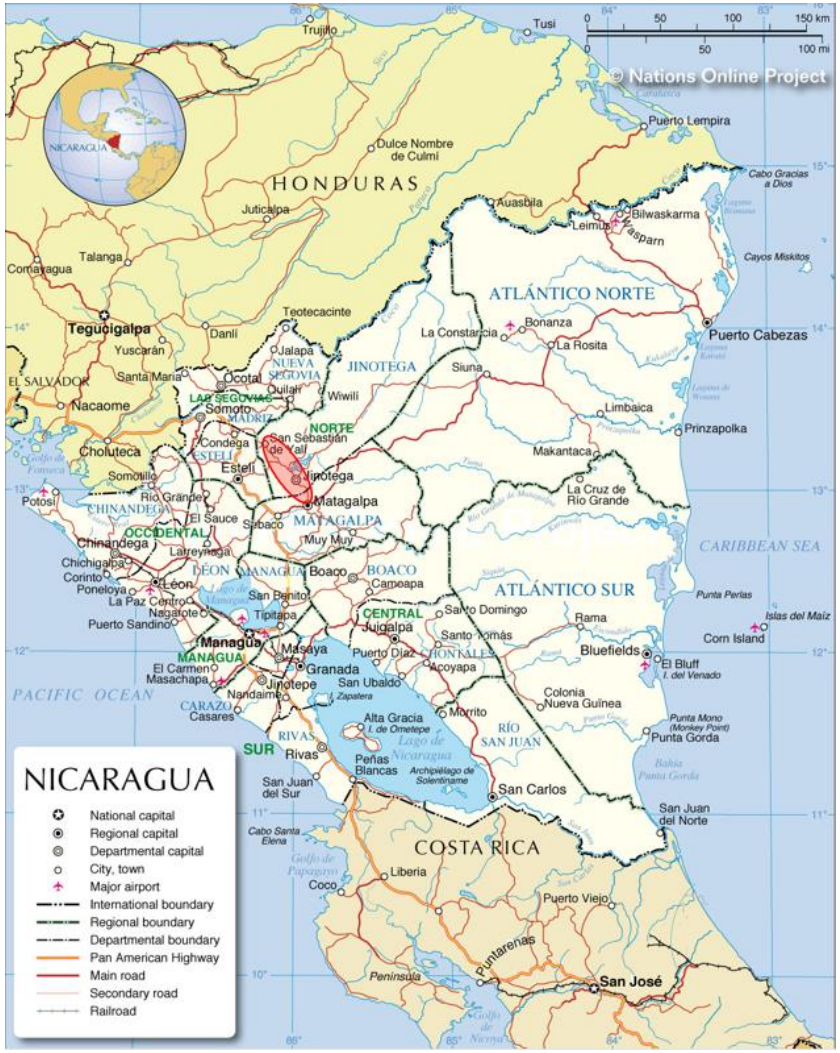

Figure S1. Area of study. All farms in this study fell within the area of north-central Nicaragua outlined in red around the cities of Jinotega and Matagalpa. Base map courtesy of the Nations Online Project.

Table S1. Shade tree species observed in ecological surveys. We report the total number of individuals observed in 87 survey plots and the percent of interviewees who mentioned the species. When uses and positive or negative attributes were mentioned in interviews, we have included those. Origin (native or exotic) was based on records in Flora de Nicaragua [51].

Common Name	Scientific Name	Family	# in Plots	Interview Mentions	Uses	Positive Characteristics	Negative Characteristics	Origin
Banano, Guineo, Plantano	*Musa spp.*	MUSACEAE	282	39%	Temporary shade, Fruit		Needs frequent replanting	Exotic
Guaba roja, Guaba colorada	*Inga oerstediana*[1]	FABACEAE	145	88%	Shade, Firewood, Timber, Wildlife	Nitrogen fixing, grows quickly, quality of shade, good growth form, recovers well from pruning, leaves improve soil, preferred firewood		Native
Guaba negra	*Inga punctata*[1]	FABACEAE	118	27%	Shade, Firewood	Nitrogen fixing, grows quickly, good growth form, recovers well from pruning, preferred firewood	Increases American leaf spot	Native
Nogal	*Juglans olanchana*[1]	JUGLANDACEAE	40	61%	Shade, Timber Wildlife	Grows fast, good for construction, easy to manage		Native
Trotón	*Mosquitoxylem jamaicense*[4,6]	ANACARDIACEAE	25	27%				Native

Pino	*Pinus oocarpa/ tecunumanii*[1]	PINACEAE	24	15%	Timber		Poor shade quality ("hot")	Native
Higuera	*Ricinius comunis*[1]	EUPHORBIACEAE	22	3%	Temporary shade			Exotic
Aguacate	*Persea americana*[1]	LAURACEAE	21	33%	Fruit, Timber, Wildlife	Good quality timber, preferred by wildlife, provides fruit		Native
Cedro rosado	*Acrocarpus fraxinifolius*[1]	FABACEAE	20	21%	Shade, Timber	Quality of shade, good for construction, nitrogen fixing	Unattractive growth form, favored by leaf cutter ants	Exotic
Guayaba	*Psidium guajava*[1]	MYRTACEAE	17	6%	Fruit			Exotic
Aguacate canelo	*Ocotea spp.*[4]	LAURACEAE	16	30%	Timber, Wildlife			Native
Roble encino	*Quercus spp.*[5]	FAGACEAE	15	30%	Timber		Increases American leaf spot	Native
Espino	*Vachellia pennatula*[1]	FABACEAE	14	9%				Native
Roble	*Quercus spp.*[5]	FAGACEAE	14	42%	Timber			Native
Cacahuillo	*Elytreria sp.*[5]	ACANTHACEAE	13	6%	Timber			Native
Lechoso	*Sapium macrocarpum*[4,5]	EUPHORBIACEAE	12	9%	Timber			Native
Cítrico	*Citrus spp.*	RUTACEAE	12	21%				Exotic
Naranja	*Citrus sinensis*[5]	RUTACEAE	11	24%	Fruit			Exotic
Mango	*Mangifera indica*[1,6]	ANACARDIACEAE	10	3%	Fruit			Exotic
Lisaquín	*Nectandra sp.*[5]	LAURACEAE	9	12%	Timber			Native
Capulín	*Trichospermum galeottii*[3]	TILIACEAE	8	0%				Native
Aguacate colorado	*Persea sp.*[5]	LAURACEAE	7	3%	Timber, Wildlife			Native

Cedro real	*Cedrela odorata*[3,5]	MELIACEAE	7	6%	Timber	Highly desirable for timber	Rare, endangered	Native
Cuajiniquil	*Inga vera*[1,4]	FABACEAE	7	18%	Firewood			Native
Jocote/Jocote ciruelo	*Spondias purpurea*[3,4,6]	ANACARDIACEAE	7	3%	Fruit			Native
Búcaro	*Erythrina berteroana*[1]	FABACEAE	6	3%	Firewood	Nitrogen fixing, easy to manage		Native
Caimito	*Conostegia xalapensis*[2]	MELASTOMATACEAE	6	12%	Firewood		Poor shade quality ("hot")	Native
Canelo	*Nectandra nitida*[1]	LAURACEAE	6	3%	Timber			Native
Guanacaste	*Enterolobium cyclocarpum*[1]	FABACEAE	6	3%				Native
Güitite	*Acnistus arborescens*[1,2,3]	SOLANACEAE	6	0%				Native
Mampas	*Lippia myriocephala*[1,3]	VERBENACEAE	6	6%	Firewood			Native
Tatascán, Tatascame	*Lasianthaea fruticosum*[1,6]	ASTERACEAE	6	3%	Firewood			Native
Aguasalipe, Aguacate guaslipe	*Beilschmiedia riparia*[6]	LAURACEAE	5	21%	Timber			Native
Palanca	*Sapranthus nicaraguensis*[4,2]	ANNONACEAE	5	3%				Native
Pisquín	*Albizia carbonaria*[5]	FABACEAE	5	0%				Native
Aguacate de monte	*Persea caerulea*[3]	LAURACEAE	4	3%	Timber			Native
Ciprés	*Cupressus lusitanica*[6]	CUPRESSACEAE	4	12%				Native
Ficus, Chilamate	*Ficus spp.1*[5]	MORACEAE	4	3%	Wildlife			Native
Guaba extranjera	*Inga jinicuil*[4]	FABACEAE	4	3%	Firewood			Exotic
Guarumo	*Cecropia spp.*[2,5]	URTICACEAE	4	3%				Native

Limoncillo	*Trichilia havanensis*[1,3,6]	MELIACEAE	4	0%				Native
Sarai	*Eugenia guatemalensi*[3,4] *Eugenia esteliensis*[6]	MYRTACEAE	4	3%				Native
Ampe			3	0%				
Guayabó	*Terminalia oblonga*[1,2,3]	COMBRETACEAE	3	18%	Timber			Native
Madero, Madero negro	*Gliricidia sepium*[1,4,5]	FABACEAE	3	9%			Only grows in warmer areas	Native
Nancite	*Byrsonima crassifolia*[1,2,6]	MALPIGHIACEAE	3	3%	Fruit			Native
Caoba	*Swietenia macrophylla*[1,5]	MELIACEAE	2	6%	Timber	Highly desirable for timber	Rare, endangered	Native
Chaperno	*Lonchocarpus spp.*[3,5]	FABACEAE	2	3%				Native
Coyote	*Platymiscium pinnatum*[2]	FABACEAE	2	6%				Native
Huele noche			2	0%				
Limón	*Citrus limon*[5]	RUTACEAE	2	6%	Fruit			Exotic
Macuelizo	*Tabebuia rosea*[2,3]	BIGNONIACEAE	2	6%				Native
Manzana			2	0%				
María	*Calophyllum brasiliense*[1]	CLUSIACEAE	2	27%	Timber, Wildlife	Good for construction		Native
Matorral	*Eupatorium sp.*[4]	ASTERACEAE	2	3%				Native
Muñeco	*Terminalia amazonia*[4]	COMBRETACEAE	2	3%	Timber			Native
Posán, Aguacate Posán	*Ocotea spp.*[3,6]	LAURACEAE	2	18%	Timber			Native
San Rafael	*Cedrela sp.*[7]	MELIACEAE	2	6%				
Sangregrado	*Croton draco*[3,6]	EUPHORBIACEAE	2	9%				Native
Sauce		SALICACEAE	2	6%				
Arrayán	*Eugenia sp.*[3,6]	MYRTACEAE	1	0%				Native
Azaharillo		SALICACEAE[7]	1	3%				

Brasil	*Haematoxylum brasiletto*[1,2,3]	FABACEAE	1	3%			Native
Cuajilote	*Parmentiera aculeata*[1,3]	BIGNONIACEAE	1	0%			Native
Cuernavaca	*Solanum wrightii*[1,3]	SOLANACEAE	1	0%			Exotic
Cugia			1	0%			
Eritrina, Elequeme	*Erythrina spp.*[5]	FABACEAE	1	3%	Firewood	Nitrogen fixing	Exotic
Guanábana	*Annona muricata*[1]	ANNONACEAE	1	0%	Fruit		Native
Liquidámber	*Liquidamber stryraciflua*[3,6]	HAMMELIDACEAE	1	21%	Timber		Native
Majagua	*Heliocarpus appendiculatus*[3,6]	TILIACEAE	1	3%			Native
Mana de león			1	0%			
Matapalo	*Ficus spp.*[5]	MORACEAE	1	6%			Native
Ojoche			1	0%			
Palo de hule	*Castilla elastic*[2,3]	MORACEAE	1	0%			Native
Paloma			1	0%			
Sacatinta	*Justicia sp.*[3,4]	ACANTHACEAE	1	0%			
Tostadillo	*Allophylus sp.*[2]	SAPINDACEAE	1	0%			Native
Vara blanca			1	0%			
Zapote	*Pouteria sapota*[5]	SAPOTACEAE	1	0%	Fruit		Native
Unidentified			42				

Names were provided as common names by producers and matched with scientific names from the following sources as indicated: 1 Stevens, D, CU Ulloa, A Pool, and OM Montiel. 2001. Flora de Nicaragua. Tropicos; 2 Salas Estrada, JB. 1993. *Árboles de Nicaragua*. Instituto Nicaragüense de Recursos Naturales y del Ambiente; 3 Grijalva Pineda, A. 2006. *Flora Útil Etnobotánica de Nicaragua.* Ministerio del Ambiente y los Recursos Naturales; 4 Muñoz, F. 2006. *Investigación de árboles, aves y orquídeas en zonas cafetaleras.* Cafenica; 5 Obregón, D. 2007. *Lista de árboles de la finca La Hammonia y Selva Negra;* 6 Watton, AJ. *Cloud Forest Trees at Celaque Honduras and in Nicaragua, their Climate Tolerance and Recommendations for Cloud Forests in Central America;* 7 Interview response