

## **Proper Planting**

*A Guide to Planting Around Power Lines  
and Electrical Equipment*



**Florida Keys Electric Cooperative Association, Inc.**

*A Not-for-Profit Cooperative Utility Serving the Upper & Middle Keys Since 1940*

305-852-2431 • 800-858-8845 • [www.FKEC.com](http://www.FKEC.com)



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## Proper Planting: *Be a Part of the Solution*

In the Florida Keys we enjoy a fabulous sub-tropical climate, which encourages year-round growth of lush vegetation. As much as we love the beauty of our trees and the shade they provide, trees growing under or near power lines are a common cause of power outages and interruptions. Trees growing into power lines can also cause public safety hazards and create emergency situations.

In addition to the dangers vegetation can cause, the annual cost of clearing vegetation away from overhead power lines and underground equipment is enormous. Despite FKEC’s use of arborist cuts the constant trimming also puts a strain on the health of the trees. The purpose of this guide is to offer suggestions about which trees and shrubs might be planted near power equipment while still maintaining the 10 to 15 foot minimum safety clearance required.

Be a part of the solution and plant the right tree in the right place!



### PLANTING TIP:

*Check County ordinances before planting...* In most areas in Monroe County you must have authorization before planting any vegetation in the right-of-way. Check local ordinances before you plant near an easement.

*The list of trees and shrubs contained in this book are a compilation of species selected to minimize the potential for hazards and conflicts created when vegetation grows into overhead utility wires or near underground equipment. The lists do not included every possible vegetation option.*



### Recommended Native Florida Keys

#### SHRUBS

(Mature Height approximately 5-15 ft)

COMMON NAME	BOTANICAL NAME
Bay Cedar*	<i>Suriana maritima</i>
Beautyberry	<i>Callicarpa americana</i>
Black Torch*	<i>Erithalis fruticosa</i>
Bloodberry	<i>Cordia globosa</i>
Firebush*	<i>Hamelia patens</i>
Inkberry	<i>Scaveola plumieri</i>
Necklace Pod	<i>Sophora tomentosa</i>
Pearlberry	<i>Callesia antillana</i>
Randia	<i>Randia aculeata</i>
Rhacoma	<i>Crossopetalum rhacoma</i>
Saltbush	<i>Baccharis halimifolia</i>
Sea Ox-Eye	<i>Borrchia arborescens</i>
Sweet Acacia	<i>Acacia farnesiana</i>
Varnish Leaf	<i>Dodonaea viscosa</i>
Wild Coffee*	<i>Psychotria sp.</i>
Wild Cotton	<i>Gossypium hirsutum</i>
Wild Croton	<i>Croton linearis</i>
Wild Hibiscus	<i>Hibiscus poeppigii</i>
Wild Sage	<i>Lantana involucrata</i>

#### PLANTING TIP:

*Learn about vegetations' lighting and watering needs... Before planting any new vegetation learn about lighting and watering requirements. It is good to ask nursery staff or landscaping contractors about growth rates and mature heights.*



### Recommended Native Florida Keys

#### SMALL TREES OR SHRUBS

(Mature Height approximately 15-20+ ft)

COMMON NAME	BOTANICAL NAME
Cocoplum*	<i>Chrysobalanus icaco</i>
Coffee Colubrina	<i>Colubrina arborescens</i>
Darling Plum	<i>Reynosa septentrionalis</i>
False Boxwood	<i>Gyminda latifolia</i>
Gulf Greywig	<i>Schoepfia chrysophylloides</i>
Jamaica Caper	<i>Capparis cynophallophora</i>
Limber Caper	<i>Capparis flexuosa</i>
Locustberry	<i>Byrsonima lucida</i>
Marlberry*	<i>Ardisia escallonioides</i>
Mayten	<i>Maytenus phyllanthoides</i>
Myrsine*	<i>Myrsine floridana</i>
Myrtle of the River	<i>Calypttranthes zuzygium</i>
Pale Lidflower	<i>Calypttranthes pallens</i>
Pond Apple	<i>Annona glabra</i>
Red Stopper*	<i>Eugenia rhombea</i>
Rough Velvetseed	<i>Guettarda scabra</i>
Seven Year Apple*	<i>Casasia clusiifolia</i>
Varnish Leaf	<i>Dodonaea viscosa</i>
West Indies Trema	<i>Trema lamarckianum</i>

\* These trees and shrubs can be planted and pruned in such a way to create a good hedge or barrier.



### Recommended Native Florida Keys

#### MEDIUM TREES

(Mature Height approximately 20-30 ft)

COMMON NAME	BOTANICAL NAME
Bahama Strongbark	<i>Bourreria ovata</i>
Black Ironwood	<i>Krugiodendron ferreum</i>
Cinnamon Bark	<i>Canella winterana</i>
Crabwood	<i>Ateramnus lucidus</i>
Fiddlewood	<i>Citharexylum fruticosum</i>
Geiger Tree	<i>Cordia sebestena</i>
Guiana Plum	<i>Dryptes laterifolia</i>
Lancewood	<i>Nectandra coriacea</i>
Lignum Vitae	<i>Guaiacum sanctum</i>
Pitch Apple	<i>Clusia rosea</i>
Princewood	<i>Exostema caribaeum</i>
Redberry Stopper*	<i>Eugenia confusa</i>
Sea Grape*	<i>Coccoloba uvifera</i>
Soldierwood	<i>Colubrina elliptica</i>
Spanish Stopper	<i>Eugenia foetida</i>
Torchwood	<i>Amyris elemifera</i>
Velvetseed	<i>Guettarda elliptica</i>
White Stopper*	<i>Eugenia axillaris</i>
Wild Dilly	<i>Manilkara bahamensis</i>

\* These trees and shrubs can be planted and pruned in such a way to create a good hedge or barrier.



### Recommended Native Florida Keys

#### LARGE TREES

(Approximate Mature Height may exceed 30 ft)

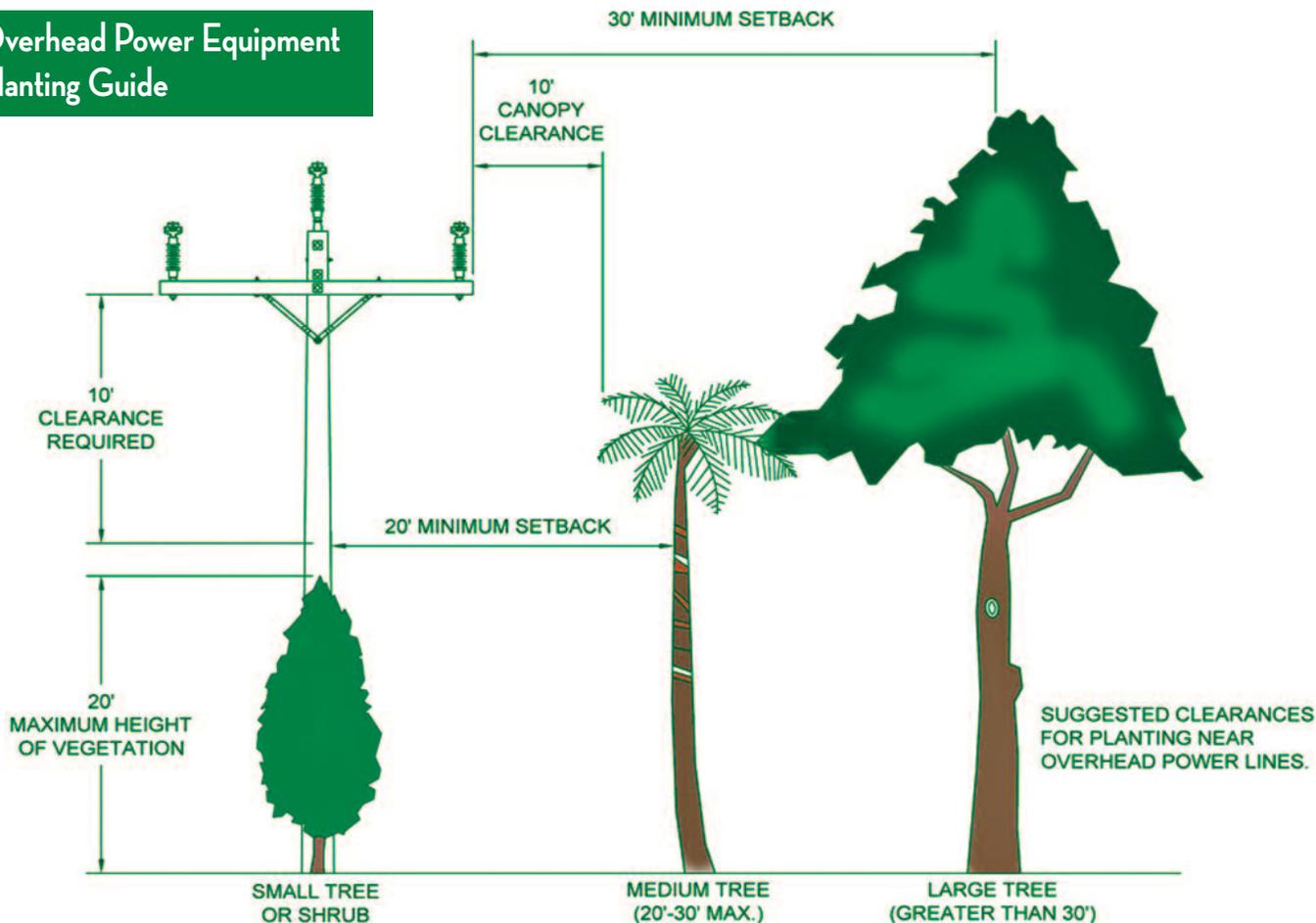
COMMON NAME	BOTANICAL NAME
Bolly	<i>Guapira discolor</i>
Buttonwood*	<i>Conocarpus erectus</i>
Gumbo Limbo	<i>Bursera simaruba</i>
Inkwood	<i>Exothea paniculata</i>
Jamaica Dogwood	<i>Piscidia piscipula</i>
Mahogany	<i>Swietenia mahogoni</i>
Mastic	<i>Mastichodendron foetidissimum</i>
Paradise Tree	<i>Simarouba glauca</i>
Pigeon Plum	<i>Coccoloba diversifolia</i>
Satinleaf	<i>Chrysophyllum oliviforme</i>
Silver Buttonwood*	<i>Conocarpus erectus L. var. sericeus</i>
Soapberry	<i>Sapindus saponaria</i>
Wild Tamarind	<i>Lysiloma latisiliqua</i>
Willow Busic	<i>Bumelia salicifolia</i>

These trees should be planted at least 30-feet away from any power equipment.

#### PLANTING TIP:

Consider the mature canopy size of trees before planting... The canopy refers to the outreach size of the tree's foliage cover. Trees with a large canopy should always be planted away from power lines to avoid their branches growing or blowing into the utility equipment.

## Overhead Power Equipment Planting Guide



## BEFORE PLANTING CONSIDER:

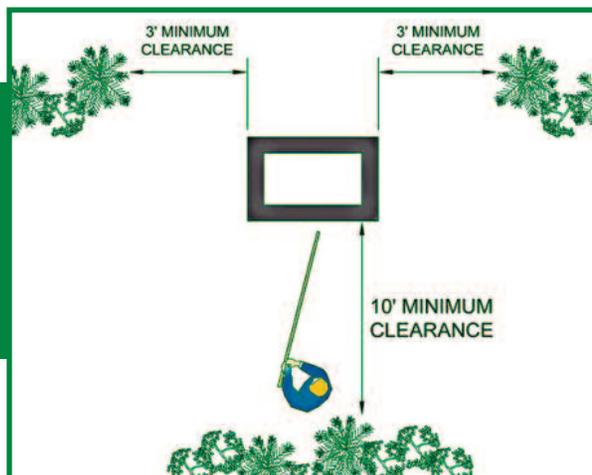
- Rate of growth: Slow growing plants are easier to maintain.
- Mature size: Consider the ultimate mature size of a tree before planting.
- Canopy size: Plant canopy trees away from power equipment.
- Root system: Only plant vegetation with shallow root systems around underground power equipment.
- Air Flow: Do not plant vegetation that will obstruct natural airflow around power equipment.

## GENERAL PLANTING GUIDELINES:

- Small Trees (20' mature height): Plant under or adjacent to overhead power lines.
- Medium Trees (20'-30' mature height): Plant at least 20 feet from overhead power lines.
- Large Trees (30' mature height or taller): Plant at least 30 horizontal feet from overhead power lines.
- Palm Trees: Plant at least one mature frond length plus ten horizontal feet from overhead power lines.

## Underground Power Equipment Planting Guide

Even areas served by underground power have some above ground equipment that requires clearance. Utility workers must have proper clearances (10 feet in front and 3 feet on all other sides) to use a "hot stick" to work on padmount transformers (equipment necessary for underground power). See diagram.



**Call Before You Dig**  
*Sunshine State One Call*  
**811**

Avoid harm to yourself and prevent damage to underground equipment with one quick free call.





### Recommended Native Florida Keys

#### SMALL PALMS

(Approximate Mature Height less than 20 ft)

COMMON NAME	BOTANICAL NAME
Buccaneer Palm	<i>Pseudophoenix sargentii</i>
Saw Palmetto	<i>Serenoa repens</i>

### Recommended Native Florida Keys

#### LARGE PALMS

(Approximate Mature Height may exceed 20 ft)

COMMON NAME (Avg. Frond Length)	BOTANICAL NAME
Cabbage Palm (7')	<i>Sabal palmetto</i>
FL Thatch Palm (6')	<i>Thrinax radiata</i>
Key Thatch Palm (7')	<i>Thrinax morrisii</i>
Paurotis Palm (10')	<i>Acoelorrhaphe wrightii</i>
Silver Palm (5')	<i>Coccothrinax argentata</i>

Always plant palms at least one mature frond length plus ten horizontal feet from all power lines.



*Example of the wrong tree in the wrong place...* These palms were planted directly under power lines. Over time, as they matured they posed a threat to electric and other utility's service. Because palm trees cannot be topped or pruned away from power lines they must be removed to maintain reliable electric service.



### Commonly Used Ornamentals

(Not Recommended)

While FKEC does not encourage the use of any non-native species, we do ask you consider the mature height of any tree or shrub before planting. Listed below are the mature heights of several common Ornamentals. Before you plant any Ornamentals we suggest you confirm the plant is not considered an invasive exotic.

Classification of ornamentals can change, consult the Florida Keys Invasive Exotics Task Force at [www.floridainvasives.org/Keys/Species.html](http://www.floridainvasives.org/Keys/Species.html) for an up-to-date list of invasive exotics and invasive species.

COMMON NAME	BOTANICAL NAME	MATURE HEIGHT & FROND LENGTH
Date Palm	<i>Phoenix dactylifera</i>	40-60 ft; Frond Length 18-20 ft
Fishtail Palm Height	<i>Caryota spp.</i>	15-25 ft; Frond length 6-9 ft
Foxtail Palm	<i>Wodyetia bifurcata</i>	20-30 ft; Frond length 8-10 ft
Royal Palm	<i>Roystonea spp.</i>	50-100 ft; Frond Length 10-13ft
Silver Bismark Palm	<i>Bismarckia nobilis</i>	30-50 ft; Frond length 10-18 ft
Bougainvillea	<i>Bougainvillea sp</i>	Height 5-15 ft
Jacaranda	<i>Jacaranda mimosifolia</i>	Height 20-40 ft
Frangipani	<i>Plumeria spp.</i>	Height 20-25 ft

#### Exotics

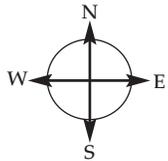
*These exotic species are invasive and/or not recommended for use in South Florida.*

Coconut Palm	<i>Cocos nucifera</i>	50-60 ft; Frond Length 18 ft
Orchid Tree Royal	<i>Bauhinia variegata</i>	Height 20-40 ft
Poinciana	<i>Delonix regia</i>	Height 40 ft
Queen Palm	<i>Syagrus romanzoffiana</i>	50ft; Frond Length 15 ft



# Plant Smart: Shade Your Home to Reduce Energy Consumption

While FKEC asks you to follow the guidelines provided in this book, we do not discourage you from planting all together. By planting smart you can avoid interference with your electricity and also reduce your cooling cost by using vegetation to shade your home. **Strategically planting trees and other vegetation to shade your home can reduce home energy consumption by 20-30%.**



In the Florida Keys,  
**plant trees on the East and West side of a residence**  
to most effectively reduce solar radiation.

Since tree canopies do not usually extend over a home's roof,  
**good attic insulation is the best defense**  
when the sun is directly over head.

**Follow FKEC planting guidelines and plant trees away from power lines.** Tree canopies should be at least 10 feet away from power lines and equipment.  
Visit [www.FKEC.com/FormService/](http://www.FKEC.com/FormService/)  
to access Co-op vegetation management guidelines.

**Consider the mature growth of a tree.**  
Do not plant trees under power lines that will grow taller than 20 feet.

**Shade your air conditioner**  
from direct light but do not block airflow.

**Tint windows not shaded by vegetation.**  
Window tint can reduce heat exchange by 30%.  
*Closing blinds or curtains will also reduce heat exchange.*

**Use rain barrels**  
to capture rainwater for irrigation.

**Shade concrete or asphalt driveways**  
to reduce surface heat by 10-12 degrees.



### SUGGESTED REFERENCES

Scurlock, J. Paul, 1987. Native Trees and Shrubs of the Florida Keys: A Field Guide. Laurel Press, Pittsburgh: 220pp.

Stevenson, George B., 1992. Trees of Everglades National park and the Florida Keys. An Illustrated List of the Native Trees and Some of the Larger Shrubs. Florida national Parks & Monuments Association, Inc., Homestead, FL: 32pp.

University of Florida IFAS Extention. Gardening Guide to the Florida Keys. [http://monroe.ifas.ufl.edu/lawn/lawn\\_keysguide.shtml](http://monroe.ifas.ufl.edu/lawn/lawn_keysguide.shtml)

University of Florida IFAS Extention. Native Landscape Plants for South Florida. <http://ecdis.ifas.ufl.edu/ep222>

#### PLANTING TIP:

*Remember safety first, always call 811 before you dig... For your safety and the safety of others - and to avoid disrupting underground utility services - always call Sunshine State One Call at 811 before you dig. With one free call to 811 all the appropriate utilities are notified and will mark any underground utilities prior to your dig.*



## FKEC Vegetation Management

Florida Keys Electric Cooperative works year round to maintain line clearances and prevent outages caused by trees or branches. While the Co-op is required by law to maintain certain clearances we do practice natural tree trimming techniques and arborist cuts to maintain the trees health.

Natural pruning trains trees to grow around wires and retain more of their natural form. This results in healthier trees and less need for constant pruning; However, there are times when a tree or trees must be removed to ensure no interference with power lines and equipment. When such cases arise FKEC may offer the "Trade-a-Tree" program. In exchange for removing a problem tree the Co-op will plant a native tree somewhere on your property where it can not interfere with electrical equipment.

FKEC is committed to its comprehensive vegetation management program but also works hard to maintain the health of our community's trees. Home and business owners can help keep our community's lines clear and our trees healthy by planting the right tree in the right place. Please plant smart and consider your surrounding utility wires, poles, and underground equipment before planting.

For more information about the Trade-a-Tree program, FKEC's vegetation management or to make a tree trim request visit [www.FKEC.com/FormService/vegetation-management.cfm](http://www.FKEC.com/FormService/vegetation-management.cfm)

*As recognized by the Arbor Day Foundation, FKEC is a Tree Line USA utility... We practice a program of quality*

*tree care which meets arborist standards. We also do*

*annual training and provide community tree*

*planting education. To request a proper plant-*

*ing presentation for your group,*

*organization or school please contact FKEC*

*Member Service at 305-852-2431*

