

USEFUL PLANT SPECIES FOR THE HIGH ALTITUDE TROPICS

Compiled by Eric Toensmeier for ECHO Conference 2011

Maximum altitude decreases with distance from the equator. The altitude figures included here are unfortunately from various latitudes, so acceptable elevations may be higher or lower at any given location. In some cases (such as maize and citrus) only certain varieties are for high elevations. This list was compiled from numerous resources, listed at the end of the document.

FOOD CROPS

Grain Legumes

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Cajanus</i>	<i>cajan</i>	pigeon pea	South Asia	shrub	3000m	humid to arid
<i>Canavalia</i>	<i>ensiformis</i>	jack bean*	Mesoamerica	vine	1800m	humid to semi-arid
<i>Canavalia</i>	<i>gladiata</i>	sword bean*	Africa & Asia	vine	1500m	humid to mesic
<i>Cicer</i>	<i>arietinum</i>	chickpea	Eurasia	annual	2300m	mesic to semi-arid
<i>Erythrina</i>	<i>edulis</i>	chachafruto	Andes	tree	3200m	mesic to semi-arid
<i>Glycine</i>	<i>max</i>	soybean	Asia	annual	3000m	humid to mesic
<i>Lablab</i>	<i>purpureus</i>	lablab bean	Africa	vine, some annual	2100m	humid to semi-arid
<i>Lens</i>	<i>culinaris</i>	lentil	Mediterranean	annual		mesic to semi-arid
<i>Lupinus</i>	<i>mutabilis</i>	tarwi lupine	Andes	annual	3500m	mesic to arid
<i>Phaseolus</i>	<i>vulgaris</i>	common bean	Americas	annual	3000m	humid to semi-arid
<i>Phaseolus</i>	<i>coccineus</i>	runner bean	Mesoamerica	vine, some annual		humid to semi-arid
<i>Phaseolus</i>	<i>lunatus</i>	lima bean	Americas	vine, some annual	2800m	mesic to semi-arid
<i>Pisium</i>	<i>sativum</i>	pea	Mediterranean	annual	2700m	humid to semi-arid
<i>Psophocarpus</i>	<i>tetragonobolus</i>	winged bean	Asia	vine	2000m	humid to mesic
<i>Vicia</i>	<i>faba</i>	fava bean	Mediterranean	annual		humid to mesic
<i>Vigna</i>	<i>subterranea</i>	Bambara groundnut	Africa	annual	1600m	mesic to semi-arid
<i>Vigna</i>	<i>unguiculata</i>	cowpea	Africa	annual	1500m	mesic to arid

* *Canavalia* species can be toxic if not prepared properly.

Cereals & Pseudocereals

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Amaranthus</i>	<i>caudatus</i>	kiwicha	Andes	annual	3600m	mesic to arid
<i>Amaranthus</i>	<i>cruentus</i>	African amaranth	Africa	annual	2000m	humid to semi-arid
<i>Avena</i>	<i>sativa</i>	oats	Eurasia	annual		mesic to semi-arid
<i>Chenopodium</i>	<i>pallidicaule</i>	kaniwa	Andes	annual	4400m	mesic to arid
<i>Chenopodium</i>	<i>quinoa</i>	quinoa	Andes	annual	4000m	mesic to arid
<i>Eragrostis</i>	<i>teff</i>	teff	Ethiopian highlands	annual grass	2800m	mesic to semi-arid
<i>Hordeum</i>	<i>vulgare</i>	barley	Eurasia	annual		mesic to semi-arid
<i>Oryza</i>	<i>glaberrima</i>	African rice	West Africa	annual grass	to 1700m	humid to semi-arid
<i>Oryza</i>	<i>sativa</i>	rice	Asia	annual		humid to mesic
<i>Pennisetum</i>	<i>glaucum</i>	pearl millet	west Africa	annual	1800m	mesic to semi-arid
<i>Secale</i>	<i>cereale</i>	rye	Eurasia	annual		mesic to semi-arid
<i>Setaria</i>	<i>italica</i>	foxtail millet	Asia	annual	2000m	mesic to semi-arid
<i>Sorghum</i>	<i>bicolor</i>	sorghum	Africa	annual	to 3000m	humid to arid
<i>Triticum</i>	<i>aestivum</i>	wheat	Eurasia	annual		mesic to semi-arid
<i>Zea</i>	<i>mays</i>	maize, corn	Mesoamerica	annual	4000m	humid to semi-arid

Root & Tuber Crops

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Allium</i>	<i>cepa</i>	onion	Eurasia	perennial	2000m	humid to semi-arid
<i>Allium</i>	<i>fistulosum</i>	Welsh onion	Eurasia	perennial		humid to semi-arid
<i>Alocasia</i>	<i>macrorrhiza</i>	bore	Oceania	perennial		humid to mesic
<i>Arracacia</i>	<i>xanthorrhiza</i>	Arracacha	Andes	perennial	2500m	humid to mesic
<i>Beta</i>	<i>vulgaris</i>	beets	Eurasia	annual		humid to mesic
<i>Canna</i>	<i>edulis</i>	achira	Andes	perennial	2000m	humid to semi-arid
<i>Colocasia</i>	<i>esculenta</i>	taro, malanga	Asia	perennial	2700m	humid to mesic
<i>Daucus</i>	<i>carota</i>	carrot	Eurasia	annual	2600m	humid to semi-arid
<i>Diocorea</i>	<i>bulbifera</i>	air potato	Asia & Africa	vine	2700m	humid to mesic

<i>Dioscorea</i>	<i>alata</i>	white yam	Asia	vine	2500m	humid to mesic
<i>Elaeocharis</i>	<i>dulcis</i>	water chestnut	Asia	perennial	1350m	aquatic
<i>Ensete</i>	<i>ventricosum</i>	enset	Ethiopian highlands	banana-like	3000m	mesic to semi-arid
<i>Helianthus</i>	<i>tuberosus</i>	sunchoke	North America	perennial	3600m	humid to mesic
<i>Ipomoea</i>	<i>batatas</i>	sweet potato	South America	perennial	3000m	humid to semi-arid
<i>Lepidium</i>	<i>meyenii</i>	maca	Andes	perennial	4300m	mesic to semi-arid
<i>Manihot</i>	<i>esculenta</i>	cassava	South America	shrub	1500m	humid to semi-arid
<i>Maranta</i>	<i>arundinacea</i>	arrowroot	South America	perennial	1500m	humid to mesic
<i>Nelumbo</i>	<i>nucifera</i>	lotus root	Asia	perennial	1800m	aquatic
<i>Oxalis</i>	<i>tuberosa</i>	oca	Andes	perennial	4000m	humid to semi-arid
<i>Pachyrhizus</i>	<i>ahipa</i>	ahipa	Andes	perennial	3000m	humid to semi-arid
<i>Pachyrhizus</i>	<i>erosus</i>	jicama	Mesoamerica	perennial	1400m	humid to semi-arid
<i>Raphanus</i>	<i>sativus</i>	radish	Eurasia	annual	2000m	humid to mesic
<i>Sechium</i>	<i>edule</i>	chayote	Mesoamerica	vine	2000m	humid to semi-arid
<i>Smallianthus</i>	<i>sonchifolia</i>	yacon	Andes	perennial	3500m	humid to semi-arid
<i>Solanum</i>	<i>tuberosum</i>	potato	Andes	perennial	3000m	mesic to semi-arid
<i>Sphenostylis</i>	<i>stenocarpa</i>	African yambean	Africa	annual	1800m	mesic to semi-arid
<i>Tropaeolum</i>	<i>tuberosum</i>	mashua	Andes	perennial	4300m	humid to mesic
<i>Ullucus</i>	<i>tuberosus</i>	ulluco	Andes	perennial		humid to mesic
<i>Xanthosoma</i>	<i>sagittifolium</i>	cocoyam, taioba	Amazonia	perennial	2000m	humid to mesic

Legume Vegetables

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Cajanus</i>	<i>cajan</i>	pigeon pea	South Asia	Shrub	3000m	humid to arid
<i>Canavalia</i>	<i>ensiformis</i>	jack bean*	Mesoamerica	vine	1800m	humid to semi-arid
<i>Canavalia</i>	<i>gladiata</i>	sword bean*	Africa & Asia	vine	1500m	humid to mesic
<i>Glycine</i>	<i>max</i>	soybean	Asia	annual	3000m	humid to mesic
<i>Lablab</i>	<i>purpureus</i>	lablab bean**	Africa	vine, some annual	2100m	humid to semi-arid
<i>Phaseolus</i>	<i>vulgaris</i>	common bean	Americas	annual	3000m	humid to semi-arid

<i>Phaseolus</i>	<i>coccineus</i>	runner bean	Mesoamerica	vine, some annual		humid to semi-arid
<i>Phaseolus</i>	<i>lunatus</i>	lima bean	Americas	vine, some annual	2800m	mesic to semi-arid
<i>Pisium</i>	<i>sativum</i>	pea	Mediterranean	annual	2700m	humid to semi-arid
<i>Psophocarpus</i>	<i>tetragonobolus</i>	winged bean	Asia	vine	2000m	humid to mesic
<i>Vicia</i>	<i>faba</i>	fava bean	Mediterranean	annual		humid to mesic
<i>Vigna</i>	<i>unguiculata</i>	cowpea	Africa	annual	1500m	mesic to arid

* *Canavalia* species can be toxic if not prepared properly.

** Some lablab varieties (typically cover crop forms) are toxic.

Cucurbit Vegetables

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Benincasa</i>	<i>hispida</i>	wax gourd	Asia	annual	1500m	humid to mesic
<i>Coccinia</i>	<i>grandis</i>	ivy gourd	Asia	vine	1500m	humid to mesic
<i>Cucumis</i>	<i>sativus</i>	cucumber	South Asia	annual	2000m	humid to semi-arid
<i>Cucurbita</i>	<i>maxima</i>	Maxima squash	Andes	annual		humid to semi-arid
<i>Cucurbita</i>	<i>ficifolia</i>	Malabar gourd	Americas	semi-perennial	2800m	humid to semi-arid
<i>Cucurbita</i>	<i>moschata</i>	Moschata squash	Mesoamerica	annual	2600m	humid to semi-arid
<i>Cyclanthera</i>	<i>pedata</i>	acocha	Andes	annual	2000m	humid to mesic
<i>Lagenaria</i>	<i>siceraria</i>	bottle gourd	Africa	annual	2600m	humid to semi-arid
<i>Sechium</i>	<i>edule</i>	chayote	Mesoamerica	vine	2000m	humid to semi-arid
<i>Trichosanthes</i>	<i>cucumerina</i>	snake gourd	Asia	annual	1500m	humid to mesic

Leaf, Shoot, & Stem Vegetables

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Allium</i>	<i>tuberosum</i>	garlic chives	Eurasia	Bulb	2000m	humid to semi-arid
<i>Allium</i>	<i>fistulosum</i>	Welsh onion	Eurasia	Bulb		humid to semi-arid
<i>Amaranthus</i>	<i>caudatus</i>	kiwicha	Andes	annual	3600m	mesic to arid
<i>Amaranthus</i>	<i>cruentus</i>	African amaranth	Africa	annual	2000m	humid to semi-arid
<i>Asparagus</i>	<i>officinalis</i>	asparagus	Eurasia	perennial		humid to semi-arid

<i>Bactris</i>	<i>gasipaes</i>	peach palm	Mesoamerica & South America	tree	1400m	humid
<i>Bambusa</i>	<i>oldhamii</i>	bamboo	Asia	bamboo		humid to mesic
<i>Bambusa</i>	<i>multplex</i>	bamboo	Asia	bamboo		humid to mesic
<i>Bambusa</i>	<i>textilis</i>	bamboo	Asia	bamboo		humid to mesic
<i>Beta</i>	<i>vulgaris</i>	beets	Eurasia	annual		humid to mesic
<i>Brassica</i>	<i>carinata</i>	Ethiopian kale	Ethiopian highlands	annual	1600m	humid to semi-arid
<i>Brassica</i>	<i>juncea</i>	mustard	Asia	annual		humid to semi-arid
<i>Brassica</i>	<i>oleracea</i>	cole crops	Eurasia	annual		humid to mesic
<i>Brassica</i>	<i>oleracea</i>	"colocha"	Eurasia	perennial		humid to mesic
<i>Brassica</i>	<i>rapa</i>	Asian brassicas	Asia	Annual		humid to mesic
<i>Canna</i>	<i>edulis</i>	achira	Andes	perennial	2000m	humid to semi-arid
<i>Celosia</i>	<i>argentea</i>	quail grass		annual		humid to semi-arid
<i>Chenopodium</i>	<i>pallidicaule</i>	kaniwa	Andes	annual	4400m	mesic to arid
<i>Chenopodium</i>	<i>quinoa</i>	quinoa	Andes	annual	4000m	mesic to arid
<i>Cnidioscolus</i>	<i>chayamansa</i>	chaya*	Mesoamerica	shrub		humid to arid
<i>Coccinia</i>	<i>grandis</i>	ivy gourd	Asia	vine	1500m	humid to mesic
<i>Colocasia</i>	<i>esculenta</i>	taro, malanga	Asia	perennial	2700m	humid to mesic
<i>Crotolaria</i>	<i>longirostrata</i>	chipilin	Mesoamerica	shrub	2300m	humid to semi-arid
<i>Cucurbita</i>	<i>maxima</i>	Maxima squash	Andes	annual		humid to semi-arid
<i>Cucurbita</i>	<i>ficifolia</i>	Malabar gourd	Americas	semi-perennial	2800m	humid to semi-arid
<i>Cucurbita</i>	<i>moschata</i>	Moschata squash	Mesoamerica	annual	2600m	humid to semi-arid
<i>Dendrocalamus</i>	<i>strictus</i>	bamboo	Asia	bamboo		humid to semi-arid
<i>Hibiscus</i>	<i>acetosella</i>	cranberry hibiscus	Africa	semi-perennial		humid to mesic
<i>Ipomoea</i>	<i>batatas</i>	sweet potato	South America	perennial	3000m	humid to semi-arid
<i>Lactuca</i>	<i>indica</i>	Indian lettuce	South Asia	semi-perennial		humid to mesic
<i>Lagenaria</i>	<i>siceraria</i>	bottle gourd	Africa	annual	2600m	humid to semi-arid
<i>Lycium</i>	<i>chinense</i>	wolfberry	Asia	shrub	2000m	humid to semi-arid
<i>Manihot</i>	<i>esculenta</i>	cassava*	South America	shrub	1500m	humid to semi-arid
<i>Moringa</i>	<i>oleifera</i>	moringa	India	tree	1500m	humid to semi-arid

<i>Moringa</i>	<i>stenopetala</i>	moringa	East Africa	tree	1800m	humid to semi-arid
<i>Morus</i>	<i>alba</i>	white mulberry	Asia	tree		humid to semi-arid
<i>Nasturtium</i>	<i>officinale</i>	watercress	Eurasia	perennial		aquatic
<i>Oenanthe</i>	<i>javanica</i>	water celery	Asia	perennial	2800m	aquatic
<i>Opuntia</i>	<i>ficus-indica</i>	nopale cactus	Mesoamerica	succulent		humid to arid
<i>Phyllostachus</i>	<i>heterocycla</i>	moso bamboo	Asia	bamboo		humid to mesic
<i>Pisium</i>	<i>sativum</i>	pea	Mediterranean	annual	2700m	humid to semi-arid
<i>Psophocarpus</i>	<i>tetragonobolus</i>	winged bean	Asia	vine	2000m	humid to mesic
<i>Sechium</i>	<i>edule</i>	chayote	Mesoamerica	vine	2000m	humid to semi-arid
<i>Sesamum</i>	<i>indicum</i>	sesame	Eurasia	annual	1500m	humid to semi-arid
<i>Solanum</i>	<i>nigrum/america num</i>	black nightshade	Global	annual	3000m	humid to semi-arid
		New Zealand				
<i>Tetragonia</i>	<i>tetragonioides</i>	spinach	Oceania	perennial	1700m	humid to arid

*Chaya and cassava greens must be boiled for five to ten minutes to detoxify cyanide

“Fruit” Vegetables

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Artocarpus</i>	<i>heterophyllus</i>	jakfruit	South Asia	tree	1700m	humid
<i>Carica</i>	<i>pentaphylla</i>	babaco	Andes	shrub	2500m	humid to mesic
<i>Carica</i>	<i>papaya</i>	papaya	Mesoamerica	Shrub	2100m	humid to mesic
<i>Lycopersicon</i>	<i>esculentum</i>	tomato	Mesoamerica	annual	2400m	humid to semi-arid
<i>Physalis</i>	<i>peruviana</i>	goldenberry	Andes	perennial	2600m	mesic to semi-arid
<i>Physalis</i>	<i>ixocarpa</i>	tomatillo	Mesoamerica	annual	2600m	humid to semi-arid
<i>Solanum</i>	<i>melongena</i>	eggplant	Asia	semi-perennial	1500m	humid to semi-arid

Edible Flowers & Flowerbuds

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Brassica</i>	<i>rapa</i>	Asian brassicas	Asia	Annual		humid to mesic
<i>Brassica</i>	<i>oleracea</i>	cole crops	Eurasia	annual		humid to mesic

<i>Chenopodium</i>	<i>quinoa</i>	quinoa	Andes	annual	4000m	mesic to arid
<i>Feijoa</i>	<i>sellowania</i>	feijoa	South America	shrub		humid to mesic
<i>Saccharum</i>	<i>edule</i>	pitpit	Oceania	perennial		humid to mesic

Fruits

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Actinidia</i>	<i>deliciosa</i>	kiwifruit	Asia	vine	2000m	humid to mesic
<i>Anacardium</i>	<i>occidentale</i>	cashew	South America	tree	1800m	humid to semi-arid
<i>Annona</i>	<i>cherimola</i>	cherimoya	Andes	tree		humid to mesic
<i>Annona</i>	<i>hybrids</i>	atemoya	hybrid origin	tree	2000m	humid to semi-arid
<i>Artocarpus</i>	<i>heterophyllus</i>	jakfruit	South Asia	tree	1700m	humid
<i>Bactris</i>	<i>gasipaes</i>	peach palm	Mesoamerica & South America	tree	1400m	humid
<i>Carica</i>	<i>pentaphylla</i>	babaco	Andes	shrub	2500m	humid to mesic
<i>Carica</i>	<i>papaya</i>	papaya	Mesoamerica	Shrub	2100m	humid to mesic
<i>Carissa</i>	<i>grandiflora</i>	carissa	Southern Africa	shrub	1500m	humid to semi-arid
<i>Casimiroea</i>	<i>edulis</i>	white sapote	Mesoamerica		1800m	humid to semi-arid
<i>Citrullis</i>	<i>lanatus</i>	watermelon	Africa	annual	1500m	mesic to semi-arid
<i>Citrus</i>	<i>spp.</i>	citrus fruits	Asia	tree	2000m	humid to semi-arid
<i>Crateagus</i>	<i>pubescens</i>	manzanilla	Mesoamerica	shrub	2800m	humid to semi-arid
<i>Cyphomandra</i>	<i>betacea</i>	tree tomato	Andes	shrub	2800m	humid to semi-arid
<i>Dacyrodes</i>	<i>edulis</i>	butterfruit, safu	West Africa	tree	1500m	humid to mesic
<i>Dimocarpus</i>	<i>longan</i>	longan	Asia	tree		humid to mesic
<i>Diospyros</i>	<i>digyna</i>	black sapote	Mesoamerica	tree	2000m	humid to mesic
<i>Diospyros</i>	<i>kaki</i>	Asian persimmon	Asia	tree		humid to mesic
<i>Dovyalis</i>	<i>caffra</i>	kei apple	Southern Africa	tree	2400m	humid to semi-arid
<i>Eriobotrya</i>	<i>japonica</i>	loquat	Asia	tree	3300m	humid to semi-arid
<i>Eugenia</i>	<i>uniflora</i>	Surinam cherry	South America	shrub	1800m	humid to semi-arid
<i>Feijoa</i>	<i>sellowania</i>	feijoa	South America	shrub		humid to mesic
<i>Ficus</i>	<i>carica</i>	fig	Mediterranean	tree		humid to semi-arid
<i>Hylocereus</i>	<i>undatus</i>	dragon fruit	Mesoamerica	vine	2000m	humid to semi-arid

<i>Inga</i>	<i>edulis</i>	ice cream bean	South America	tree	1600m	humid to mesic
<i>Inga</i>	<i>spp.</i>	ice cream beans	Americas	tree	1800m	humid to mesic
<i>Lycium</i>	<i>chinense</i>	wolfberry	Asia	shrub	2000m	humid to semi-arid
<i>Malpighia</i>	<i>glabra</i>	acerola	South America	tree		humid to semi-arid
<i>Manilkara</i>	<i>zapota</i>	sapodilla	Mesoamerica	tree	2000m	humid to semi-arid
<i>Morus</i>	<i>alba</i>	white mulberry	Asia	tree		humid to semi-arid
<i>Morus</i>	<i>nigra</i>	black mulberry	Asia	tree		humid to semi-arid
<i>Musa</i>	<i>paradisica</i>	banana & plantain	Asia & Africa	giant perennial	1800m	humid to mesic
<i>Myrtus</i>	<i>ugni</i>	ugni	Andes	shrub		humid to mesic
<i>Opuntia</i>	<i>ficus-indica</i>	nopale cactus	Mesoamerica	succulent		humid to arid
		banana				
<i>Passiflora</i>	<i>mollissima</i>	passionfruit	Andes	vine	3300m	humid to mesic
<i>Passiflora</i>	<i>ligularis</i>	sweet granadilla	Andes	vine	2700m	humid to mesic
<i>Persea</i>	<i>americana</i>	avocado	Mesoamerica	tree	2500m	humid to mesic
<i>Physalis</i>	<i>peruviana</i>	goldenberry	Andes	perennial	2600m	mesic to semi-arid
<i>Physalis</i>	<i>ixocarpa</i>	tomatillo	Mesoamerica	annual	2600m	humid to semi-arid
<i>Pouteria</i>	<i>lucuma</i>	lucuma	Andes	tree	3000m	mesic to semi-arid
<i>Pouteria</i>	<i>kampechiana</i>	canistel	Mesoamerica	tree	1400m	humid to semi-arid
<i>Prunus</i>	<i>salicifolia</i>	capulin	Mesoamerica	tree	3100m	humid to semi-arid
<i>Prunus</i>	<i>persica</i>	peach	Eurasia	tree		humid to semi-arid
<i>Psidium</i>	<i>cattleianum</i>	strawberry guava	South America	shrub		humid to mesic
<i>Psidium</i>	<i>guajava</i>	guava	South America	tree	2000m	humid to mesic
<i>Punica</i>	<i>granatum</i>	pomegranite	Eurasia	shrub		humid to semi-arid
<i>Pyrus</i>	<i>communis</i>	pear	Eurasia	tree		humid to mesic
<i>Rubus</i>	<i>glaucus</i>	mora de Castilla	Americas	shrub		humid to semi-arid
		Himalayan yellow				
<i>Rubus</i>	<i>ellipticus</i>	raspberry	Asia	Shrub	2000m	humid to mesic
<i>Rubus</i>	<i>spp.</i>	Andean brambles	Andes	shrub		humid to semi-arid
<i>Rubus</i>	<i>idaeus</i>	raspberry	Eurasia	shrub		humid to mesic
<i>Rubus</i>	<i>fruticosus</i>	blackberry	Eurasia	shrub		humid to mesic
<i>Rubus</i>	<i>niveus</i>	Mysore raspberry	South Asia	shrub	3000m	humid to mesic
<i>Sambucus</i>	<i>mexicana</i>	sauco	Mesoamerica	shrub		humid to semi-arid

<i>Solanum</i>	<i>nigrum/americanum</i>	black nightshade	Global	annual	3000m	humid to semi-arid
<i>Solanum</i>	<i>quitoense</i>	naranjilla	Andes	shrub	2000m	humid to mesic
<i>Solanum</i>	<i>muricatum</i>	pepino melon	Andes	perennial	3300m	humid to mesic
<i>Spondias</i>	<i>purpurea</i>	hog plum	Mesoamerica	tree	1800m	humid to semi-arid
<i>Syzigium</i>	<i>malaccense</i>	Malay apple	Asia	tree	2700m	humid
<i>Syzigium</i>	<i>aqueum</i>	rose apple	Asia	tree	2300m	humid to semi-arid
<i>Tamarindus</i>	<i>indica</i>	tamarind	Africa	tree	1500m	humid to semi-arid
<i>Vaccinium</i>	<i>spp.</i>	Andean blueberries	Andes	shrub	4000m	mesic
<i>Zizyphus</i>	<i>mauritanica</i>	Indian jujube	South Asia	tree	1800m	humid to arid
<i>Zizyphus</i>	<i>jujuba</i>	jujube	East Asia	tree	1800m	humid to arid

Nuts, Seeds, & Edible Woody Pods

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Anacardium</i>	<i>occidentale</i>	cashew	South America	tree	1800m	humid to semi-arid
<i>Artocarpus</i>	<i>heterophyllus</i>	jakfruit	South Asia	tree	1700m	humid
<i>Bactris</i>	<i>gasipaes</i>	peach palm	Mesoamerica & South America	tree	1400m	humid
<i>Balanites</i>	<i>aegyptiaca</i>	balanites	Africa	tree	1800m	mesic to arid
<i>Ceratonia</i>	<i>siliqua</i>	carob	N. Africa	tree		mesic to semi-arid
<i>Citrullis</i>	<i>lanatus</i>	egusi	Africa	annual	1500m	mesic to semi-arid
<i>Cucurbita</i>	<i>maxima</i>	Maxima squash	Andes	annual		humid to semi-arid
<i>Cucurbita</i>	<i>ficifolia</i>	Malabar gourd	Americas	semi-perennial	2800m	humid to semi-arid
<i>Cucurbita</i>	<i>moschata</i>	Moschata squash	Mesoamerica	annual	2600m	humid to semi-arid
<i>Helianthus</i>	<i>annuus</i>	sunflower	North America	annual	2600m	humid to semi-arid
<i>Juglans</i>	<i>neotropica</i>	Andean walnut	Andes	tree	3000m	humid to mesic
<i>Macadamia</i>	<i>integrifolia</i>	macadamia	Australia	tree		humid to mesic
<i>Parajubaea</i>	<i>cocoides</i>	Quito palm	Andes	tree	3000m	mesic to semi-arid
<i>Prosopis</i>	<i>chilensis</i>	mesquite	South America	tree	2900m	semi-arid to arid

Spices & Culinary Herbs

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Allium</i>	<i>sativum</i>	garlic	Eurasia	Bulb		humid to semi-arid
<i>Allium</i>	<i>tuberosum</i>	garlic chives	Eurasia	Bulb	2000m	humid to semi-arid
<i>Brassica</i>	<i>juncea</i>	mustard	Asia	annual		humid to semi-arid
<i>Capsicum</i>	<i>pubescens</i>	rocoto	Andes	shrub	2900m	humid to mesic
<i>Capsicum</i>	<i>annuum</i>	peppers	Mesoamerica	annual or shrub	3000m	humid to arid
<i>Cinnamomum</i>	<i>zeylandicum</i>	cinnamon	Asia	tree		humid to mesic
<i>Curcuma</i>	<i>longa</i>	turmeric	South Asia	perennial		humid to mesic
<i>Cymbopogon</i>	<i>citratius</i>	lemon grass	Asia	perennial		humid to semi-arid
<i>Elettaria</i>	<i>cardomomo</i>	cardamon	Asia	perennial		humid to mesic
<i>Nasturtium</i>	<i>officinale</i>	watercress	Eurasia	perennial		aquatic
<i>Zingiber</i>	<i>officinale</i>	ginger	South Asia	perennial		humid to mesic

Sugars & Beverages

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Aloe</i>	<i>vera</i>	aloe	N. Africa	Succulent		humid to arid
<i>Arenga</i>	<i>pinnata</i>	sugar palm	Asia	tree	1400m	humid to mesic
<i>Beta</i>	<i>vulgaris</i>	beets	Eurasia	annual		humid to mesic
<i>Camellia</i>	<i>sinensis</i>	tea	Asia & South Asia	shrub	1500m	humid to mesic
<i>Ceratonia</i>	<i>siliqua</i>	carob	N. Africa	tree		mesic to semi-arid
<i>Coffea</i>	<i>arabica</i>	coffee	Africa	shrub	2000m	humid to mesic
<i>Cymbopogon</i>	<i>citratius</i>	lemon grass	Asia	perennial		humid to semi-arid
<i>Hibiscus</i>	<i>acetosella</i>	cranberry hibiscus	Africa	semi-perennial		humid to mesic
<i>Hibiscus</i>	<i>sabdariffa</i>	roselle	South Asia	semi-perennial		humid to semi-arid
<i>Ilex</i>	<i>paraguariensis</i>	yerba mate	South America	shrub		mesic
<i>Malphigia</i>	<i>glabra</i>	acerola	South America	tree		humid to semi-arid
<i>Sacharum</i>	<i>officinarum</i>	sugar cane	Asia	perennial		humid to mesic
<i>Stevia</i>	<i>rebaudiana</i>	stevia	South America	perennial		humid to mesic

Oilseeds

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Bactris</i>	<i>gasipaes</i>	peach palm	Mesoamerica & South America	tree	1400m	humid
<i>Glycine</i>	<i>max</i>	soybean	Asia	annual	3000m	humid to mesic
<i>Helianthus</i>	<i>annuus</i>	sunflower	North America	annual	2600m	humid to semi-arid
<i>Jatropha</i>	<i>curcas</i>	jatropha*	Mesoamerica	shrub		humid to semi-arid
<i>Macadamia</i>	<i>integrifolia</i>	macadamia	Australia	tree		humid to mesic
<i>Moringa</i>	<i>oleifera</i>	moringa	India	tree	1500m	humid to semi-arid
<i>Moringa</i>	<i>stenopetala</i>	moringa	East Africa	tree	1800m	humid to semi-arid
<i>Oryza</i>	<i>sativa</i>	rice	Asia	annual		humid to mesic
<i>Persea</i>	<i>americana</i>	avocado	Mesoamerica	tree	2500m	humid to mesic
<i>Ricinus</i>	<i>comunis</i>	castor bean*	Africa & Asia	shrub		humid to semi-arid
<i>Sesamum</i>	<i>indicum</i>	sesame	Eurasia	annual	1500m	humid to semi-arid

* Jatropha and castor bean oils are toxic and for fuel use only.

Botanical Pesticides

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Allium</i>	<i>sativum</i>	garlic	Eurasia	perennial		humid to semi-arid
<i>Capsicum</i>	<i>pubescens</i>	rocoto	Andes	shrub	2900m	humid to mesic
<i>Capsicum</i>	<i>annuum</i>	chili peppers	Mesoamerica	annual or shrub	3000m	humid to arid
<i>Melia</i>	<i>azederach</i>	chinaberry	Asia	tree		humid to semi-arid
<i>Pachyrhizus</i>	<i>erosus</i>	jicama	Mesoamerica	perennial	1400m	humid to semi-arid
<i>Tephrosia</i>	<i>vogelii</i>	tephrosia	Africa	semi-perennial	2100m	humid to mesic

AGROFORESTRY & SUPPORT SPECIES

Nitrogen-Fixing Trees & Shrubs

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Acacia</i>	<i>angustissima</i>	timbre	Mexico & U.S.	Tree	2600m	humid to semi-arid
<i>Acacia</i>	<i>mearnsii</i>	black wattle	Australia	Tree	2000m+	humid to semi-arid
<i>Albizia</i>	<i>lebbeck</i>		South Asia	Tree	1600m	humid to semi-arid
<i>Alnus</i>	<i>acuminata</i>	ilite	Mesoamerica	Tree	3200m	humid to mesic
<i>Alnus</i>	<i>arguta</i>	aliso	Mesoamerica	Tree	3000m	humid to mesic
<i>Alnus</i>	<i>nepalensis</i>	Nepalese alder	South Asia	Tree	3000m	humid to mesic
<i>Cajanus</i>	<i>cajan</i>	pigeon pea	South Asia	Shrub	3000m	humid to arid
<i>Calliandra</i>	<i>calothyrsus</i>	calliandra	Asia	Tree	2000m	humid to semi-arid
<i>Casuarina</i>	<i>junghuhniana</i>		Asia	Tree	3000m	humid to semi-arid
<i>Casuarina</i>	<i>oligodon</i>		Oceania	Tree	2500m	humid to mesic
<i>Chaemaecytisus</i>	<i>palmensis</i>	tagasaste	N. Africa	Shrub	3000m	mesic to semi-arid
<i>Crotolaria</i>	<i>longirostrata</i>	chipilin	Mesoamerica	shrub	2300m	humid to semi-arid
<i>Crotolaria</i>	<i>ochroleuchra</i>	sun hemp	Africa	shrub	1500m	humid to mesic
<i>Desmanthus</i>	<i>virgatus</i>	bundleflower	Americas	shrub	2500m	humid to semi-arid
<i>Desmodium</i>	<i>rensonii</i>		Asia	shrub		humid to semi-arid
<i>Erythrina</i>	<i>edulis</i>	chachafruto	Andes	tree	3200m	mesic to semi-arid
<i>Erythrina</i>	<i>berteroana</i>	palo de pito	Americas	tree	2000m	humid to arid
<i>Erythrina</i>	<i>poeppigiana</i>	coral tree	Tropical Americas	tree	2000m	humid to mesic
<i>Faidherbia</i>	<i>albida</i>	winterthorn	Southern Africa	tree	2700m	mesic to arid
<i>Flemingia</i>	<i>macrophylla</i>	flemingia	Asia	shrub	2000m	humid to semi-arid
<i>Gliricidia</i>	<i>sepium</i>	madre de cacao	Mesoamerica	tree	1600m	humid to semi-arid
<i>Inga</i>	<i>edulis</i>	ice cream bean	South America	tree	1600m	humid to mesic
<i>Inga</i>	<i>spp.</i>	ice cream beans	Americas	tree	1800m	humid to mesic
<i>Leucaena</i>	<i>diversifolia</i>		Mesoamerica	tree	2500m	humid to mesic
<i>Pithecellobium</i>	<i>dulce</i>		Americas	tree	1500m	mesic to arid
<i>Prosopis</i>	<i>chilensis</i>	mesquite	South America	tree	2900m	semi-arid to arid
<i>Robinia</i>	<i>psuedoacacia</i>	black locust	North America	tree	3300m	semi-arid to mesic

<i>Rubus</i>	<i>ellipticus</i>	Himalayan yellow raspberry	Asia	Shrub	2000m	humid to mesic
<i>Sesbania</i>	<i>sesban</i>		North Africa	tree	1800m	mesic to semi-arid
<i>Tephrosia</i>	<i>vogelii</i>	tephrosia	Africa	semi-perennial	2100m	humid to mesic

Nitrogen-Fixing Cover Crops

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Arachis</i>	<i>pintoii</i>	forage peanut	South America	perennial	2000m	humid to semi-arid
<i>Canavalia</i>	<i>ensiformis</i>	jack bean	Mesoamerica	vine	1800m	humid to semi-arid
<i>Canavalia</i>	<i>gladiata</i>	sword bean	Africa & Asia	vine	1500m	humid to mesic
<i>Clitoria</i>	<i>ternatea</i>	butterfly pea	Asia	perennial	1800m	humid to semi-arid
<i>Crotolaria</i>	<i>ochroleuchra</i>	sunn hemp	Africa	shrub	1500m	humid to mesic
<i>Desmanthus</i>	<i>virgatus</i>	bundleflower	Americas	shrub	2500m	humid to semi-arid
<i>Flemingia</i>	<i>macrophylla</i>	flemingia	Asia	shrub	2000m	humid to semi-arid
				vine, some		
<i>Lablab</i>	<i>purpureus</i>	lablab bean	Africa	annual	2100m	humid to semi-arid
<i>Lupinus</i>	<i>mutabilis</i>	tarwi	Andes	annual	3500m	mesic to arid
<i>Medicago</i>	<i>sativa</i>	alfalfa	Eurasia	Perennial		mesic to semi-arid
<i>Mucuna</i>	<i>pruriens</i>	velvet bean	Asia	vine	2100m	humid to mesic
<i>Psophocarpus</i>	<i>tetragonobolus</i>	winged bean	Asia	vine	2000m	humid to mesic
<i>Pueraria</i>	<i>phaseoloides</i>	tropical kudzu	Asia	vine	2000m	humid to mesic
<i>Tephrosia</i>	<i>vogelii</i>	tephrosia	Africa	semi-perennial	2100m	humid to mesic
<i>Trifolium</i>	<i>repens</i>	white clover	Eurasia	perennial		mesic
<i>Trifolium</i>	<i>pratense</i>	red clover	Eurasia	perennial		mesic
<i>Vicia</i>	<i>faba</i>	fava bean	Mediterranean	annual		humid to mesic
<i>Vigna</i>	<i>unguiculata</i>	cowpea	Africa	annual	1500m	mesic to arid

Living Fence Species

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Bambusa</i>	<i>multiplex</i>	bamboo	Asia	bamboo		humid to mesic
<i>Bursera</i>	<i>simaruba</i>	gumbo limbo	Americas	tree		humid to semi-arid
<i>Erythrina</i>	<i>edulis</i>	chachafruto	Andes	tree	3200m	mesic to semi-arid
<i>Erythrina</i>	<i>berteroana</i>	palo de pito	Americas	tree	2000m	humid to arid
<i>Erythrina</i>	<i>poepigiana</i>	coral tree	Tropical Americas	tree	2000m	humid to mesic
<i>Gliricidia</i>	<i>sepium</i>	madre de cacao	Mesoamerica	tree	1600m	humid to semi-arid
<i>Jatropha</i>	<i>curcas</i>	jatropha	Mesoamerica	shrub		humid to semi-arid
<i>Moringa</i>	<i>oleifera</i>	moringa	India	tree	1500m	humid to semi-arid
<i>Moringa</i>	<i>stenopetala</i>	moringa	East Africa	tree	1800m	humid to semi-arid
<i>Morus</i>	<i>alba</i>	white mulberry	Asia	tree		humid to semi-arid
<i>Opuntia</i>	<i>ficus-indica</i>	nopale cactus	Mesoamerica	succulent		humid to arid
<i>Spondias</i>	<i>purpurea</i>	hog plum	Mesoamerica	tree	1800m	humid to semi-arid
<i>Yucca</i>	<i>guatemalensis</i>	izote	Mesoamerica	succulent		humid to arid

Contour Hedgerow & Living Terrace Species

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Calliandra</i>	<i>calothyrsus</i>	calliandra	Asia	Tree	2000m	humid to semi-arid
<i>Chrysopogon</i>	<i>zizanoides</i>	vetiver grass	South Asia	perennial		humid to semi-arid
<i>Cymbopogon</i>	<i>citratus</i>	lemon grass	Asia	perennial		humid to semi-arid
<i>Flemingia</i>	<i>macrophylla</i>	flemingia	Asia	shrub	2000m	humid to semi-arid
<i>Gliricidia</i>	<i>sepium</i>	madre de cacao	Mesoamerica	tree	1600m	humid to semi-arid
<i>Leucaena</i>	<i>diversifolia</i>		Mesoamerica	tree	2500m	humid to mesic
<i>Moringa</i>	<i>oleifera</i>	moringa	India	tree	1500m	humid to semi-arid
<i>Moringa</i>	<i>stenopetala</i>	moringa	East Africa	tree	1800m	humid to semi-arid
<i>Morus</i>	<i>alba</i>	white mulberry	Asia	tree		humid to semi-arid
<i>Pennisetum</i>	<i>purpureum</i>	king grass	Africa	perennial		humid to mesic
<i>Sambucus</i>	<i>mexicana</i>	sauco	Mesoamerica	shrub		humid to semi-arid

<i>Tithonia</i>	<i>diversifolia</i>	giganton	Mesoamerica	shrub	2400m	humid to semi-arid
<i>Yucca</i>	<i>guatemalensis</i>	izote	Mesoamerica	succulent		humid to arid

FORAGES

Fodder Bank Species

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Calliandra</i>	<i>calothyrsus</i>	calliandra	Asia	Tree	2000m	humid to semi-arid
<i>Desmodium</i>	<i>rensonii</i>		Asia	shrub		humid to semi-arid
			Tropical			
<i>Erythrina</i>	<i>poeppigiana</i>	coral tree	Americas	tree	2000m	humid to mesic
<i>Flemingia</i>	<i>macrophylla</i>	flemingia	Asia	shrub	2000m	humid to semi-arid
<i>Gliricidia</i>	<i>sepium</i>	madre de cacao	Mesoamerica	tree	1600m	humid to semi-arid
<i>Leucaena</i>	<i>diversifolia</i>		Mesoamerica	tree	2500m	humid to mesic
<i>Moringa</i>	<i>oleifera</i>	moringa	India	tree	1500m	humid to semi-arid
<i>Moringa</i>	<i>stenopetala</i>	moringa	East Africa	tree	1800m	humid to semi-arid
<i>Morus</i>	<i>alba</i>	white mulberry	Asia	tree		humid to semi-arid
<i>Pennisetum</i>	<i>purpureum</i>	king grass	Africa	perennial		humid to mesic
<i>Sesbania</i>	<i>sesban</i>		North Africa	tree	1800m	mesic to semi-arid
<i>Tithonia</i>	<i>diversifolia</i>	giganton	Mesoamerica	shrub	2400m	humid to semi-arid
<i>Trichanthera</i>	<i>gigantea</i>	nacadero	South America	shrub	2150m	humid to mesic
<i>Salix</i>	<i>spp.</i>	willow	Global	tree		humid to mesic

Legume Forages

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Arachis</i>	<i>pinto</i>	forage peanut	South America	perennial	2000m	humid to semi-arid
<i>Cajanus</i>	<i>cajan</i>	pigeon pea	South Asia	Shrub	3000m	humid to arid
<i>Canavalia</i>	<i>ensiformis</i>	jack bean	Mesoamerica	vine	1800m	humid to semi-arid
<i>Canavalia</i>	<i>gladiata</i>	sword bean	Africa & Asia	vine	1500m	humid to mesic
<i>Ceratonia</i>	<i>siliqua</i>	carob	N. Africa	tree		mesic to semi-arid
<i>Clitoria</i>	<i>ternatea</i>	butterfly pea	Asia	perennial	1800m	humid to semi-arid

<i>Crotolaria</i>	<i>ochroleuchra</i>	sun hemp	Africa	shrub	1500m	humid to mesic
<i>Desmanthus</i>	<i>virgatus</i>	bundleflower	Americas	shrub	2500m	humid to semi-arid
<i>Erythrina</i>	<i>edulis</i>	chachafruto	Andes	tree	3200m	mesic to semi-arid
<i>Lablab</i>	<i>purpureus</i>	lablab bean	Africa	vine, some annual	2100m	humid to semi-arid
<i>Lupinus</i>	<i>mutabilis</i>	tarwi	Andes	annual	3500m	mesic to arid
<i>Medicago</i>	<i>sativa</i>	alfalfa	Eurasia	perennial		mesic to semi-arid
<i>Mucuna</i>	<i>pruriens</i>	velvet bean	Asia	vine	2100m	humid to mesic
<i>Prosopis</i>	<i>chilensis</i>	mesquite	South America	tree	2900m	semi-arid to arid
<i>Psophocarpus</i>	<i>tetragonobolus</i>	winged bean	Asia	vine	2000m	humid to mesic
<i>Pueraria</i>	<i>phaseoloides</i>	tropical kudzu	Asia	vine	2000m	humid to mesic
<i>Stylosanthes</i>	<i>guianensis</i>	stylo	Americas	semi-perennial	2000m	humid to mesic
<i>Trifolium</i>	<i>repens</i>	white clover	Eurasia	perennial		mesic
<i>Trifolium</i>	<i>pratense</i>	red clover	Eurasia	perennial		mesic
<i>Vigna</i>	<i>unguiculata</i>	cowpea	Africa	annual	1500m	mesic to arid

Forage Grasses

Genus	Species	Common Name	Origin	Form	Max. Altitude	Climate
<i>Brachiaria</i>	<i>brizantha</i>		Africa	perennial	2000m	humid to mesic
<i>Chloris</i>	<i>gayana</i>	rhodes grass	Africa	perennial	2000m	mesic to semi-arid
<i>Cynodon</i>	<i>dactylon</i>	Bermuda grass	Africa & Asia	perennial		humid to semi-arid
<i>Panicum</i>	<i>maximum</i>		Africa	perennial	1500m	humid to mesic
<i>Paspalum</i>	<i>notatum</i>	Bahia grass	Americas	perennial	2000m	humid to mesic
<i>Pennisetum</i>	<i>purpureum</i>	king grass	Africa	perennial		humid to mesic
<i>Setaria</i>	<i>sphacelata</i>	setaria	Africa	perennial	3000m	mesic to semi-arid

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