Hawaii Cooperative Extension Service

HORTICULTURE DIGEST

HITAHR · College of Tropical Agriculture and Human Resources
U. S. Department of Agriculture Cooperating

Department of Horticulture
University of Hawaii at Manoa

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DENDROBIUM CAESAR, UH921, AND DENDROBIUM SAMARAI, UH988, AS FLOWERING POTTED PLANTS

Two crosses involving *Dendrobium stratiotes* 'D200-1' have performed well as flowering potted plants, and therefore the repeat crosses are being released for trial as seed-propagated potted plants cultivars. These crosses are D. Caesar (*D. stratiotes* 'D200-1' x *D. phalaenopsis* var. *compactum* 'D291') and *D.* Samarai (*D. stratiotes* 'D200-1' x *D. antennatum* 'K741-13').

Dendrobium Caesar, UH921

Dendrobium Caesar was registered decades ago by Nagrok as a cross between *D. phalaenopsis* and *D. stratiotes*. Most offspring from various crosses involving these two species are tall and show a high incidence of bud drop. In order to reduce the height of *D.* Caesar, we crossed *D. stratiotes* 'D200-1' with pseudobulbs 32 inches tall and *D. phalaenopsis* var. *compactum* 'D291' with pseudobulbs only 3 inches tall. The cross was made in October 1983, germinated in January 1984, compotted in August 1984, transplanted into 2-inch pots in November 1984, and repotted into 5-inch pots in May 1985. Offspring began to flower in January 1986, only two years after germination. Petals and sepals are Purple-violet (RHS Colour Chart 80B) edged with white, and the lip is darker Purple-violet (RHSCC 80A). Although petals and sepals are narrow, the flowers are fairly large, measuring about 3 inches in height (Fig. 1).

Within the first year of flower production, all plants were considered saleable with at least two sprays produced within the same month (Table 1). Several plants were considered saleable more than once in a year. Flower yield increased during the second year of production. Flowers were obtained throughout the year; however, production was greater during July to December than from January to June. Plant height averaged 16.2 inches in December 1986, and 25.9 inches in December 1987. Surprisingly, the bud drop percentage was only 6.8% compared to 40.2 for another *D.* Caesar cross (*D. stratiotes* 'D200-1' x *D. phalaenopsis* 'Mauna Loa'). The characteristics of *D.* Caesar UH921, are as follows:

Natural spread of flowers–height (in.)	3.0 ± 0.4
Natural spread of flowers–across (in.)	2.2 ± 0.2
Pedicel length (in.)	1.2 ± 0.1
Scape length (in.)	4.9 ± 1.0
Spray length (in.)	10.7 ± 2.0
No. of flowers per spray	8.4 ± 0.4
Leaf length (in.)	4.2 ± 0.4
Leaf width (in.)	1.6 ± 0.2
Plant height (in.) in December '87	25.9 ± 4.8
Percent bud drop	6.8

Dendrobium Samarai, UH988

The cross between *D. stratiotes* and *D. antennatum* was registered as *D.* Samarai by Limberlost in 1967. We remade the cross (UH988) using *D. stratiotes* 'D200-1', and *D. antennatum* 'K741-13'.

The shape and color of flowers of UH988 and both parental species are similar. The petals are upright, twisted, and yellow-green (RHSCC 154B) toward the tip and white toward the base.

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Fig. 1. *Dendrobium* Caesar, UH921

Fig. 2. *Dendrobium* Samarai, UH988

The sepals are white; the lip is white with Purple-violet (RHSCC 80B) stripes. The height of plants and other characteristics are more or less intermediate between the two parents (Table 2).

UH988 was pollinated in March 1984, germinated in June 1984, compotted in May 1985, transplanted into 2-inch pots in August 1985, and repotted into 6-inch pots in April 1986. Offspring began to flower in November 1986. Monthly spray yield and saleable plants (having at least two sprays produced in a month) of UH988 are shown in Table 3. Flowers were produced throughout the year.

D. stratiotes produces larger, more attractive flowers than both *D. antennatum* and the hybrid. However, it is highly seasonal, with peak flowering in April and May, and the pseudobulbs are tall, attaining a height of 32 inches. The main disadvantage of *D. antennatum* is that it has smaller flowers that frequently self-pollinate and set pods, thereby reducing the quality of flowers. However, the good features of *D. antennatum* are its floriferousness, year-round flowering, short stature, and attractive foliage. The hybrid, UH988, (Fig. 2) is floriferous and produces flowers throughout the year like *D. antennatum*, and flowers are long-lasting with negligible self-pollination. The pseudobulbs within foliage are attractive. It does not get as tall as *D. stratiotes*.

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Table 1. Monthly and annual spray yield and number of saleable plants of Dendrobium Caesar, UH921, based on 20 plants.

Month	1986		1987	
	No. spray	No. saleable plants*	No. sprays	No. saleable plants*
JAN	10	3	11	3
FEB	19	5	8	1
MAR	5	2	17	4
APR	7	0	11	4
MAY	7	2	0	0
JUN	15	3	15	3
JUL	4	1	24	7
AUG	19	7	17	5
SEP	40	10	20	3
OCT	9	2	53	14
NOV	37	8	35	10
DEC	13	4	54	12
TOTAL	185	41	265	66

*Saleable plants are those with at least two sprays per plant per month. The total number of saleable plants exceeds 20 because some plants were saleable during more than one month.

Table 2. Characteristics of *D. stratiotes*, *D. antennatum* and *D. Samarai*, UH988.

Characteristics	*D. stratiotes*	*D. antennatum*	*D.* Samarai, UH988
Scape length (in.)	1.8 ± 0.4	3.4 ± 0.4	2.1 ± 0.2
Spray length (in.)	6.4 ± 2.1	9.0 ± 1.2	5.9 ± 0.9
No. flowers per spray	7.7 ± 2.1	6.9 ± 1.0	6.2 ± 1.6
Natural spread, length (in.)	3.2 ± 0.1	2.1 ± 0.1	3.0 ± 0.4
Natural spread, width (in.)	2.0 ± 0.1	1.1 ± 0.1	1.5 ± 0.1
Pedicel length (in.)	0.9 ± 0.1	1.1 ± 0.1	1.5 ± 0.2
Leaf length (in.)	5.0 ± 0.7	3.1 ± 0.5	4.2 ± 0.5
Leaf width (in.)	2.3 ± 0.1	1.8 ± 0.1	2.1 ± 0.2
Petal length (in.)	2.1 ± 0.1	1.4 ± 0.1	2.0 ± 0.1
Petal twist (no. of turns/petal)	1.3 ± 0.2	0.7 ± 0.1	1.1 ± 0.2
Plant height (in.)	32.0	20.0	25.9 ± 3.3

Table 3. Monthly spray yield and saleable plants of *Denbrobium* Samarai, UH998, in 1987 based on 30 plants.

Month	No. sprays	No. saleable plants*
JAN	10	3
FEB	14	6
MAR	21	7
APR	52	14
MAY	25	7
JUN	49	14
JUL	28	8
AUG	56	16
SEP	50	13
OCT	64	18
NOV	17	4
DEC	23	5
TOTAL	409	115

***Saleable plants are those with at least two sprays per plant per month. The total number of saleable plants exceeds 30 because most plants were saleable during more than one month.**

COMING EVENTS

Landscape Design Study Course

The National Council of State Garden Clubs in cooperation with ASLA, Hawaii Chapter, LICH and U.H. Cooperative Extension will conduct its third Landscape Design Study Course for the general public on Saturday, March 4, 11, and 18, 1989. This will be held in Rm. 011 of the St. John Plant Science Building on the Manoa Campus. This instructors will consist of ASLA members. For further information contact Fred. D. Rauch, 948-7256, Connie Riccio at 623-9958.

Plant Show

The annual HAN Plant Show and Sale is scheduled for the Neal Blaisdell Center in Honolulu on March 17–19, 1989. A number of educational displays and seminars will be featured.

Ornamental Short Course

The 12th Annual Ornamental Short Course sponsored by Cooperative Extension (CTAHR) in cooperation with various commodity organizations will be held at the King Kamehameha Hotel in Kailua-Kona March 30–31, 1989. The morning general session on the 30th will feature plant propagation while several concurrent sessions are planned for that afternoon. A tour to various industry locations will be held on Friday (March 31). For further information contact: Fred D. Rauch, 3190 Maile Way, Honolulu, HI 96822. (948-7256).

Landscape Field Day

Tentative plans are to hold a Landscape Field Day at the Waimanalo Experiment Station around the end of April.

Midterm Turf Conference

The Hawaii Turfgrass Association will have their midterm turf conference on Kauai at the Sheraton Coconut Beach on May 25–26, 1989.

Turf Conference

The annual Turfgrass Conference is scheduled for September 21–22 at the Hilton Hawaiian Village.

Nursery Conference

The Hawaii Association of Nurserymen Annual Conference and Trade Show is tentatively scheduled for the end of October, 1989.

SHIPPING TRIALS WITH *PSEUDERANTHEMUM SINUATUM*

Previous trials (1,2) suggest that *Pseuderanthemum sinuatum* may have potential for the mainland export market. It is easy to propagate

and produce, has attractive flowers and foliage, and appears to tolerate interior conditions. One of the limitations for large scale export of finished plant is their ability to withstand the conditions of surface shipment. This study was designed to evaluate the potential for surface shipment of this plant.

Finished plants of *P. sinuatum* were produced in the UH-Manoa Magoon shade house under 30 percent shade. Rooted cuttings were potted one per 6-inch (15-cm) azalea pots in a 1:1 peat:perlite mix amended with Osmocote 186-12, dolomitic lime, treble superphosphate and micromax at 8.5, 10, 1, and 1.7 lbs/cubic yard, respectively.

Twenty uniform plants were selected and subjected to treatments of 5, 10 and 15 days of simulated shipment in a growth chamber plus a control which remained under normal shade house conditions. The chamber was maintained under total darkness and at temperatures of 60–65 F. The plants were watered, sleeved and placed in the chamber for removal at one time. There were 5 replicates of each treatment.

The plants were evaluated for leafdrop, flowering and plant quality after removal from storage and 10 days after returning all 20 plants to normal shade house conditions. Leafdrop was the number of leaves that dropped during the storage period and during the 10-day observation period. Flowering was the number of flowers (and buds) present on the plants. The plants were graded for quality using the following scale:

1–very poor, dry, brown leaves; no flowers,
2–poor, yellow or brown foliage; few or no flowers,
3–average, little yellowing; some flowers,
4–good, very little yellowing; moderate flowers,
5–very good, normal plants with abundant flowering.

There was an increase in leaf drop and a decrease in plant quality with an increase in the simulated shipping time when the plants were removed from storage (Table 1). Flowering was only reduced at the 15-day storage time.

There was continued leaf drop and reduction in plant quality when the plants were evaluated 10 days after removal from simulated shipping conditions (Table 2). Very few flowers or flower buds were present on any of the "shipped" plants while the control plants continued to flower in a normal fashion.

These results suggest that *P. sinuatum* is not suitable for surface shipment to the mainland.

Table 1. The influence of simulated shipment on *P. sinuatum* after removal from storage.

Days in shipment	Leaf drop	Flowering	Quality rating[x]
0	1.8 b[y]	49.0 a	5.0 a
5	16.4 b	33.0 a	4.2 ab
10	21.6 ab	33.0 a	3.8 b
15	45.4 a	9.4 b	2.2 c

[x] Quality– 5= excellent quality, 1= very poor quality.
[y] Mean separation in columns by Duncan's multiple range test, 5% level.

Table 2. The influence of simulated shipment on *P. sinuatum* 10 days after removal from storage.

Days in shipment	Leaf drop	Flowering	Quality rating[x]
0	0.0 b	32.0 a	5.0 a
5	14.4 ab	2.8 b	3.2 b
10	5.0 ab	4.4 b	3.0 c
15	18.0 a	0.0 b	1.6 d

[x] Quality– 5= excellent quality, 1= very poor quality.
[y] Mean separation in columns by Duncan's multiple range test, 5% level.

It is possible that some form of preconditioning or acclimatization would improve the shipping characteristics of this plant as the plants used in this study were grown under high light conditions.

Literature Cited

1. Rodriques, D. K. and F. D. Rauch, 1986. *Pseuderanthemum* production. Horticulture Digest 81:2–3.
2. Rodriques, D. K. and F. D. Rauch. 1987. Influence of propagation, fertilization levels, and light on growth of *Pseuderanthemum* species. Acta Horticulturae 205:275–280.

Fred D. Rauch, Hort. Spec.
Doris K. Rodriques, Former Grad. Student

AVAILABLE PUBLICATIONS

A number of publications have recently been released from the College of Tropical Agriculture and Human Resources (CTAHR). Included are the following that might be of interest:

Instant Information Series

Sweet Corn, Home Garden Vegetable Series No. 4. James L. Brewbaker, Richard Sakuoka and Kenneth Takeda.

Care For Your Garden–use green manure and cover crops. General Home Garden Series No. 39. Wade W. McCall.

Dryland Taro Production Under Mulch. Instant Information Series No. 16. Florendo M. Melchor and Ramon S. de la Pena.

Watering Turfgrass. Turfgrass Management Series No. 4. Charles L. Murdoch.

Commodity Fact Sheet Series

Avocado. AVO-3(A). Chian L. Chia and Dale O. Evans.

Pineapple. PIN-3(A). Dale O. Evans, Wallace G. Sanford and Duane P. Bartholomew.

Single copies of these publications are available from your county extension office or by contacting the Agricultural Publications Office, CTAHR, University of Hawaii, 3050 Maile Way, Gilmore 119, Honolulu, HI 96822.

SOME ADVANCES IN LEI FLOWER PRODUCTION

(A presentation made during the 1987 Ornamentals Short Course at the Ala Moana Hotel, Honolulu.)

Stephanotis

During winter mainland florists pay anywhere from 30 to 50 cents apiece for individual flowers of Stephanotis. Assuming the usual wholesale markup of 2X, this means that the grower received 15 to 25 cents per flower. The market does vary with New York selling the flower for less than in Dallas or San Francisco, for example.

In Hawaii, Stephanotis is mainly used for leis, although its Hawaiian name, pua male, signifies the wedding flower. Mainland florists prize it in wedding bouquets because of its white, waxy texture, fragrance, and good keeping quality. It is native to Madagascar; hence, the common name of Madagascar jasmine.

The big months for weddings include June–when we normally have a plentiful supply of Stephanotis–and winter, when we don't.

Stephanotis is a popular potted plant in Europe where they've figured out how to "program" them to bloom early in the spring. At the University of California Los Angeles some years back, similar work was done on Stephanotis vines for the production of cut flower clusters. It would seem that Hawaii growers could take advantage of such work to produce stephanotis in the off-season here in Hawaii, both for the lei maker's use and for export to mainland wholesale markets.

The important culture considerations would be:

1. Vigorously-growing vines which could be cut back to produce the new growth on which flowers could be borne in winter. The time of cutback would vary with location, but would probably be during September and October.
2. Relatively warm sites in the early fall (October–November) for development. Temperatures should be between 65–70° F.
3. Lights (20–40 w/m2) to provide a 16-hr long day are provided through the whole forcing period, which can span 5 to 12 weeks.

The unknowns, or "trade secrets" if you will, include just when the pruning should be done and how severely the plants should be pruned. This is likely to vary with the site. There is no literature to suggest a specific influence of any nutrient on flower production, so maintaining a 200 ppm (each) N and K regime should be sufficient. Both water stress and overwatering will cause flower drop during flower initiation and development. The flowers are picked when fully open and packed in cellophane or plastic bags, 25/bag

Telosma cordata

Another vine related to stephanotis is *Telosma cordata*, the pakalana vine or Chinese Violet. It is native to India-China where it is also grown for its fragrant flowers. It is a seasonal bloomer with few flowers produced in the winter months.

There seem to be several forms to pakalana differing in flower size (Giant Pakalana) and color, which ranges from a yellowish green to orange. Since pakalana does set seed in Hawaii, it seems that some potential does exist for selection of desirable forms or more productive plants.

During the fall-winter of 1986–87, we grew several pots of pakalana outdoors under lights–24 hours in one case with fluorescent light–and with a 4-hour light break interruption from 60 watt incandescent bulbs in another.

A pleasant surprise was the early production of flowers on a few of the vines. We are not sure just what interpretation to make of this because the plant were produced from seed, and those which didn't flower may have been too young, but the flowers were borne on vines which were exposed to the light. About 8–10 weeks were required from the start of lighting until flowers were evident. Additional work is in progress to examine the temperature requirements for flower development.

Other members of the milkweed family (Asclepiadaceae): *Calotropis* and *Hoya*

The crown-flower, *Calotropis gigantea* is in rich bloom in the spring and summer in white and purple forms. This, too, is related to the stephanotis and pakalana vines and is used extensively in leis.

Another relative in this milkweed family is the *Hoya* or star flower vine. It is a spring bloomer in may cases with the species *H. australis* and *H. carnea* common vining forms and *H. bella* a little shrubby sort. These are fragrant, but the flowers are small and despite their waxiness, they don't last all that long when picked.

Besides these common species are some others, larger in size and more colorful. Local landscape architect, Ted Green, has collected more colorful and large-flowered sorts. Naturally we have to learn which are good keepers and whether we can get a long enough blooming season, but these do offer some variety to the blossoms usually offered as "strung" leis.

H. hybrida–a natural hybrid discovered by Ted. Its flowers are about 1" in diameter with a fragrance like grapes.

H. ariadna with flowers 1¼" in diameter.

H. imperialis with flowers to 2½" diameter.

All 3 of these are pretty constant bloomers. The next 4 are somewhat more seasonal.

H. guppyi–1¼" diameter.

H. rubida (Australian sort) 1¼" diameter.

H. species from the USDA (No. 244). 2" diameter flowers with up to 12 flowers per umbel.

H. archboldiana–both a pink form and this red with white markings are available. Flower diameter is about 1½". Somewhat cup-shaped.

Plumeria

For more than 20 years the University of Hawaii has maintained a collection of plumeria cultivars. This is a rich source of germplasm, and some breeding and selection did take place in the 1960s. Four selections were released through the Hawaii Association of Nurserymen in 1970, and additional releases were made since then. We have also been blessed with donations of plants from various collectors such as Donald Angus and Jim Little, plumeria breeder William Moragne on Kauai, and some mainland members of the Plumeria Society of America (headquartered in Houston, Texas).

It has long been an interest of mine to try to produce plumerias for the winter lei trade. We started off with very little information, but we learned that protoperiod did not seem to be involved in flower initiation although leaf drop is associated with the short days and cool temperatures of winter. Most plumerias have lost or are losing their leaves by the end of January, and new flower clusters emerge from February onwards, depending on the cultivar.

These flower clusters were initiated late in previous summer. A short branch was taken as a cutting at the end of August with a bud in it could be rooted and forced into bloom earlier than if it remained on the tree (see Hort. Digest No. 75, January 1985). There are lots of questions for which we would like answers, but the possibilities for forcing flowers on small plants under cover and at a height where they are easy to pick do seem feasible.

We have also worked with large plants in the field, measuring growth rate and counting flower clusters, as a part of a fertilizer experiment at the Waimanalo Farm. Grower tradition has always had it that you had to fertilize heavily with phosphorus to get good flower production.

We tested this practice using 10-10-10, 10-20-10, and 10-30-10 fertilizers applied quarterly at the rate of 4 oz fertilizer/inch of tree di-

ameter, up to a maximum of one pound of fertilizer per tree per application, to 6 plumeria cultivars. Over a 4–5 year evaluation period, we did find a slight, but significant trend to more flower clusters on trees with the highest rate of phosphorus fertilization.

But at the same time as we were counting flower clusters, we also counted growing points on the tree. This data gave us some other perspectives as well.

For one thing, we can now model the growth rate of the plant. The 6 cultivars produced new branches at different rates, but within a cultivar, the percentage of those bearing flower clusters was remarkably constant. The most productive cultivar was 'Common Yellow' with an average of 73.3% of the branches bearing flower clusters while 'Scott Pratt' averaged only about 6%.

We also devised a model of the rate of flower development from the time the flower bud was just visible until the first flower opened. In greenhouse studies, we were able to follow the time frame of flower opening through the whole productive period of an inflorescence. Maximum production occurred 3 to 4 weeks after the first flower opened in the greenhouse. This may not be applicable to outdoor plants because of a larger number of flowers borne in a cluster (upwards of 200 in some cultivars).

We would like to learn how to manage plumerias better to take advantage of this knowledge—to help commercial growers achieve a more uniform production. One grower indicated that he'd almost give up his summer flower crop to get good winter production. He had tried defoliating his plants because someone had said this was the way to force them into bloom. Unfortunately, it didn't work, and he lost about 6 months of growth as the plants struggled to recover.

We would also like to examine the plumeria as an export crop for wedding work. They would have a use much like stephanotis as their soft pastel colors and sweet scent would surely be popular. But we have to learn which cultivars will last the best and how to handle the flowers to avoid bruising and loss of quality.

Cuphea

Some new members of the Lythraceae family, sometimes known as "False Heather", are of the genus *Cuphea*. The flowers are borne singly or in small clusters on plants which branch readily, thus facilitating collection of the large number of flowers needed to make a lei.

The orangish and pinkish forms of the Cigar Flower, *C. platycentra* (syn. *C. ignea*) are in common use in Hawaii in lei production. Other forms from Mexico and Central America exist—some 200 species, in fact—and have been extensively investigated for the oils contained in their seeds. A few cuttings of some bright orange, magenta, and rose-colored ornamental *Cuphea* species were obtained from a botanic garden in December 1986. Most of them don't even have a name—at least as far as the labels on the botanic collection went—but the magenta *form is probably C. caerulea*. Cuttings of these forms were released in 1987 and are now available in the trade.

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Food for Thought

*To register a new pesticide with EPA, a company must spend an average of $30–35 million in 8–10 years on laboratory, field and environmental testing.

"The trouble with unemployment is that the minute you wake up in the morning, you're on the job." Slappy White

'ARCS HAWAII' AND 'LAVENDER LADY' ANTHURIUM

'ARCS' anthurium was described in the January 1988 issue of Horticulture Digest as the first purple, tulip-type anthurium developed by the University of Hawaii. A few plants propagated through cuttings were released to the Honolulu Chapter of ARCS Foundation, Inc. and the Hawaii Anthurium Industry Association.

Two sibling selections of 'ARCS', UH1067 and UH1145, have also performed well, and therefore have been named 'ARCS Hawaii' (Fig. 1) and 'Lavender Lady' (Fig. 2) respectively. Both of these, as well as 'ARCS', have four species in their pedigree, *Anthurium andraeanum, A. kamemotoanum, A. formosum* and *A. amnicola* (Fig. 3).

'ARCS Hawaii' is similar to 'ARCS'. It can be distinguished from 'ARCS' by its slightly lighter purple spathe and greenish stipe. The spathes do not reflex as much as those of 'ARCS'. Its yield is 7.6 flowers per plant per year. It is resistant to anthracnose and tolerant to bacterial blight. The descriptions of 'ARCS Hawaii' and 'Lavender Lady' are given in Table 1.

'Lavender Lady' has attractive lavender spathes that are slightly recurved. The lavender color provides an additional color selection in anthurium.

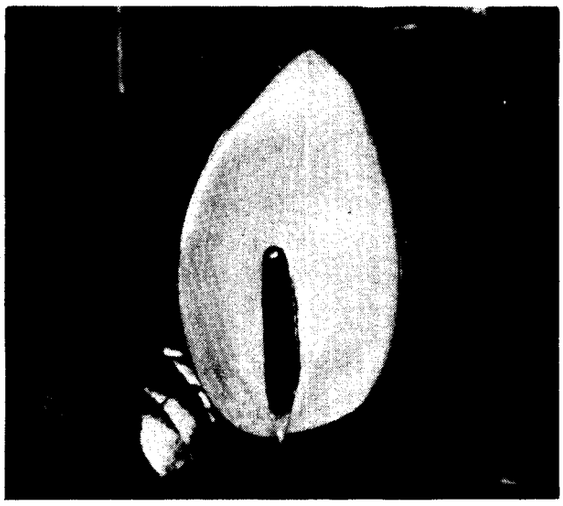

Fig. 1. 'ARCS Hawaii'

Fig. 2. 'Lavender Lady'

Table 1. Characteristics of 'ARCS Hawaii' and 'Lavender Lady' anthurium.

Characteristics	'ARCS Hawaii'	'Lavender Lady'
Spathe		
Size	11.4 cm. (4.5 in.) long, 7.1 cm. (2.8 in.) wide	15.5 cm. (6.1 in.) long, 6.7 cm. (2.6 in.) wide
Shape	Cupped when newly open, often reflexed	Narrow, pointed tip, about 135° from stem axis, recurved
Color	Purple-Violet, RHSCC* 80C	Purple (lavender), RHSCC 75B
Spadix		
Size	6.4 cm. (2.5 in.) long, 1.1 cm. (0.4 in.) in diameter	6.6 cm. (2.6 in.) long, 1.1 cm. (0.4 in.) in diameter
Shape	Straight, upright	Straight, about 150° from stem axis
Color	Purple, RHSCC* 79A	Purple, RHSCC 79C
Anthracnose	Resistant	Resistant
Peduncle	47.0 cm. 18.5 in.) long, 1.14 cm. (0.4 in.) in diameter, sturdy, straight	59.7 cm. (23.5 in.) long, 1.1 cm. (0.4 in.) in diameter, sturdy, straight
Leaf		
Blade	29.2 cm. (11.5 in.) long, 17.3 cm. (6.8 in.) wide	30.0 cm. (12.0 in.) long, 17.8 cm. (7.0 in.) wide, triangular
Petiole	35.6 cm. (14.0 in.) 0.6 cm. (0.2 in.) in diameter	40.6 cm. (16.0 in.) long, 0.6 cm. (0.2 in.) in diameter
Yield	7.6 flowers per year	6.9 flowers per year
Bacterial Blight	Tolerant	Tolerant
Vase Life	15.0 days	14.5 days

*Royal Horticulture Society Colour Chart.

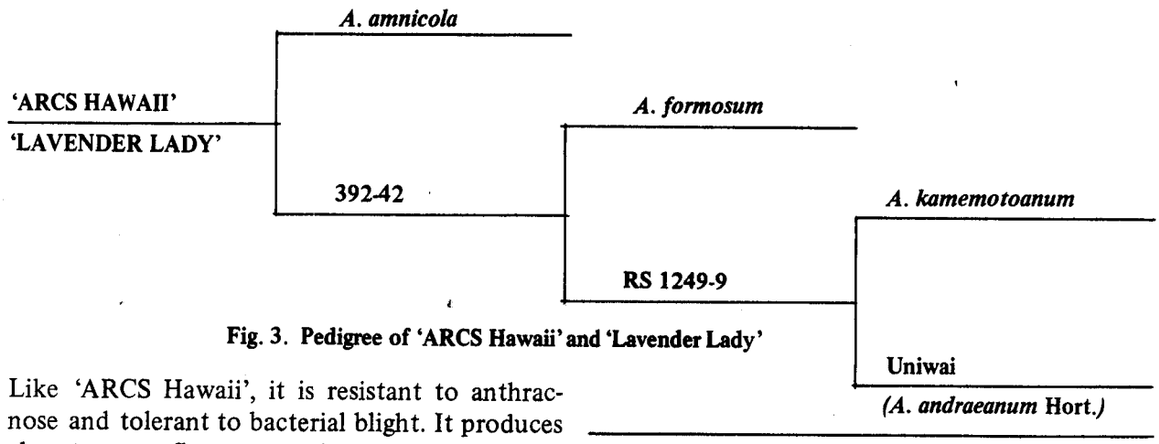

Fig. 3. Pedigree of 'ARCS Hawaii' and 'Lavender Lady'

Like 'ARCS Hawaii', it is resistant to anthracnose and tolerant to bacterial blight. It produces close to seven flowers per plant per year.

A few plants of 'ARCS Hawaii' propagated from cuttings will be distributed to the Honolulu Chapter of ARCS Foundation, Inc. 'ARCS Hawaii' has been placed under micropropagation, and plantlets will be released soon to the Hawaii Anthurium Industry Association. 'Lavender Lady' has also been placed under micropropagation, but has not reached clonal increase stage. In the meantime a few plants propagated through cuttings will be released to the industry association.

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NOTE: The use of trade names is for the convenience of readers only and does not constitute an endorsement of these products by the University of Hawaii, the College of Tropical Agriculture and Human Resources, the Hawaii Cooperative Extension Service, and their employees.

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