss less hydraulic capacitance; (Fps) specific force to punch; (A _{mas}) Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{mas}) maximum leaf CO2 assimilation capacity per unit leaf mas (A _{sat}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomate conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomate density; (c ₂ /c _a) intercellular to atmospheric carbon dioxic ratio; (K ₁) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogenuse efficiency; (PPUE) Photosynthetic Nitrogenuse efficiency; (PPUE) Photosynthetic Nitrogenuse efficiency; (PPUE) Area based nitrogen content; (N _{area}) Area based potassiun content; (K _{area}) Area based potassiun content; (K _{area}) Area based magnesiun content; (M _{gamas}) Mass based magnesiun content; (M _{gamas}) Area based magnesiun content; (Ca _{lex}) Area based calcium content; (C _{elex}) total carbon content; (P _{leaf}) total phosphorus content; (C _{elex} total carbon content; (P _{leaf}) total phosphorus content; (C _{lex} total carbon content; (P _{leaf}) total phosphorus content; (CA _{lox}) Maximum (N/P) Nitrogen to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (N/P) Maximum	y n; a) e
mass; (CC _{area}) Leaf construction cost per unit leaf are: (MC _{mass}) Leaf Maintenance cost per unit dry mass; (MC _{are}) Leaf Maintenance cost per unit Leaf area; (Pl) Petiol length; (A;A _a) Leaf/sapwood area ratio; (DW/SW) Leaf dry weight to saturated fresh weight; (C _{leaf}) Pre turgor loss less hydraulic capacitance; (Fps) specific force to punch; (A _{mas}) Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{mas}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomate conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomate density; (c/c _a) intercellular to atmospheric carbon dioxic ratio; (K _l) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PNUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (N _{area}) Are based nitrogen content; (M _{gmass}) Mass based potassiun content; (M _{gmass}) Mass based magnesiun content; (Ca _{area}) Area based calcium content; (Ca _{area}) Area based calcium content; (Ca _{carea}) Mass based adacium content; (Ca _{carea}) Area based calcium content; (C _{ca} total carbon content; (P _{leaf}) total phosphorus content; (C _{ca} total carbon content; (P _{leaf}) total phosphorus content; (CA) P	n; a) e
(MC _{mass}) Leaf Maintenance cost per unit dry mass; (MC _{are} Leaf Maintenance cost per unit Leaf area; (Pl) Petio length; (A ₁ :A ₈) Leaf/sapwood area ratio; (DW/SW) Leaf d weight to saturated fresh weight; (C _{leaf}) Pre turgor loss les hydraulic capacitance; (Fps) specific force to punch; (A _{ma} Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{mas} maximum leaf CO2 assimilation capacity; (AI Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (c _i /c _a) intercellular to atmospheric carbon dioxic ratio; (K ₁) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Area based nitrogen content; (M _{area}) Area based magnesium content; (M _{gmass}) Massed magnesium content; (M _{gmass}) Massed calcium content; (Ca _{mass}) Massed calcium content; (Ca _{mass}) Massed calcium content; (P _{leaf}) total nitrogen content; (C _{clea} total carbon content; (P _{leaf}) total phosphorus content; (C _{clea} total carbon content; (P) Rafford (C _{clea} total carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (N/P) Natimum) Maximum	a) e
Leaf Maintenance cost per unit Leaf area; (PI) Petiol length; (A ₁ :A ₂) Leaf/sapwood area ratio; (DW/SW) Leaf diveight to saturated fresh weight; (C _{leaf}) Pre turgor loss lea hydraulic capacitance; (Fps) specific force to punch; (A _{max}) Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{max}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC ₁) Guard cell length; (Sd) Stomatic density; (c ₃ /c _a) intercellular to atmospheric carbon dioxic ratio; (K ₁) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; ((PPUE) Photosynthetic Phosphorus-use efficiency; ((N _{mass}) Mass based potassiun content; (N _{area}) Are based nitrogen content; (N _{area}) Are based magnesium content; ((M _{gmass}) Mass based magnesium content; ((Ca _{area}) Area based calcium content; (Ca _{mass}) Massed magnesium content; ((Ca _{area}) Area based calcium content; (Ca _{mass}) Massed angenesium content; ((Ca _{area}) Area based calcium content; (Ca _{mass}) Massed magnesium content; ((Ca _{area}) Area based calcium content; (Ca _{mass}) Massed magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Massed magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Massed calcium content; (Ca _{area}) Area based calci	e
length; (A ₁ :A ₈) Leaf/sapwood area ratio; (DW/SW) Leaf dweight to saturated fresh weight; (C _{1eaf}) Pre turgor loss least hydraulic capacitance; (Fps) specific force to punch; (A _{max} Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{max} maximum leaf CO2 assimilation capacity; (An Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance twater vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (cy(c _a) intercellular to atmospheric carbon dioxic ratio; (K ₁) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PWE) Photosynthetic Phosphorus-use efficiency; (PW _{mass}) Mass based nitrogen content; (N _{area}) Area based potassium content; (K _{area}) Area based potassium content; (Ka _{mass}) Mas based magnesium content; (M _{gmass}) Mas based calcium content; (C _{area}) Area based calcium content; (C _{clea} total carbon content; (N _{leaf}) total nitrogen content; (C _{clea} total carbon content; (P _{leaf}) total nitrogen content; (C _{clea} total carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (V _{cmax}) Maximum (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
weight to saturated fresh weight; (C_{leaf}) Pre turgor loss lea hydraulic capacitance; (Fps) specific force to punch; (A _{max}) Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{max} maximum leaf CO2 assimilation capacity; per unit leaf mas (A _{sat}) Light saturated leaf CO2 assimilation capacity; (A _l Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (cy/c _a) intercellular to atmospheric carbon dioxic ratio; (K ₁) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Nitrogen-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Area based nitrogen content; (K _{area}) Area based potassium content; (Mg _{mass}) Mass based magnesium content; (Mg _{mass}) Mass based magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Mass based calcium content; (C _{leat}) total phosphorus content; (C _{leat}) total phosphorus content; (C _{leat}) total phosphorus content; (C _{leat}) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
Maximum net leaf CO2 assimilation rate; (A _{area}) maximum leaf CO2 assimilation capacity per unit leaf area; (A _{mas} maximum leaf CO2 assimilation capacity per unit leaf mas (A _{sat}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomats conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomats density; (c _i /c _a) intercellular to atmospheric carbon dioxic ratio; (K _i) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Area based nitrogen content; (K _{area}) Area based potassium content; (K _{area}) Area based potassium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Mass based magnesium content; (N _{garea}) Area based magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Mass based calcium content; (Ca _{mass}) Mass based calcium content; (Ca _{lrea}) Area based calcium content; (Ca _{lrea}) Area based calcium content; (Ca _{lrea}) Area based calcium content; (Ca _{lrea}) Nass based calcium content;	•
leaf CO2 assimilation capacity per unit leaf area; (A _{mas} maximum leaf CO2 assimilation capacity per unit leaf mas (A _{sat}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomats conductance; (gw) Time integrated stomatal conductance to water vapour; (GC _L) Guard cell length; (Sd) Stomats density; (c _i /c _a) intercellular to atmospheric carbon dioxic ratio; (K _i) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Area based nitrogen content; (N _{area}) Area based potassium content; (K _{arca}) Area based potassium content; (Ka _{mass}) Massed magnesium content; (Ca _{mass}) Massed calcium content; (Ca _{mass}) Massed calcium content; (P _{leaf}) total nitrogen content; (C _{clee} total carbon content; (P _{leaf}) total phosphorus content; (C _{clee} total carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	.)
maximum leaf CO2 assimilation capacity per unit leaf mas (A _{sat}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (c _i /c _a) intercellular to atmospheric carbon dioxidic ratio; (K _i) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogenuse efficiency; (PPUE) Photosynthetic Nitrogenuse efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (N _{area}) Are based nitrogen content; (K _{mass}) Mass based magnesium content; (K _{area}) Area based magnesium content; (Ca _{mass}) Mass based calcium content; (Ca _{mass}) Mass based calcium content; (P _{leaf}) total nitrogen content; (C _{lea} total carbon content; (P _{leaf}) total phosphorus content; (C _{lea} total carbon content; (P _{leaf}) total phosphorus content; (C _{lea} total carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	n
(A _{sat}) Light saturated leaf CO2 assimilation capacity; (Ar Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (c _i /c _a) intercellular to atmospheric carbon dioxic ratio; (K _i) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogenuse efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Area based nitrogen content; (K _{mass}) Mass based nitrogen content; (Mg _{mass}) Mass based nitrogen content; (Mg _{mass}) Mass based nagnesium content; (Ma _{area}) Area based calcium content; (Ca _{mass}) Massed calcium content; (Ca _{mass}) Massed calcium content; (Ca _{leaf}) total nitrogen content; (C _{clea}) total carbon content; (P _{leaf}) total phosphorus content; (C/Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
Photosynthetic nitrogen use efficiency; (gs) Stomatic conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (c _i /c _a) intercellular to atmospheric carbon dioxidic ratio; (K _I) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (K _{mass}) Mass based potassiun content; (K _{area}) Area based potassiun content; (K _{area}) Area based magnesium content; (Ca _{mass}) Mass based calcium content; (Ca _{mass}) Mass based calcium content; (Ca _{mass}) Mass based calcium content; (Ca _{mass}) Missed calcium content; (P _{leaf}) total nitrogen content; (C _{clea} total carbon content; (P _{leaf}) total phosphorus content; (C/C Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
conductance; (gw) Time integrated stomatal conductance water vapour; (GC _L) Guard cell length; (Sd) Stomatic density; (c _i /c _a) intercellular to atmospheric carbon dioxidicatio; (K _I) Leaf specific hydraulic conductivity; (WUE Water use efficiency; (PNUE) Photosynthetic Nitrogen-use efficiency; (PPUE) Photosynthetic Phosphorus-use efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (K _{mass}) Mass based potassistic content; (K _{area}) Area based potassistic content; (K _{area}) Area based magnesium content; (Mg _{mass}) Mass based magnesium content; (Ca _{mass}) Area based calcium content; (Ca _{mass}) Mass based calcium content; (Pl _{eaf}) total nitrogen content; (C _{clea} total carbon content; (P _{leaf}) total phosphorus content; (C/C Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
water vapour; (GC _L) Guard cell length; (Sd) Stomatidensity; (c _i /c _a) intercellular to atmospheric carbon dioxidinatio; (K _I) Leaf specific hydraulic conductivity; (WUE Water use efficiency; (PNUE) Photosynthetic Nitrogen-usefficiency; (NPUE) Photosynthetic Phosphorus-usefficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Arebased nitrogen content; (N _{area}) Arebased nitrogen content; (K _{mass}) Mass based potassisus content; (K _{area}) Area based potassisus content; (K _{area}) Area based magnesium content; (Mg _{mass}) Masbased magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Masbased calcium content; (Ca _{mass}) Masbased calcium content; (P _{leaf}) total nitrogen content; (C _{clea} total carbon content; (P _{leaf}) total phosphorus content; (C/C Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
density; (c _i /c _a) intercellular to atmospheric carbon dioxic ratio; (K _I) Leaf specific hydraulic conductivity; (WUE Water use efficiency; (PNUE) Photosynthetic Nitrogen-us efficiency; (PPUE) Photosynthetic Phosphorus-us efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (N _{area}) Are based nitrogen content; (K _{mass}) Mass based potassism content; (K _{area}) Area based potassism content; (K _{area}) Area based magnesium content; (Ca _{mass}) Mas based magnesium content; (Ca _{mass}) Area based calcium content; (Ca _{mass}) Mas based calcium content; (Pl _{eaf}) total nitrogen content; (C _{clea} total carbon content; (P _{leaf}) total phosphorus content; (C/C Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
ratio; (K ₁) Leaf specific hydraulic conductivity; (WUF Water use efficiency; (PNUE) Photosynthetic Nitrogen-us efficiency; (PPUE) Photosynthetic Phosphorus-us efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (N _{area}) Are based nitrogen content; (K _{area}) Area based potassium content; (K _{area}) Area based magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Mas based calcium content; (Ca _{mass}) Mas based calcium content; (Plear) total nitrogen content; (C _{clear} total carbon content; (Plear) total phosphorus content; (C/C Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
Water use efficiency; (PNUE) Photosynthetic Nitrogen-us efficiency; (PPUE) Photosynthetic Phosphorus-us efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (N _{area}) Area based potassium content; (K _{area}) Area based potassium content; (K _{area}) Area based magnesium content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Mas based calcium content; (Ca _{mass}) Mas based calcium content; (Pa _{area}) Area based calcium content; (Ca _{mass}) Content; (Ca _{clet} total carbon content; (P _{lear}) total phosphorus content; (Chear bon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
efficiency; (N _{mass}) Mass based nitrogen content; (N _{area}) Are based nitrogen content; (K _{area}) Area based potassium content; (K _{area}) Area based potassium content; (Mg _{mass}) Mas based magnesium content; (Mg _{area}) Area based magnesium content; (Ca _{mass}) Mas based calcium content; (Ca _{mass}) Mas based calcium content; (N _{leaf}) total nitrogen content; (C _{cleaf}) total carbon content; (P _{leaf}) total phosphorus content; (C/N Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
based nitrogen content; (K_{mass}) Mass based potassium content; (K_{area}) Area based potassium content; (M_{gmass}) Mass based magnesium content; (M_{garea}) Area based magnesium content; (Ca_{area}) Area based calcium content; (Ca_{mass}) Mass based calcium content; (Ca_{mass}) Mass based calcium content; (C_{lea}) total nitrogen content; (C_{lea}) total carbon content; (C/N) Carbon to Nitrogen Ratio; (C/N) Carbon to phosphorus ratio; (N/N) Nitrogen to phosphorus ratio; (N/N) Maximum	
content; (K_{area}) Area based potassium content; (Mg_{mass}) Maxibased magnesium content; (Mg_{area}) Area based magnesium content; (Ca_{area}) Area based calcium content; (Ca_{mass}) Maxibased calcium content; (N_{leaf}) total nitrogen content; (C_{clea}) total carbon content; (P_{leaf}) total phosphorus content; (C/N) Carbon to Nitrogen Ratio; (C/N) Carbon to phosphorus ratio; (N/N) Nitrogen to phosphorus ratio; (N/N) Maximum	
based magnesium content; (Mg_{area}) Area based magnesium content; (Ca_{area}) Area based calcium content; (Ca_{mass}) Mas based calcium content; (N_{leaf}) total nitrogen content; (C_{clec}) total carbon content; (P_{leaf}) total phosphorus content; (C/N) Carbon to Nitrogen Ratio; (C/N) Carbon to phosphorus ratio; (N/N) Nitrogen to phosphorus ratio; (N_{cmax}) Maximum	
content; (Ca _{area}) Area based calcium content; (Ca _{mass}) Mas based calcium content; (N _{leaf}) total nitrogen content; (C _{clee} total carbon content; (P _{leaf}) total phosphorus content; (C/N Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximum	
based calcium content; (N_{leaf}) total nitrogen content; (C_{clea}) total carbon content; (P_{leaf}) total phosphorus content; (C/N) Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio; (N/P) Nitrogen to phosphorus ratio; (V_{cmax}) Maximum	
total carbon content; (P _{leaf}) total phosphorus content; (C/N Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio (N/P) Nitrogen to phosphorus ratio; (V _{cmax}) Maximus	
Carbon to Nitrogen Ratio; (C/P) Carbon to phosphorus ratio (N/P) Nitrogen to phosphorus ratio; (V_{cmax}) Maximum	
carboxylation capacity: (J _{max}) Maximum rate of electro	n
transport; (PPFD) Photosynthetically active photon flu	
density; (Rd _{area}) Area-based dark respiration; (Rd _{mass}) Mass	
based dark respiration; (δ^{13} C) Leaf Carbon 13 isotop (δ^{15} N) Leaf Nitrogen 15 isotope; (δ^{18} O) Leaf Oxigen 1	
isotope; (Chl) Chlorophyll content; (Car) Carotenoi	
content; $(\Psi_{\text{leaf pd}})$ Pre-down leaf water potential; $(\Psi_{\text{leaf m}})$	
Mid-day leaf water potential; (LAR) Leaf area ratio; (LM	
Leaf mass fraction; (LAD) Leaf area density; (π_{tip}) Leaf	
turgor loss point; (π_{tlp100}) Osmotic potential at full turgor	
(R_{550nm}) Reflectance at 550nm; (R_{800nm}) Reflectance	
800nm; (mSR ₇₀₅) Modified simple ratio at 705nm; (mND ₇₀)	
Modified Normal Difference at 705nm; (WBI ₉₇₀) Water Band Index: (P.) Passiration at 25C per unit mass: (TNC	
Band Index; (R _m) Respiration at 25C per unit mass; (TNC Non-structural carbohydrates; (Q ₁₀) Proportional increase in	
respiration with 10C warming; (e _i) Vapor pressure in lea	
intercellular air spaces; (ASM) Air space mesophyll; (I	
Transpiration rate; (NAR) Net assimilation rate; (per	<u>.</u>
Proportion of O atoms exchanging with medium water	
during cellulose synthesis; (px) Proportion of water i	n
developing cells not subject to evaporative 180 enrich;	
STEM TRAITS (K _s) Theoretical specific xylem hydraulic conductivity; (K Potential hydraulic conductivity; (p _{wood}) wood specifi	c C
gravity*; (P50) Water potential at 50 percent loss of	
conductivity; (BT) Bark thickness; (SW) Stem weight; (II	
Internode length; (TwB) Twig biomass; (N _{stem}) Ster	n
nitrogen content; (Hv) Huber Value; (V _n) Number of vesse	s
per area; (VA) Vessel lumen area; (MVL) Maximum vesse	
length; (MLV) Mean longest vessel; (D _V) Vessel diamete	;
(MVD) Mean vessel lumen diameter; (BVD) Biggest vessel lumen diameter; (BVD) Biggest vessel lumen diameter; (BVD) Well lumen arctice; (DVD)	
lumen diameter; (WLR) Wall-lumen ratio; (Di Hydraulically weighted vessel diameter; (Parenchyma	
Parenchyma cross sectional area; (Pp) Percentage of xyler	(_I)
T arenenyma cross sectional area, (1 p) referringe of xyret	ı) ı)

	represented by parenchyma; (Pf) Percentage of xylem represented by fibers; (D _F) Fiber diameter; (Pv) Percentage of xylem represented by vessels; (A _s) Sapwood cross-sectional area; (XA); Xylem cross sectional area; (Ψ_x) xylem water potential; ($\theta_{s,x}$) sapwood saturated water content; (Aph) Phloem area; (Api) Pith area; (MOR) Modulus of Rupture; (ξ_x) sapwood bulk elastic modulus; (Pe) Air entry threshold; (SD) stem density; (SMF) Stem mass fraction; ($\pi_{o,x}$) sapwood osmotic potential at full turgor; ($\Psi_{tlp,x}$) sapwood water potential at turgor loss point; (RWC $_{tlp,x}$) relative water content at turgor loss point; (Cx) sapwood capacitance; (ξ_x) Stem Carbon 13 isotope; (ξ_x) Stem Nitrogen 15 isotope; (DMD) Dry mass density; (Gas
	content) Gas volumetric content; (Gas
ROOT TRAITS	(SRL) Specific Root Length; (RMF) Root mass fraction; (RMF) Root Mass Fraction; (RD) Root diameter; (RTD) Rood tissue density; (RBI) Root branching intensity; (C _{root}) total root carbon; (N _{root}) total root nitrogen; (P _{root}) total root phosphorus; (C:N _{root}) root carbon to nitrogen ratio; (C:P _{root}) Root carbon to phosphorus ratio; (N:P _{root}) root nitrogen to phosphorus ratio; Mycorrhizal colonization; nodule biomass;
WHOLE PLANT TRAITS	(NUE) Whole-plant N use efficiency; (Rp) The 13C/12C ratio of plant C; (TEc) Whole-plant transpiration efficiency of C gain; (v) Whole-plant transpiration efficiency of C gain;

^{*} Most accepted name for the functional trait referred as "wood density" (WD) in the studies selected for review.