

Table S1 – List of the composition of the families and species that were originally planted during the installation of different ecological restoration systems (1997-1998) of the Semideciduous Seasonal Forest in Botucatu, São Paulo. Labels: DIRS (direct seeding), AFS (agroforestry system), MIX (timber and firewood mixed plantation), HDIV (high-diversity tree plantation), E (exotic species), N (native species), N* (naturalized species), A (short-lived pioneers), B (long-lived pioneers, firewood trees); C (non-pioneer, mid or late successional species, canopy species, timber trees); D (non-pioneer, late successional, mid-canopy or understory trees, fleshed-fruited and NTFP trees).

Family	Specific name	Group	E/N	DIRS	AFS	MIX	HDIV
Anacardiaceae	<i>Schinus terebinthifolius</i> Raddi	A	N				X
Apocynaceae	<i>Aspidosperma polyneuron</i> Müll.Arg.	C	N		X	X	X
	<i>Chrysophyllum gonocarpum</i> (Mart. & Eichler ex Miq.) Engl.	C	N		X	X	X
	<i>Aspidosperma cylindrocarpon</i> Müll.Arg.	C	N		X		
Arecaceae	<i>Euterpe edulis</i> Mart.	D	N		X	X	X
	<i>Syagrus romanzoffiana</i> (Cham.) Glassman	D	N				X
Bignoniaceae	<i>Handroanthus avellanedae</i> (Mart. ex DC.) Mattos	C	N			X	
	<i>Zeyheria tuberculosa</i> (Vell.) Bureau ex Verl.	BC	N		X	X	X
Bixaceae	<i>Bixa orellana</i> L.	D	N		X		
Boraginaceae	<i>Cordia superba</i> Cham.	D	N				X
Cecropiaceae	<i>Cecropia pachystachya</i> Trécul	A	N				X
Euphorbiaceae	<i>Croton floribundus</i> Spreng.	A	N	X			X
Fabaceae	<i>Anadenanthera colubrina</i> (Vell.) Brenan	B	N		X	X	X
	<i>Centrolobium tomentosum</i> Guillem. ex Benth.	C	N				X
	<i>Copaifera langsdorffii</i> Desf.	C	N		X	X	X
	<i>Dalbergia nigra</i> (Vell.) Allemão ex Benth.	C	N			X	
	<i>Dipteryx alata</i> Vogel	C	N				X
	<i>Enterolobium contortisiliquum</i> (Vell.) Morong	B	N	X	X	X	X
	<i>Hymenaea courbaril</i> L.	C	N		X	X	X
	<i>Inga vera</i> subsp. <i>affinis</i> (DC.) T.D.Penn.	A	N		X		
	<i>Machaerium acutifolium</i> Vogel	A	N			X	
	<i>Machaerium stipitatum</i> Vogel	B	N			X	X
	<i>Mimosa caesalpiniiifolia</i> Benth.	A	E		X	X	

	<i>Mimosa scabrella</i> Benth.	A	N	X	X	X	
	<i>Myroxylon peruiferum</i> L.f	C	N			X	
	<i>Ormosia arborea</i> (Vell.) Harms	C	N				X
	<i>Parapiptadenia rigida</i> (Benth.) Brenan	C	N		X	X	X
	<i>Peltophorum dubium</i> (Spreng.) Taub.	B	N		X	X	
	<i>Piptadenia gonoacantha</i> (Mart.) J.F.Macbr.	A	N		X	X	X
	<i>Poecilanthus parviflora</i> Benth.	C	N				X
	<i>Pterogyne nitens</i> Tul.	B	N		X	X	X
	<i>Schizolobium parahyba</i> (Vell.) Blake	B	N	X			X
	<i>Senegalia polyphylla</i> (DC.) Britton & Rose	B	N		X	X	X
Lamiaceae	<i>Aegiphila integrifolia</i> (Jacq.) Moldenke	A	N		X		X
Lecythidaceae	<i>Cariniana estrellensis</i> (Raddi) Kuntze	C	N				X
	<i>Cariniana legalis</i> (Mart.) Kuntze	C	N			X	
Malvaceae	<i>Ceiba speciosa</i> (A.St.-Hil.) Ravenna	B	N	X			X
	<i>Luehea divaricata</i> Mart. & Zucc	B	N				X
Meliaceae	<i>Cedrela fissilis</i> Vell.	C	N		X	X	X
	<i>Cedrela odorata</i> L.	C	N		X	X	X
Moraceae	<i>Ficus guaranitica</i> Chodat	B	N				X
Myrtaceae	<i>Eugenia pyriformis</i> Cambess.	D	N				X
	<i>Eugenia uniflora</i> L.	D	N				X
Phytolacaceae	<i>Gallesia integrifolia</i> (Spreng.) Harms	A	N				X
Rubiaceae	<i>Genipa americana</i> L.	AB	N				X
Rutaceae	<i>Balfourodendron riedelianum</i> (Engl.) Engl.	C	N			X	X
	<i>Esenbeckia febrifuga</i> (A.St.-Hil.) A. Juss. ex Mart.	D	N				X
	<i>Esenbeckia leiocarpa</i> Engl.	C	N		X	X	X
Sapindaceae	<i>Diatenopteryx sorbifolia</i> Radlk.	C	N				X
	<i>Allophylus edulis</i> (A.St.-Hil. et al.) Hieron. ex Niederl.	D	N				X
Sterculiaceae	<i>Guazuma ulmifolia</i> Lam.	A	N		X	X	X
Verbenaceae	<i>Citharexylum myrianthum</i> Cham.	AB	N				X

Table S2 – List of families and species introduced eight years after establishment as enrichment planting at agroforest system (AFS) plots with fruit species at Ultisol and medicinal species at Alfisol.

Family	Scientific name	Ultisol	Alfisol
Anacardiaceae	<i>Spondias cytherea</i> Sonn.	X	
Annonaceae	<i>Rollinia sylvatica</i> (A. St-Hil.) Mart.	X	
Asteraceae	<i>Mikania glomerata</i> Spreng.		X
Caricaceae	<i>Jacaratia spinosa</i> (Aubl.) A.DC.	X	
Celastraceae	<i>Maytenus ilicifolia</i> Mart. ex Reissek		X
Clusiaceae	<i>Rheedia gardneriana</i> (Planch. & Triana) Zappi	X	
Lecythidaceae	<i>Lecythis pisonis</i> Cambess.	X	
Malpighiaceae	<i>Malpighia emarginata</i> DC.	X	
Meliaceae	<i>Trichilia catigua</i> A. Juss		X
Myrtaceae	<i>Eugenia brasiliensis</i> Lam.	X	
	<i>Eugenia myrcianthes</i> Nied.	X	
	<i>Eugenia pyriformis</i> Camb.	X	
	<i>Myrcianthes pungens</i> (O.Berg) D.Legrand	X	
	<i>Plinia cauliflora</i> (Mart.) Kausel	X	
	<i>Psidium cattleianum</i> Sabine	X	
	<i>Psidium myrtoides</i> O.Berg	X	
Punicaceae	<i>Punica granatum</i> L.	X	
Salicaceae	<i>Casearia sylvestris</i> Sw.		X

Table S3 – List of the composition of the families and species sampled 20 years after establishment in the ecological restoration systems of the Semideciduous Seasonal Forest in Botucatu, São Paulo. Labels: MIXm (‘managed’ timber and firewood mixed plantation), MIX (timber and firewood mixed plantation), HDIV (high-diversity tree plantation), AFSm (‘managed’ agroforestry system), AFS (agroforestry system), DIRS (direct seeding), P (planted), R (regeneration), E (exotic species), N (native species), N* (naturalized species), A (short-lived pioneers), B (long-lived pioneers, firewood trees); C (non-pioneer, mid or late successional species, canopy species, timber trees); D (non-pioneer, late successional, mid-canopy or understory trees, fleshed-fruited and NTFP trees).

Family	Scientific name	Group	P/R	E/N	MIXm	MIX	HDIV	AFSm	AFS	DIRS
Anacardiaceae	<i>Schinus terebinthifolius</i> Raddi	A	P	N	X	X	X		X	X
Annonaceae	<i>Rollinia sylvatica</i> A.St.-Hil	D	P	N				X	X	
Apocynaceae	<i>Aspidosperma cylindrocarpon</i> Müll.Arg.	C	P	N	X	X		X	X	
	<i>Aspidosperma polyneuron</i> Müll.Arg.	C	P	N		X	X	X		
	<i>Chrysophyllum gonocarpum</i> (Mart. & Eichler ex Miq.) Engl.	C	P	N				X		
	<i>Tabernaemontana hystrix</i> Steud.		R	N	X	X	X	X	X	X
Asteraceae	<i>Vernonanthura polyanthes</i> (Sprengel) Vega & Dematteis		R	N	X			X		
Bignoniaceae	<i>Handroanthus albus</i> (Cham.) Mattos		R	N	X	X				
	<i>Handroanthus avellanadae</i> (Lorentz ex Griseb.) Mattos	C	P	N	X	X		X		
	<i>Tecoma stans</i> (L.) Juss. ex Kunth		R	E						X
	<i>Zeyheria tuberculosa</i> (Vell.) Bureau ex Verl.	B/C	P	N	X	X		X	X	
Boraginaceae	<i>Cordia</i> sp. L.		R	N			X	X		
Cannabaceae	<i>Celtis</i> sp. L.		R	N				X		
Cecropiaceae	<i>Cecropia pachystachya</i> Trécul	A	P	N	X	X	X	X		
Combretaceae	<i>Terminalia argentea</i> Mart.		R	N		X				X
Euphorbiaceae	<i>Alchornea glandulosa</i> Poepp. & Endl.		R	N	X	X		X		
	<i>Alchornea triplinervia</i> (Spreng.) Müll.Arg.		R	N	X			X		
	<i>Croton floribundus</i> Spreng.	A	P	N	X		X	X		X
Fabaceae	<i>Anadenanthera colubrina</i> (Vell.) Brenan	B	P	N	X	X	X	X	X	

	<i>Bauhinia forficata</i> Link		R	N						X
	<i>Cassia ferruginea</i> (Schrاد.) Schrad. ex DC.		R	N		X				
	<i>Centrolobium tomentosum</i> Guillem. ex Benth.	C	P	N	X		X			
	<i>Copaifera langsdorffii</i> Desf.	C	P	N	X	X	X	X		
	<i>Dipteryx alata</i> Vogel	C	P	N			X			
	<i>Enterolobium contortisiliquum</i> (Vell.) Morong	B	P	N	X	X	X	X	X	X
	<i>Hymenaea courbaril</i> L.	C	P	N	X	X	X	X	X	
	<i>Inga vera</i> subsp. <i>affinis</i> (DC.) T.D.Penn.	A	P	N			X	X		
	<i>Lonchocarpus muehlbergianus</i> Hassl.		R	N		X	X			X
	<i>Lonchocarpus guilleminianus</i> (Tul.) Malme		R	N				X		X
	<i>Machaerium acutifolium</i> Vogel	A	P	N			X			
	<i>Mimosa caesalpiniiifolia</i> Benth	A	P	E	X	X	X	X	X	X
	<i>Myroxylon peruiferum</i> L.f	C	P	N	X	X				
	<i>Ormosia arborea</i> (Vell.) Harms	C	P	N	X		X			
	<i>Peltophorum dubium</i> (Spreng.) Taub.	B	P	N	X	X	X	X	X	X
	<i>Piptadenia gonoacantha</i> (Mart.) J.F.Macbr.	A	P	N	X	X	X	X	X	X
	<i>Poecilanthus parviflora</i> Benth.	C	P	N			X			
	<i>Pterogyne nitens</i> Tul.	B	P	N	X	X	X	X	X	X
	<i>Schizolobium parahyba</i> (Vell.) Blake	B	P	N			X			X
	<i>Senegalia polyphylla</i> (DC.) Britton & Rose	B	P	N	X	X	X	X	X	X
Lamiaceae	<i>Aegiphila integrifolia</i> (Jacq.) Moldenke	A	P	N	X		X	X	X	
Lauraceae	<i>Nectandra megapotamica</i> (Spreng.) Mez		R	N	X		X		X	X
Malvaceae	<i>Bastardiopsis densiflora</i> (Hook. & Arn.) Hassl.		R	N	X					
	<i>Luehea divaricata</i> Mart. & Zucc	B	P	N			X			
Meliaceae	<i>Cabralea canjerana</i> (Vell.) Mart.		R	N					X	
	<i>Cedrela fissilis</i> Vell.	C	P	N	X	X	X	X	X	X

	<i>Chorisia speciosa</i> A.St.-Hil.	B	P	N			X			
	<i>Guarea</i> sp. F. Allam. ex L.		R	N	X					
	<i>Trichilia claussoni</i> C.DC.		R	N			X			
	<i>Trichilia pallida</i> Sw.		R	N			X			X
	<i>Trichilia</i> sp. 1		R	N						X
Moraceae	<i>Ficus guaranitica</i> Chodat	B	P	N			X			
Myrtaceae	<i>Campomanesia xanthocarpa</i> (Mart.) O.Berg		R	N					X	
	<i>Eucalyptus</i> sp.		R	E					X	
	<i>Eugenia uniflora</i> L.	D	P	N			X		X	
	<i>Eugenia myrcianthes</i> Nied.	D	P	N					X	X
	<i>Psidium guajava</i> L.		R	N*	X	X	X	X	X	X
Piperaceae	<i>Piper amalago</i> L.		R	N	X					X
Rutaceae	<i>Balfourodendron riedelianum</i> (Engl.) Engl.	C	P	N	X	X				
	<i>Esenbeckia leiocarpa</i> Engl.	C	P	N						X
	<i>Zanthoxylum rhoifolium</i> Lam.		R	N		X		X		
Salicaceae	<i>Casearia sylvestris</i> Sw.	D	P	N				X		X
Sapindaceae	<i>Allophylus edulis</i> (A.St.-Hil. et al.) Hieron. ex Niederl.	D	P	N	X		X			
Solanaceae	<i>Solanum mauritianum</i> Scop.		R	N	X			X	X	
	<i>Solanum pseudoquina</i> A.St.-Hil.		R	N				X		
Sterculiaceae	<i>Guazuma ulmifolia</i> Lam.	A	P	N	X		X			
Urticaceae	<i>Urera baccifera</i> (L.) Gaudich. ex Wedd.		R	N	X	X		X	X	
Verbenaceae	<i>Aloysia virgata</i> (Ruiz & Pav.) Juss.		R	N	X	X	X	X	X	X
	<i>Citharexylum myrianthum</i> Cham.	A/B	P	N	X		X			
	<i>Lantana camara</i> L.		R	N*						X