

Winter 2005

MALP



The mission of the Maui Association of Landscape Professionals is to exemplify leadership by offering education to its membership, the industry, and the community.

NEWS

Aloha MALP Members,

I just can't believe how quickly the year has come and gone. Within a blink of an eye this year will soon be over. It has been filled with a lot of challenges, fun, excitement and growth.

While buying irrigations supplies at one of my favorite Nurseries, Kihana, Scottie (one of the owners) asked me "Hey Jeff, I hear you're the M.A.L.P President nowwhy would you want to be?" I told him it was time to give back, that the organization has been good to me throughout the many years I have been learning and gaining valuable knowledge. Through osmosis or just a natural progression, I felt it was my turn to give back. It has been a privilege getting to know you all, and the one thing I realize, is that the M.A.L.P members are some of the most genuine people I have ever known and everyone in the organization love to share their knowledge and experience.

The Pres Sez...

Whether you are looking to find organic fertilizers, or learning about the most current insect or pest, this is a fantastic organization for networking and information sharing.

(Food for thought.)

At this time I would to thank our vocal Susi for doing an excellent job on our M.A.L.P newsletters. She takes a lot of pride in her work and it shows. THANKS!

Don't forget, November 12th is our Lawn and Garden Fair. Any one interested in volunteering for the event please contact Elaine Malina at 244-5982. So come on down and join us as we celebrate the gardener in us all. It will be filled with PLANTS, FOOD, and FUN.

So catch the M.A.L.P fever, see you there...

Aloha, Jeff

Trees That Make Scents

By Terri Nutt

Pua Keni Keni- Fagraer berteroaana. This plant may be grown as a large shrub or a small/medium size tree reaching up to heights of 40 feet. Known for their fragrant flowers which open as a cream color turning orange/yellow as they age. Blossoms are 1-3 inches long with a waxy texture. Fruit is orange and round, filled with small seeds resembling a golf ball.



The first Pua Keni Keni plant was brought to Oahu more than one hundred years ago. Flowers which were used in lei's sold for 10 cents each (hence the Hawaiian name Pua Keni Keni or "10 cent flower")

Grown from Southern Asia throughout the South Pacific. Pua Keni Keni may grow in a wide range of habitats. Preferably grown in wetter locations, although, may also be grown in dry

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Avocado, a Must for Most Gardens

by Ernie Rezens

In my opinion mango, citrus, and avocado are the fruit trees of choice for most yards. Being that my previous articles were about the first two, today is the avocado's turn. We have five citrus, one mango, and three avocado trees with four different types of fruit due to grafting. Avocado trees are of two types: the kind that are very large and should be planted only in gulches and the dwarf to medium sized trees for today's yards.

Pollination: The sex life of avocados forces them to "fool around" or cross pollinate. In type A trees the female part of the flower is receptive in the morning, but the male part releases pollen to insects for dispersal in the afternoon of the next day. Type B flowers release pollen in the morning but the female part is receptive in the afternoon of the following day, just the opposite of type A flowers.

The insects don't know this and go from tree to tree moving pollen from type B to A in the mornings and type A to B in the afternoon. The switch from female receptivity to male pollen release within a flower occurs around 12 noon. You can use this to determine whether a tree is type A or type B. Check a tree's flowers in the morning and also in the afternoon for confirmation. If the central erect pistil is fully exposed in the morning – the female is receptive and the tree is type A. If there are three upright appendages surrounding the pistil in the morning, the pistil is not receptive and the tree is a type B. Most neighborhoods have types A and B so you need not have one of each type in your yard. One of my trees has the Hass (A) and Fuerte (B) grafted on the same root stock. My other two trees are type A. They all flower about the same time so pollination is not a problem. There are many other trees in the area, and insects travel for some distances to collect pollen and nectar and fertilize flowers in the process.

Because avocados are not self compatible all flowers are cross pollinated. Planting the seed from a delicious fruit will give you fruit better or worse

than, but not exactly like the one you ate. To be guaranteed of fruit quality, buy a grafted tree. Seedlings do fruit and may produce excellent fruit. They may also have stringy flesh unlike the original fruit.

Selecting a tree. Nurseries have many types to choose from and they should all be grafted and labeled. Buy a single trunk healthy tree that is not too small or too big for its pot. I prefer to buy a medium sized tree than a big one for fear of root bound conditions.

The cultivar you choose will depend on your taste preference, time of year fruiting is desired, ultimate tree size, and insect resistance. As for rubbish they are all messy because they are deciduous in the late winter and early spring prior to flowering. This is not a tree for the front yard if you are sensitive to brown leaves on a green lawn. Usually the grass will die under an avocado tree. A friend of ours grows mondo grass under her tree after lifting its canopy just a little. My favorites are:

1. Hass (A). A nutty tasting and drier flesh fruit with "purply" skin when it is ready to pick. It grows to about 20 feet tall and bears from September to May. The skin is pebbly in texture.
2. Fuerte (B). Its moister flesh makes excellent guacamole and sandwich spread. It is easy to peel and grows to about 20 feet tall. It bears from November to June. Its skin is green and smooth.
3. Little Cado (A). This is a dwarf tree that grows to 8-12 feet tall at maturity. It has fruit that are very easy to peel and slice for salads. It bears from August to June of the next year if you let it. The quality of the



Selecting Turfgrasses for the Landscape

University of Hawaii Cooperative Extension Service

By Norman Nagata, Extension Agent

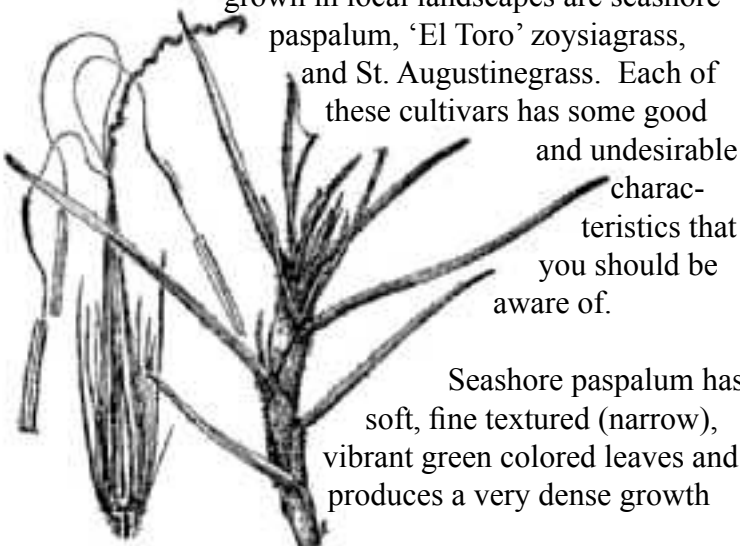
Warm-season grasses such as bermudagrass, buffalograss, centipedegrass, kikuyugrass, St. Augustinegrass, zoysiagrass, and seashore paspalum grow better at temperatures of 80-95 F and are best suited for Hawaii. In contrast, cool-season grasses (bentgrass, bluegrass, ryegrass, fescue, etc.) that prefer temperatures between 60-75 F will grow poorly under our high daytime temperatures.

Avoid planting a lawn by just choosing the best-looking turfgrass without consideration to its adaptability to your area and intended use. Disappointment usually occurs when people disregard such things as soil drainage and pH, pests and diseases, hours of full sunlight or shade, amount of maintenance required, and foot traffic. The University of Hawaii has several publications at its website (www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs/FreePubs09.asp#TurfManagement) that give the characteristics of many of these warm-season turfgrasses.

Another way to determine which turfgrass to grow is by visiting properties where these grasses are grown. These areas should have similar conditions (elevation, rainfall, sunlight/shade, soil type, etc.) as your site. This will allow you to see what these grasses look like in a real situation, under normal wear and tear, and determine the type of maintenance that is needed to have a beautiful lawn. Many of these grasses are also on display at the Maui County Cooperative Extension Service in Kahului.

The three most popular turfgrasses that are being grown in local landscapes are seashore paspalum, 'El Toro' zoysiagrass, and St. Augustinegrass. Each of these cultivars has some good and undesirable characteristics that you should be aware of.

Seashore paspalum has soft, fine textured (narrow), vibrant green colored leaves and produces a very dense growth



that keeps out weeds. However, its density also creates a problem with thatch buildup, which makes it thick and spongy and difficult to mow. Dethatching may be required annually to keep this lawn looking good that could involve renting special equipment or hiring a professional to do the job. Its high salt tolerance allows it to be irrigated with brackish water or planted in areas where ocean sprays prevent other grasses from growing. Fungal diseases may become a problem under wet conditions. Seashore paspalum can be grown either from seeds or vegetative material (existing grass plants or from pieces of grass).



Zoysia 'El Toro' has dark-green, moderate textured, slightly stiff leaves, and is probably the most trouble free turfgrass for landscapes. It has some shade and salt tolerance, is relatively thatch-free, and dense enough to prevent weed establishment. There are more selective herbicides available to control broadleaf and grassy weeds in zoysiagrasses (and bermudagrasses) than for other turfgrasses. 'El Toro' also appears to have no serious pest and disease problems. This grass must be planted from vegetative material.

The greatest advantage of St. Augustinegrass is its high degree of shade tolerance that allows it to grow quite well under trees or along shade producing structures. It is also fairly salt tolerant. St. Augustinegrass has the widest (coarse textured) and longest leaves of all the turfgrasses grown in Hawaii and will also develop thatch over time. The major pest problem is the southern chinch bug that will kill this grass if left uncontrolled. This grass is grown from vegetative material.

Kikuyugrass is another turfgrass that is commonly grown in the upper elevations of Maui (Kula, Pukalani). It grows well where it's relatively cool, but does poorly at sea level, such as in Kahului. Kikuyugrass is grown either from seeds or vegetative material.

Bermudagrass is also a very well known, fine to medium textured turfgrass that hasn't been used too much in the landscape, except for golf courses. Bermudagrasses began to lose their popularity due to its lack of shade tolerance and with the development of better

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Avocado, a Must for Most Gardens

late picked fruit will be "so so". For fruiting every year the tree should be picked clean by December 15th. Leaving fruit on into the next year causes few to no flowers to develop in the spring and this makes for alternate year crops.

Fruiting times vary with elevation, water, and tree health. Prior to the leaf mite problem our Hass avocado would have fruit hanging and flowers for the next year's crop at the same time. I have not found the Little Cado for sale anywhere locally except at Aloha O Ka Aina Nursery in Olinda. Call Billy Irvine at 572-9440. He has other types as well.

We have avocados almost all year long with these three cultivars.

All of our avocados have the mite that attacks the leaves (brown spots along the large veins) but only the Hass is very sensitive to it. It defoliates, releafs, defoliates, and releafs during the summer in Makawao. Small fruit and branch dieback result. Defoliation is not a problem in some parts of Maui. I have found that lots of irrigation and rain seem to keep the leaves on longer.

The Sharwil (B) is the commercial type grown in Hawaii. It bears excellent fruit. Green Gold (A) is a seedling of Sharwil and produces higher yields. Damage from fruit rot and anthracnose is less for Green Gold than for Sharwil. Both are medium sized trees. I do not know how either of these two cultivars react to the leaf mite. The Cooperative Extension Office on the MCC Campus has much more information on avocado cultivars.

Planting a Tree: The avocado prefers a sunny site that is well drained and with enough space below and above ground to grow. Remove the pot and slightly open

up the roots if circling roots are seen. Dig the hole 3-5 times the root ball's diameter. If the hole is too deep return some soil and firm it to avoid the tree sinking into soft soil and is thus planted too deeply. Plant the tree at the depth it was growing in the pot. Build a berm at least 4 feet in diameter around the tree to hold a 3 inch layer of tree chip mulch and where water will be applied. Keep the mulch away from the trunk by about 6 inches.

Post Plant Care: Water as needed. Younger trees need to be watered more often than older trees. Pest problems are non existent for the most part except for the leaf mite. Older trees sometimes decline and die from Phytophthora, a soil borne disease. Excess moisture and poor drainage predisposes the tree to the disease. Periodic use of gypsum from trunk to drip line helps to maintain tree root health. Trees planted in sand need not have Gypsum because Calcium is already present. Apply 1 pound of 14-14-14 (I use the one with calcium in Makawao.) annually per inch trunk diameter measured at 12 inches above

ground for small trees, and measured at 54 inches above ground for trees larger than 8 inches in diameter. Divide this fertilizer in half and apply half during fruit development and half right after harvesting is completed as a "thank you, please repeat". Spread the fertilizer from the trunk out to the drip line and beyond if possible. Young none bearing trees can be fertilized four times a year.

Divide the fertilizer into four parts and apply one fourth each time.

Harvesting: Avocados do not ripen on the tree. Pick the fruit when the seed shakes, or when the skin is a dull green color and the flesh is filled out to where no convolutions are present at the stem end. Purple skin types turn a light purple color when they are read for picking. Eat when a tooth pick or knife point can be easily poked into the flesh at the stem end after it falls off.



EVENTS CALENDAR

Take note of the following dates.

November 12th *Maui Association of Landscape Professionals Lawn and Garden Fair*

Following the success of last years fair at the Tropical Plantation it will o nce again be held at that fabulous venue.

Please help us with this calendar. If you know of any event that is relevant to our Industry, please contact Susi at gardencreations@verizon.net We will be happy to include it in our next newsletter coming out in July 2005

Maui Garden Spotlight

By Susi Mastroianni

The Maui Nui Botanical Garden
150 Kanaloa Ave (Opposite the War Memorial)
Kahului, HI, 96733
Tel: 808 249 2798
Hours: Mon – Sat 8am – 4pm



Kawika Lum, Tamara Sherrill, Tina Barnes, Lisa Shattenburg-Raymond, Kapena Kuailani

The pale green buildings that dot the landscape at the Maui Nui Botanical Gardens are a reminder of the origins of this cultural heritage. They held the animals that made up the old Maui Zoo and Botanical Gardens. But while the fates of the animals were being debated, the plants around them grew. Planted by the visionary Rene Sylva, and sustained today by Lisa Schattenburg-Raymond and her band of dedicated gardeners, you can see

several large native trees scattered about the garden as well as other native shrubs that have needed the passage of time to attain their stature.

The garden was the first in the State to include mainly Hawaiian natives in its design.

Today there are more than 250 Hawaiian endemic, indigenous and Polynesian introduced

plants. This includes about 40 varieties of sugar cane, 15 varieties of bananas and about 35 known taro varieties. Tamara Sherrill is a gifted propagator and through



her efforts in the nursery, hundreds of natives are being provided to gardeners around the island. On Saturday, November 5, The Gardens will be hosting the annual Arbor Day tree give-away from 9:00 until 12:00. 1,000 trees will be given away and there will be many plant experts available to answer questions, as well as information booths and demonstrations. Watch out for the Plants Sales. As if the plants weren't enough there is a playground for keiki , shaded picnic areas, and strolling paths to lead you through the garden.

The volunteer pro- by Tina Barnes, greatly con- the gardens' well kept appear- have the infamous Weed and which provides volunteers with guest speaker after they have time in the soil. Healthy exerci- easy two hour volunteer effort. dens puts you on their mailing- great newsletter as well as info- events, plant sales and worksho-



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A TREE FIT FOR A QUEEN

This being the 100th anniversary of Arbor Day in the Hawaiian Isles, one of the many celebrations being held is the planting of a Pua Keni Keni (*Fagraea berteriana*) tree on the campus of Lahainaluna High School. It will be planted in memory of Queen Liliuokalani who planted a Royal Palm on campus in honor of Arbor Day in 1906.

After the planting she told the students, "that as this tree grows up in strength and beauty, so I hope that they will grow also, strong and noble, and that they will be a pride to their parents, to the school and the country."

The Pua Keni Keni will be donated by M.A.L.P in acknowledgement for all the work the school, its AG Department, students and faculty have donated to our organization over the years.

MAHALO!



STOLEN FROM MAUI NUI
BOTANICAL GARDENS

Dark Green club Car with hydraulic
dump bed and white vinyl canopy. If
seen please report to the police. They
have the serial numbers of the cart. Lets
work together to eliminate AG theft!!

Trees That Make Scents

areas given ample amounts of water. Plenty of sun is favorable. Pruning is a corrective measure to encourage fullness and prevent legginess, which this plant is prone to.

Propagation of Pua Keni Keni can be from seed or cuttings. To produce faster flower bearing plants, air layering may be preferred.

Pest concerns for Pua Keni Keni usually come from the Homoptera family. Piercing, sucking insects consisting of mealy bugs, scale, and white fly, may be treated with topical spray of Horticultural oils for shrubs and smaller trees. A systemic injection or drenching may be used for larger trees.

Pua Keni Keni is definitely a tree that makes scents.



MALP Monthly meetings

On July 24th instead of our monthly meeting we went on our MALP field trip. We were fortunate to have Hank Oppenheimer as our guide to the Pu'u Kukui Watershed. Part of the area is an arboretum that was created in the 1920's by D. T. Fleming.

It was educational and good fun. We hope to see you at next years M.A.L.P Field Trip.

In August Andy Kaufman from the University of Hawaii, College of Tropical Agriculture presented a talk titled "Plants, Color and Aloha: Can the understanding of people-plant interactions effect landscape industries in Hawaii? The meeting presented interesting observations on how plants affect people socially, psychologically, and physiologically.

In September Norman Nagata presented his research on the comparison between the new seeded turf available and the vegetative alternatives. Norman has done extensive research on the warm season grasses best suited to our Hawaiian environment. The evening was sponsored by James Tavares owner of The Grassmaster (808 579 8536).

The October meeting was sponsored by Boulder Image. Frank Gummich is owner of Advanced Building Solutions and the local distributor of their products. Frank carries several lines which included products that are used for creating faux Landscape rocks, fountains and waterfalls as well as concrete overlay products for driveways and patios. His company is conducting a course on how to use their products in December and can be reached at 808 575 5172. Troy Epping helps run the western region for Boulder Image and was our speaker that evening. Troy focused on ways to add value to your business by focusing on making customers for life and better time management.

Mahalo to all our speakers!



MALP

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Maui Garden Spotlight

plant nut like me or you are interested in including natives into your Maui Nui Botanical Gardens is the place to go to see natives in action. but donations are welcomed. At the entrance there is a wonderful guide with a numbered tour detailing the plant names and ethnobotanical



Selecting Turfgrasses for the Landscape

looking turfgrasses that are available today.

Common bermudagrass was used extensively in lawns in the past. Unfortunately its poor density and medium textured leaves did not make it a very attractive turfgrass. A major improvement occurred with the release of 'Tifway' bermudagrass in 1960. This hybrid is a dense, fine textured turfgrass that has been used primarily on golf course fairways. Its use in landscapes has been limited due to the unavailability of planting material, being somewhat more difficult to maintain due to thatch buildup, and insect problems. 'Tifway' can only be planted from vegetative material.

Recently, turfgrass companies have made great advancements in developing denser and better-looking bermudagrasses for landscapes that can now be grown from seeds. Some of these new cultivars are being used on golf courses and in sports fields throughout the U.S. Two seeded cultivars, 'Yukon' and 'Princess,' have shown to produce a high quality turfgrass that compares well with 'Tifway' in evaluation trials in Kahului. Both cultivars are relatively problem free, except that 'Princess' may develop thatch. Like all bermudagrasses, these cultivars are not shade tolerant.