Zone-specific Native and Polynesian plants for Maui County

Zone 4

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Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Sh	Artemisia mauiensis var. diffusa	Maui wormwood, 'ahinahina	2'	3,	1,000' to higher	Dry to Medium
Sh	Bidens hillebrandiana ssp. hillebrandiana	koʻokoʻolau		2	sea to 1,000'	Dry to Wet
Sh	Bidens menziesii ssp. menziesii	koʻokoʻolau		3.		
Sh	Bidens micrantha ssp. micrantha	koʻokoʻolau		3,		
Sh	Cordyline fruticosa	B, Ki	9			
Sh	Dianella sandwicensis	ʻuki	2.	2.	1,000' to higher	Dry to Medium
Sh	Lipochaeta lavarum	nehe	3.	3.	sea to 3,000'	Dry to Medium
Sh	Osteomeles anthyllidifolia	'ulei, eluehe	4.	.9	sea to 3,000'	Dry to Medium
Sh	Scaevola sericea	naupaka, naupaka-kahakai	.9	8.	sea to 1,000'	Dry to Medium
Sh	Solanum nelsonii	'akia, beach solanum	3.	3.	sea to 1,00'	Dry to Medium
Sh	Styphelia tameiameiae	pukiawe	.9	.9	1,000' to higher	Dry to Medium
Sh	Vitex rotundifolia	pohinahina	3.	4	sea to 1,000'	Dry to Medium
Sh	Wikstroemia uva-ursi kauaiensis kauaiensis	akia, Molokai osmanthus				
Sh - Tr	Broussonetia papyrifera	wauke, paper mulberry	.8	.9	sea to 1,000°	Dry to Medium
Sh - Tr	Myoporum sandwicense	naio, false sandalwood	10.	10.	sea to higher	Dry to Medium
Sh - Tr	Nototrichium sandwicense	kulu'i	8.	8.	sea to 3,000'	Dry to Medium
Sh-Tr	Dodonaea viscosa	'a'all'i		.8.	sea to higher	Dry to Medium
<u> </u>	Acacia koa	коа	50' - 100'	40' - 80'	1,500' to 4,000'	Dry to Medium
1	Aleurites moluccana	candlenut, kukul	.20	50.	sea to 3,000°	Medium to wet
1	Calophyllum inophyllum	kamani, alexandrian laurel	.09	40	sea to 3,000	Medium to wet
	Canthium odoratum	Alahe'e, 'ohe'e, walahe'e	12		sea to 3,000	Ury to integral
=	Charpentiera obovata		15.			1000
=	Cordia subcordata	kou	30	c7	sea to 1,000 ;	
=	Diospyros sandwicensis	lama	77		sea to 3,000	July to integral !
	Hibiscus furcellatus	Takiohala, hau-hele	Ω			1000
1	Metrosideros polymorpha var. macrophylla	ohi'a lehua	25'	25	sea to 1,000°	Dry to wet
E	Morinda citrifolia	indian mulberry, noni	20.	15	sea to 1,000'	Dry to wet

Zone 4

Zone-specific Native and Polynesian plants for Maui County

					1	
ype	Scientific Name	Common Name	Height	Height Spread		water req.
	Nestegis sandwicensis	olopua	15'	15'	1,000' to 3,000'	1,000' to 3,000' Dry to Medium
	Pandanus tectorius	hala, puhala (HALELIST)	35	25'	sea to 1,000'	Dry to Wet
	Pleomele auwahiensis	halapepe	20.			
	Rauvolfia sandwicensis	hao	20.	15.	sea to 3,000'	Dry to Medium
	Santalum ellipticum	coastal sandalwood, 'Ill-ahi	.8	.8	sea to 3,000'	Dry to Medium
	Sophora chrysophylla	mamane	15	15	1,000' to 3,000' Medium	Medium
	Thespesia populnea	milo	30.	30,	sea to 3,000'	Dry to Wet
	Alyxia oliviformis	maile	Vine		sea to 6,000'	Medium to Wet
						Marine and the second s

Zone-specific Native and Polynesian plants for Maui County

Zone 5

Туре	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
	Colubrina asiatica	anapanapa	3.	.01	sea to 1,000°	Dry to Wet
ම	Eragrostis variabilis	вој-оша,	-10	2	sea to 3,000'	Dry to Medium
0	Fimbristylis cymosa ssp. spathacea	mau'u'aki'aki fimbristylis	0.5	1	sea to 1,000°	Dry to Medium
Gr	Boerhavia repens	alena	0.5	4	sea to 1,000°	Dry to Medium
Gr	Chamaesyce celastroides var. laehiensis	akoko	2'	3	sea to 1,000°	Dry to Medium
Gr	Cressa truxillensis	cressa	0.5	1.	sea to 1,000°	Dry to Medium
Gr	Heliotropium anomalum var. argenteum	hinahina ku kahakai		2	sea to 1,000°	Dry to Medium
Gr	Jacquemontia ovalifolia ssp. sandwicensis	pa'u o hi'aka	0.5	9	sea to 1,000'	Dry to Medium
Gr	Lipochaeta integrifolia	nehe	F and	9	sea to 1,00°	Dry to Medium
Gr	Sesuvium portulacastrum	'akulikuli, sea-purslane	0.5	2	sea to 1,000'	Dry to Wet
Gr	Sida fallax	Vima	0.5	50	sea to 1,000°	Dry to Medium
Ğr	Tephrosia purpurea var. purpurea	auhuhu	2.	2	sea to 1,000'	Dry to Medium
Gr - Sh	Hibiscus calyphyllus	ma'o hau hele, Rock's hibiscus	3	2	sea to 3,000'	Dry to Medium
Gr-Sh	Lycium sandwicense	'ohelo-kai, 'ae'ae	2	2	sea to 1,000'	Dry to Medium
	Cocos nucifera	coconut, niu	100,	30	sea to 1,000'	Dry to Wet
	Pritchardia hillebrandii	lo'ulu, fan palm	25'	15	sea to 1,000'	Dry to Wet
	Mariscus Javanicus	marsh cypress, 'ahu'awa	910	0.5	sea to 1,000'	Dry to Medium
Sh	Argemone glauca var. decipiens	pua kala	59	2.	sea to 3,000°	Dry to Medium
Sh	Artemisia australis	ahinahina	72	23	sea to 3,000'	Dry to Medium
Sh	Bidens hillebrandiana ssp. hillebrandiana	koʻokoʻolau		2	sea to 1,000'	Dry to Wet
Sh	Bidens meulensis	koʻokoʻolau		.3.	sea to 1,000'	Dry to Medium
Sh	Chenopodium oahuense	Taheahea, aweoweo	9		sea to higher	Common
Sh	Dianella sandwicensis	uki	Ñ	ζĄ	1,000" to higher	COLUMN TO SERVICE STATE OF SERVICE STATE
3	Cossimilar lomoning im	Imag Bawaijan cotton	[2]		Sea for 1000	III BLAVI TO WELL HITTE

Zone-specific Native and Polynesian plants for Maui County

Zone 5

Hedyoris spp. au, pilo 3' 2' 1,000 to 3,000 to	Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Lipochaeta lavarum nehe 3' sea to 3,000' Osteomeles anthylidifolia ulel, eluehe 4' 6' sea to 3,000' Scaevola sericea Serina gaudichaudii kolomana 3' 5' sea to 1,000' Serina gaudichaudii kolomana akta, beach solanum 3' 4' sea to 1,000' Vilex rotundifolia pohinahina pohinahina 3' 4' sea to 1,000' Wikstroemia uva-ursi kaualensis kaualensis kaualensis kaualensis radakood pohinahina 3' 4' sea to 1,000' Wikstroemia uva-ursi kaualensis kaualensis radakood rada, Molokai osmanthus 10' 8' sea to 1,000' Wikstroemia uva-ursi kaualensis kaualensis radakood radii'i a' sea to 1,000' Alaurites moluccana raali'i sea to higher 50' sea to higher Condia subcordata kou kou 4'0' sea to 1,000' Hibiscus furcellatus akkohala, hau-hele 8' sea to 1,000' Moninda cifrifolia pandanus lectorius a' sea to 1,000'	Sh		au, pilo	3	2	1,000' to 3,000'	THE STATE OF
Osteomeles anthylildifolia Ulei, elueñe Lueñe 4* 6* sea to 3,000* Scaevola sericea raupaka, naupaka, naupaka-kahakal 6* 8 sea to 1,000* Solanum nelsonii rakia, beach solanum 3* 4* sea to 1,000* Wikstroemia uva-ursi kauaiensis kauaiensis kauaiensis kauaiensis kauaiensis hari, alexandrian lauren 7* 4* sea to 1,000* Wikstroemia uva-ursi kauaiensis kauaiensis kauaiensis kauaiensis kauaiensis hari, alexandriam lauren 7* 4* sea to 1,000* Wikstroemia uva-ursi kauaiensis kauaiensi kauaiens	Sh	Lipochaeta lavarum	nehe	(3)	33	sea to 3,000'	Dry to Medium
Scaevola sericea naupaka, naupaka-kahakat 6" 8" sea to 1,000 Sonna gaudichaudii velomana 3" 4" sea to 1,000 Solanum nelsonii akia, beach solanum 3" 4" sea to 1,000 Vitex rotundifolia pohinahina 3" 4" sea to 1,000 Wysporum sandwicense nalo, false sandalwood 10" 10" 10" sea to 1,000 Mysporum sandwicense "a ali' Aleurites moluccana "a ali' sea to 1,000 sea to 1,000 Aleurites moluccana candienut, kukul 6" 8" sea to 3,000 Calophyllum inophyllum ino	Sh	Osteomeles anthyllidifolia	65 (882.78)	45	9	sea to 3,000'	Dry to Medium
Senna gaudichaudii kolomana For Solanum	Sh	Scaevola sericea	naupaka, naupaka-kahakai	.9	80	sea to 1,000'	Dry to Medium
Solanum nelsonii akia, beach solanum 3° 3° sea to 1,00° Vitex rotundifolia Wikstroemia uva-ursi kaualensis kaualensis laufa, Molokai osmanthus 10° <td< td=""><td>Sh</td><td>Senna gaudichaudii</td><td>kolomana</td><td>2.</td><td>5.</td><td>sea to 3,000'</td><td>Dry to Medium</td></td<>	Sh	Senna gaudichaudii	kolomana	2.	5.	sea to 3,000'	Dry to Medium
Vitex rotundifolia pohinahina 3° 4° sea to 1,000 Wikstroemia uva-ursi kauaiensis kauaiika kaiiikui 10° 10° 10° sea to 1,000 Dodonaea viscosa candienut, kukui 6° 8° sea to 1,000 Calophyllum inophyllum kamani, alexandrian laurel 60° 40° sea to 3,000 Cordia subcordata kkou akiohala, hau-hele 8° 25° sea to 1,000 Morinda citrifolia hala, puhala (HALELIST) 35° 25° sea to 1,000 Thespesia popuinea millo millo 30° 30° sea to 3,000 Ipomoea pes-caprae beach morning glory, pohuehue 1 sea to 3,000 30° sea to 3,000	Sh	Solanum nelsonii	akia, beach solanum	Ġ	3,	sea to 1,00°	Dry to Medium
Wikstroemia uva-ursi kauaiensis kauaitus aka kauaitus	Sh	Viex rotundifolia	pohinahina	3.	4	sea to 1,000'	Dry to Medium
Myoporum sandwicense nalo, false sandalwood 10 10 10 sea to higher Dodonaea viscosa a alifu candlenut, kukui 6° 8° sea to 3,000° Aleurifes moluccana candlenut, kukui 50 50° sea to 3,000° Cordia subcordata kou 40° sea to 3,000° Hibiscus furcellatus akiohala, hau-hele 8° sea to 1,000° Morinda citrifolia hala, puhala (HALELIST) 35° sea to 1,000° Pandanus teclorius milo 35° sea to 1,000° Thespesia populnea milo 30° sea to 3,000° Ipomoea pes-caprae beach morning glory, pohuehue 1 sea to 3,000°	Sh	Wikstroemia uva-ursi kauaiensis kauaiensis	aki				
Dodonaea viscosa afali'i Sea to higher Sea to higher Aleurites moluccana candlenut, kukui 50° <td>Sh-1r</td> <td>Myoporum sandwicense</td> <td>naio, faise sandalwood</td> <td>.0].</td> <td>(0)5</td> <td>sea to higher</td> <td>Dry to Medium</td>	Sh-1r	Myoporum sandwicense	naio, faise sandalwood	.0].	(0)5	sea to higher	Dry to Medium
a candlenut, kukul 50° 50° sea to 3,000° Ilum kamani, alexandrian laurel 60° 40° sea to 3,000° kou 30° 25° sea to 1,000° akiohala, hau-hele 8° sea to 1,000° indian mulberry, noni 20° 15° sea to 1,000° a milo 35° 25° sea to 1,000° milo milo sea to 3,000° sea to 3,000° e beach morning glory, pohuehue 1 sea to 3,000°	Sh-If	Dodonaea Viscosa	aali	.9	.8	sea to higher	Dry to Medium
flum kemani, alexandrian laurel 60° 40° sea to 3,000° kou akiohala, hau-hele 8° sea to 1,000° indian mulberry, noni 20° 15° sea to 1,000° nilio 35° 25° sea to 1,000° milio 30° sea to 3,000° e beach morning glory, pohuehue 1 sea to 3,000°		Aleurites moluccana	candlenut, kukui	20.	20,	sea to 3,000	Medium to Wet
kou 30° 25° sea to 1,000° akiohala, hau-hele 8° 5° 5° 10°	1	Calophyllum inophyllum	kamani, alexandrian laurel	.09	40,	sea to 3,000'	Medium to Wet
akiohala, hau-hele8'indian mulberry, noni20'15'sea to 1,000'naia, puhala (HALELIST)35'25'sea to 1,000'milomilo30'sea to 3,000'ebeach morning glory, pohuehue1	11	Cordia subcordata	kou	.30),	25,	sea to 1,0000'	Dry to Wet
Indian mulberry, noni 20° 15° sea to 1,000° 18° sea to 1,000° sea to 1,000° sea to 1,000° sea to 3,000° se	II.	Hibiscus furcellatus	'akiohala, hau-hele	æ			
hale, puhala (HALELIST) 35' 25' sea to 1,000' a milo 30' 30' sea to 3,000' e beach morning glory, pohuehue 1 1		Morinda citrifolia	indian mulberry, noni	20,	15	sea to 1,000	Dry to Wet
a milo 3,000° sea to 3,000° se		Pandanus lactorius	hala, puhala (HALELIST)	35	25	sea to 1,000'	Dry to Wet
		Thespesia populnea	milo	.30	:00:	sea to 3,000'	Dry to Wet
	Δ	Ipomoea pes-caprae	beach morning glory, pohuehue				

DO NOT PLANT THESE PLANTS !!!|

Соттоп пате	Scientific name	Plant family
black wattle	Acacia mearnsii	Mimosaceae
blackberry	Rubus argutus	Rosaceae
blue gum	Eucalyptus globulus	Myrtaceae
bocconia	Bocconia frutescens	Papaveraceae
broad-leaved cordia	Cordia glabra	Boraginaceae
∦broomsedge, yellow bluestem	Andropogon virginicus	Poaceae
buffelgrass	Cenchrus ciliaris	Poaceae
butterfly bush, smoke bush	Buddleja madagascariensis	Buddlejaceae
cats claw, Mysore thorn, wait-a-bit	Caesalpinia decapetala	Caesalpiniaceae
common ironwood	Casuarina equisetifolia	Casuarinaceae
common velvet grass, Yorkshire fog	Holcus lanatus	Poaceae
fiddlewood	Citharexýlum spinosum	Verbenaceae
fire free, faya tree	Myrica faya	Myricaceae
glorybower	Clerodendrum laponicum	Verbenaceae
hairy cat's ear, gosmore	Hypochoeris radicata	Asteraceae
haole koa	Leucaena leucocephala	Fabaceae
lvy gourd, scarlet-fruited gourd	Coccinia grandis	Cucurbitaceae
luniper berry	Citharexylum caudatum	Verbenaceae
kahili flower	Grevillea banksii	Proteaceae
klu, popinac	Acacia farnesiana	Mimosaceae
logwood, bloodwood tree	Haematoxylon campechianum	Caesalpiniaceae
(Jodnat	Eriobotrya japonica	Rosaceae
meadow ricegrass	Ehrharta stipoides	Роасезе
melaleuca	Melaleuca quinquenervia	Myraceae
miconia, velvel leaf	Miconia calvescens	Melastomataceae
narrow-leaved carpetgrass	Axonopus fissifolius	Роасеае
oleaster	Elaeagnus umbellata	Elaeagnaceae
oriental mangrove	Bruguiera gymnorrhiza	Rhizophoraceae
padang cassia	Cinnamomum burmanii	Lauraceae
palmgrass	Setaria palmifolia	Poaceae
pearl flower	Heterocentron subtriplinervium	Melastomataceae
quinine tree	Cinchona pubesens	Rubiaceae
satin leaf, caimitillo	Chrysophyllum oliviforme	Sapotaceae
silkwood, Queensland maple	Findersia brayleyana	Rutaceae
silky oak, silver oak	Grevillea robusta	Profeaceae .
strawberry guava	Psidium cattleianum	Myrtaceae
swamp oak, saltmarsh, longleaf ironwood	Casuarina glauca	Casuarinaceae
sweet vernalgrass	Anthoxanthum odoratum	Poaceae
Tree of heaven	Ailanthus altissima	Simaroubaceae
frumpet tree, guarumo	Cecropia obtusifolia	Cecropiaceae
_	Hedychium coronarium	Zingiberaceae
white moho	Heliocarpus popayanensis	lilaceae
yellow ginger	Hedychium flavescens	Zingiberaceae
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DO NOT PLANT THESE PLANTS !!!

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Common name	Scientific name	Plant family
	Lasminum fluminense	Oleaceae
	Arhrosiema ciliatum	Melastomataceae
	Dissofts rottindifolia	Melastomataceae
	Fringron karvinskianus	Asteraceae
	Filoalyottis robusta	Myrtaceae
	Hervehilm gardnerianum	Zingiberaceae
	Inches plantolitis	Juncaceae
	Tonhostemon confertus	Myrtaceae
	Madinilla Cuminoli	Melastomataceae
	Madicilla machilica	Melastomataceae
	Medicilla venosa	Melastomataceae
	Molaetoma candidim	Melastomataceae
	Melinis minutifiora	Poaceae
	Oleo guronaga	
	Ovenora naniculata	Melastomataceae
	Danion maximim	Poaceae
	Decreation (confidence)	Poaceae
	Descripts adulis	Passiforaceae
	Dhormium tenax	Agavaceae
	Divis tanda	Pinaceae
	Disconic palida	Fabaceae
	Distribute diomerata	Melastomataceae
	Tiel Old Dis grounding to	Myrtaceae
	Khodoliyida tohtonada	Araliaceae
	Screnera acunophysis	Myrtaceae
	Syzygiuiii lainibus	Minosaceae
Australian blackwood	Acada Bearlovyion	Cyatheaceae
Australian tree fern	Cyainea cooperi	Cvatheaceae
Australian tree fern	Sphaeropteris cooperi	Дерегара
Beggar's tick, Spanish needle	Bidens pilosa	Poaceae
California grass	Stachiaria munca	Moraceae
Chinese banyon, Maylayan banyon	Ficus mirocarpa	Acadhaceae
Chinese violet	Asystasia gangetica	Anacardiaceae
Christmasberry, Brazilian pepper	Schinus terebintinifolius	Mimosaceae
Formosan koa	Acadia comusa	Asieraceae
German ivy	Seriecio ninanciaca	Caprifoliaceae
Japanese honeysuckie	Cidemia hirta	Melastomataceae
Koster's curse	S polana camara	Verbenaceae
Laniana	Furname foelide	Agavaceae
Mauritus nemp	Frayinis indei	Oleaceae
Mexican ash, tropical asi	Hunnemannia tumariifolia	Papaveraceae
Mexican (uit) poppy	Angiopteris evecta	Marattiaceae
Mules 1001, Wadagascal life 1511	Corynocarpus laevigatus	Corynocarpaceae
	Leptospermum scoparium	Myrtaceae
New Zearallu tea	Cortaderia iubata	Poaceae
Pampas grass	Castilloa elastica	Moraceae
- 1	Ardisia elliptica	Myrsinaceae
Shoe in alusia	Passifiora mollissima	Passifloraceae
Daliels 'Oka	and the second s	and production and differences management of programming the conference of the conference of the conference of

Selection

As a general rule, it is best to select the largest and healthiest specimens. However, be sure to note that they are not pot-bound. Smaller, younger plants may result in a low rate of plant survival. When selecting native species, consider the site they are to be planted in, and the space that you have to plant. For example: Mountain species such as koa and maile will not grow well in hot coastal areas exposed to strong ocean breezes. Lowland and coastal species such as wiliwili and Kou require abundant sunshine and porus soil. They will not grow well with frequent cloud cover, high rainfall and heavy soil.

Consider too, the size that the species will grow to be. It is not wise to plant trees that will grow too large.² Overplanting tends to be a big problem in the landscape due to the underestimation of a species' height, width or spread.

A large, dense canopied tree such as the kukui is a good shade tree for a lawn. However, it's canopy size and density of shade will limit what can be planted in the surrounding area. Shade cast by a koa and ohia lehua is relatively light and will not inhibit growth beneath it.

Keep seasons in mind when you are selecting your plants. Not all plants look good year round, some plants such as ilima will look scraggly after they have flowered and formed seeds. Avoid planting large areas with only one native plant. Mixing plants which naturally grow together will ensure the garden will look good all year round.³ Looking at natural habitats helps to show how plants grow naturally in the landscape.

When planting an area with a mixed-ecosystem, keep in mind the size and ecological requirements of each plant. Start with the hardiest and most easily grown species, but allow space for fragile ones in subsequent plantings.

Acquiring natives

Plants in their wild habitat must be protected and maintained. It is best and easiest to get your plants from nurseries (see list), or friend's gardens. Obtain proper permits from landowners and make sure you follow a few common sense rules:

- collect sparingly from each plant or area.
- some plants are on the state or Federal Endangered Species list. Make sure you get permits (see app. A,B)

¹ K. Nagata, P.6

² K. Nagata, P.9

³ Nagata, P.9

Soil

Once you have selected your site and the plants you wish to establish there, you must look at the soil conditions on the site. Proper soil is necessary for the successful growth of most native plants, which preform poorly in hard pan, clay or adobe soils. If natives are to be planted in these types of soil, it would be wise to dig planting holes several times the size of the rootball and backfill with 50-75% compost.⁴ A large planting hole ensures the development of a strong root system. The plant will have a headstart before the roots penetrate the surrounding poor soil.⁵

It is recommended that native plants not be planted in ground that is more dense than potting soil. If there is no alternative, dig a hole in a mound of soil mixed with volcanic cinder which encourages maximum root development. Fill the hole with water, if the water tends to puddle or drain too slowly, dig a deeper hole until the water does not puddle longer than 1 or 2 minutes.⁶ Well-drained soil is one of the most important things when planting natives as you will see in the next section.

Irrigation

Most natives do very poorly in waterlogged conditions. Do not water if the soil is damp. Water when the soil is dry and the plants are wilting. Once established, a good soaking twice a week should suffice. Deep soaking encourages the development of stronger, and deeper root systems. This is better than frequent and shallow watering which encourage weaker, more shallow root systems.

The following is a watering schedule from Kenneth Nagata's Booklet, How To Plant A Native Hawaiian Garden:

WATER REQUIREMENT	WATERING FREQUENCY
Heavy	3x / week
Moderate	2x / week
Light	lx / week

Red clay soils hold more water for a longer period of time than sandy soils do. If your area is very sunny or near a beach, things will dry out faster. Even in the area of one garden, there are parts that will need more or less water. Soils can vary and amount of shade and wind differ. After plants are established (a month or two for most plants, up to a year for some trees), you can back off watering.

⁴ Nagata, p. 6.

⁵ Nagata, p. 8

⁶ Nagata, p. 8

Automatic sprinkler systems are expensive to install and must be checked and adjusted regularly. Above-ground systems allow you to monitor how much water is being put out, but you lose a lot due to malfunctioning of sprinkler heads and wind. The most efficient way to save water and make sure your plants get enough water, is to hand-water. This way you are getting our precious water to the right places in the right amounts.⁷

Fertilizer

An all-purpose fertilizer 10-10-10 is adequate for most species. They should be applied at planting time, 3 months later, and 6 months thereafter. Use half the dosage recommended for ornamentals and pay special attention to native ferns which are sensitive to strong fertilizers. Use of organic composts and aged animal manures is suggested instead of chemical fertilizers. In addition, use of cinders for providing trace minerals is strongly recommended.⁸

Natives are plants which were here hundreds of years before the polynesians inhabited the Hawaiian Islands. They were brought here by birds, or survived the harsh ocean conditions to float here. They are well-adapted to Hawaii's varying soil and environmental conditions. This is why they make prime specimens for a xeriscape garden. However, natives will not thrive on their own, especially under harsh conditions. On the other hand, like any other plant, if you over-water and over-fertilize them, they will die. Follow the instructions given to you by the nursery you buy the plant from, or from this booklet. Better yet, buy a book (suggested readings can be found in the bibliography in the back of this pamphlet), read it, and learn more about native plants. I guarantee that you will be pleased with the results.

⁷ Bornhorst, p. 19-20

⁸ Nagata, p. 6

Propagation

There are many ways to propagate and plant-out native Hawaiian species. One of the most thourough and helpful book is Heidi Bornhorst's book, *Growing Native Hawaiian Plants*. The easiest, and best way to obtain natives for the novice gardener is to get them from a reputable nursery (see appendix c). That way all you will have to do is know how to transplant (if necessary) and plant-out when you are ready. These are the two methods I have listed here.

Transplanting

1. Use pots that are one size bigger than the potted plant is in

2. Get your potting medium ready

Good potting medium is a ½, ½ mixture of peat moss and perlite. If the plant is from a dry or coastal area, add chunks of cinder or extra perlite. If it is a wet forest species, add more peat moss or compost. Be aware that peat moss is very acidic and certain plants react severely to acidity.

If the plant is to eventually be planted into the ground, make a mix of equal parts peat moss, perlite, and soil from the area in which the plant is to be planted. Slow-release fertilizer can be mixed into the potting medium.

3. Once pots, potting medium, fertilizer and water are ready, you can begin re-potting. Keep the plant stem at the same depth it was in the original pot. Avoid putting the plant in too large a pot, as the plant may not be able to soak up all the water in the soil and the roots may drown and rot.

Mix potting medium and add slow-release fertilizer at this time. Pre-wet the medium to keep dust down and lessen shock to the plant. Put medium in bottom of pot. Measure for the correct depth in the new pot. Make sure there is from ½ to 2 inches from the top of the pot so the plant can get adequate water. Try to stand the plant upright and center the stem in the middle of the pot.

Water the plant thoroughly after transplanting. A vitamin B-1 transplanting solution can help to lessen the transplant shock. Keep the plant in the same type of environment as it was before, sun or shade. If roots were broken, trimm off some of the leaves to compensate for the loss.⁹

Planting out

- 1. Plant most native Hawaiian plants in a sunny location in soil that is well-drained.
- 2. Make the planting hole twice as wide as the root ball or present pot, and just as deep. If the soil is clay-like, and drains slowly, mix in some coarse red or bland cinder, coarse perlite or

⁹ Bornhorst, p.20-21

coarse compost. Place some slow-release fertilizer at the bottom of the hole.

- 3. Carefully remove the plant from the container and place it in the hole. The top of the soil should be at the same level as the top of the hole, if it is too high or too low, adjust the soil level so that the plant is at the right depth.
 - 4. Water thoroughly after you transplant.

Mulch

Most natives cannot compete with weeds, and therefore must be weeded around constantly in order to thrive. Mulch is a practical alternative, which discourages and prevents weeds from growing.

Hawaii's hot, humid climate leads to the breaking down of organic mulches. Thick organic mulches such as wood chips and leaves, may also be hiding places for pests.

Stone mulches are attractive, permanent and can help to improve soil quality. Red or black cinder, blue rock chips, smooth river rocks and coral chips are some natural choices.¹⁰ Macadamia nut hulls are also easy to find and can make a nice mulch.¹¹

Never pile up mulch right next to the stem or trunk of a plant, keep it a few inches away.

¹⁰ Bornhorst, p. 24

¹¹ Nagata, p. 7

ZONES

The Maui County Planting Plan has compiled a system of 5 zones of plant growth for Maui County. The descriptions of zones and maps for these zones are as follows:

Zone 1:

Wet areas on the windward side of the island. More than 40 inches of rain per year. Higher than 3,000 feet.

Zone 2:

Cool, dry areas in higher elevations (above 1,000 feet). 20 to 40 inches of rain per year.

Zone 3:

Low, drier areas, warm to hot. Less than 20 inches of rain per year. Sea level to 1,000 feet.

Zone 4:

Lower elevations which are wetter due to proximity of mountains. 1,000 to 3,000 feet.

Zone 5:

39

Salt spray zones in coastal areas on the windward side.

These zones are to be used as a general guide to planting for Maui County. In addition to lookir at the maps, read the descriptions of the zones and decide which zone best fits your area. Plants can be listed in more than one zone and can be planted in a variety of conditions. For best results, take notes on the rainfall, wind, sun and salt conditions of your site. Use the zones as a general guide for selection and read about the plants to decide which best fits your needs as far as care and or function.

PLACES TO SEE NATIVES ON MAUI:

The following places propagate native Hawaiian plants from seeds and/or cuttings. Their purpose is to protect and preserve these native plants. Please contact them before going to view the sites, they can provide valuable information and referral to other sources.

1.	Hoolawa Farms P O Box 731 Haiku HI 96708	575-5099
2.	The Hawaiian Collection 1127 Manu Street Kula HI 96790	878-1701
3.	Kula Botanical Gardens RR4, Box 228 Kula HI 96790	878-1715
4.	Maui Botanical Gardens Kanaloa Avenue, Kahului across from stadium	249-2798
5.	Kula Forest Reserve access road at the end of Waipoli Rd Call the Maui District Office	984-8100
6.	Wailea Point, Private Condominium residence 4000 Wailea Alanui, Kihei public access points at Four Seasons Resort or Polo Beach	875-9557
7.	Kahanu Gardens, National Tropical Botanical Garden Alau Place, Hana HI 96713	248-8912
8.	Kahului Library Courtyard 20 School Street Kahului HI 96732	873-3097

PLACES TO BUY NATIVE PLANTS ON MAUI

- 1. Ho'olawa Farms Anna Palomino P O Box 731 Haiku HI 96708 575-5099
 - * The largest and best collection of natives in the state. They will deliver, but worth the drive to go and see! Will propagate upon request
- 2. Kahanu Gardens
 National Tropical Botanical
 Garden
 Alau Place, Hana
 248-8912
- 3. Kihana Nursery 1708 South Kihei Road Kihei HI 96753 879-1165
- 4. Kihei Garden and Landscape Waiko Road, Wailuku P O Box 1058 Puunene HI 96784 244-3804
- 5. Kula Ace Hardware and Nursery 3600 Lower Kula Road Kula HI 96790 876-0734
 - * many natives in stock
 - * get most of their plants from Ho'olawa Farms
 - * they take special requests

- 6. Kulamanu Farms Ann Carter Kula HI 96790 878-1801
- 7. Maui Nui Botanical Gardens Kanaloa Avenue (Across from stadium) Kahului HI 96732 249-2798
- 8. Native Gardenscapes
 Robin McMillan
 1330 Lower Kimo Drive
 Kula HI 96790
 870-1421
 - * grows native plants and installs landscapes including irrigation.
- 9. Native Hawaiian Tree Source 1630 Piiholo Road Makawao HI 96768 572-6180
- 10. Native Nursery, LLC Jonathan Keyser 250-3341
- 11. New Moon Enterprises Pat Bily 47 Kahoea Place Kula HI 96790 878-2441
- 12. Waiakoa Tree Farm Kua Rogoff Pukalani HI 96768 Cell - 264-4166