

Volume 19, Number 2 Spring 2007

The *Cut Flower*

Q U A R T E R L Y

Association of Specialty Cut Flower Growers Inc.

for growers of field and specialty greenhouse cuts

Inside this Issue

From the President.....3
 Generating Goodwill and More
 Through Applied Research.....4
 Grower Profile.....6
 Culture Profile.....8
 Grower Grant Reports.....11
 Moving the Needle.....12
 IPM Update.....14
 Research Update.....16
 Small Things Considered.....18
 Back to Basics.....20
 Regional Reports.....26
 Guest Editorial.....32
 ASCFG News.....33
 From the Director.....41
 Classifieds.....42



page 11



page 12

Cover photo by John Dole
 Dahlia 'Thalia'

The Cut Flower

QUARTERLY

is published by:

The Association of Specialty
 Cut Flower Growers, Inc.
 MPO Box 268
 Oberlin, OH 44074

Judy Marriott Laushman, editor.
 Linda Twining, layout.
 2007 ASCFG

ISSN 1068-8013

Subscription is included with ASCFG membership. No part of this publication may be reproduced in any form without the written permission of the ASCFG. No endorsement of named or illustrated products or companies is intended, nor is criticism implied of products or companies not included.

PUBLISHING SCHEDULE

Issue	Deadline
Spring	March 1
Summer	June 1
Fall	September 1
Winter	December 1

All articles, features, display and classified advertising must be received by these deadlines for publication.

The Cut Flower Quarterly welcomes advertising. For display advertising, contact ASCFG for current advertising insertion order form. Classified ads are FREE TO MEMBERS.

Contact Judy Laushman

(440) 774-2887 or ascfg@oberlin.net

SUCCESS...
 the SAKATA standard

- Antirrhinum
- Calima
- Admiral
- Asters
- Matsumoto
- Serenade
- Campanula Champion
- Delphinium Candle
- Lisianthus
- Excalibur
- Echo
- Mariachi
- Stock
- Cheerful
- Sunflower
- Sunbright
- Sunbright Supreme

Experience the simplicity of buying from Sakata. Enjoy the success!
 Contact your favorite broker for ordering information.

seeds
 of your **SUCCESS™**

SAKATA®

SAKATA SEED AMERICA INC.
 18095 Serene Dr. • Morgan Hill, California • 95037
 phone: 408.778.7758 fax: 408.778.7768
www.sakata.com

FROM *the President*

Dave Dowling

Spring is in the air! It's that time of year when everything seems fresh and new. Fresh ideas of new plants to try, new marketing ideas, and new goals to aim for.

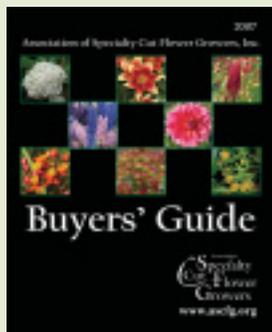
The winter 2007 issue of *The Cut Flower Quarterly* was full of new plants to try. These included some newer varieties that have been tested by fellow ASCFG members and other introductions by the many seed companies that support the ASCFG. Having something different for your customers helps keep you ahead of the competition and sets your business apart as someplace special and helps customers remember you.

New marketing ideas are just about everywhere. Look at what other businesses are doing to make their companies succeed. Have they come up with an interesting way to advertise or display their product? Do they do anything special for their regular customers? Do you have customers that *have* to have your flowers? If not, you may need to make some changes in your marketing, or maybe the quality of your product. Your customers should buy from you because you have a superior product, but also because they like to do business with you.

Do you have new goals for this year, or are you still working on last year's goals that weren't reached? Maybe you didn't get all your succession planting done on time, or keep the weeds under control. Do you still need that bigger cooler or new delivery van? Do you want to increase sales by 10%, 20%, or maybe even more? Make this the year to meet your goals.

It's also the time to find new seasonal help. This is possibly the most difficult part of having a business. You may have to interview dozens of applicants, to find just one *good* employee. To find one *great* employee may take years. When you do find employees who are right for your company, invest in them with not just a fair salary, but also with realistic expectations, and recognition of a job well done. Taking your employees to ASCFG Regional Meetings or even the National Conference goes a long way in letting them know that you value them as an important part of your business. Keeping employees happy can be as easy (and cheap) as keeping popsicles in the freezer for those hot summer days, or offering paid vacation and other benefits if you can afford the added cost. Every employee should want to come to work and be concerned for the well-being of your company. If not, keep looking for that *great* employee. They are out there.

I hope to see some of you this summer at Regional Meetings, or at the National Conference in Raleigh this fall. It would be great to see some of your key employees there too.



Need Extra copies for

- Wholesalers?
- Retail Florists?
- Event Planners?

Call the ASCFG @ (440) 774-2887

Johnny's
Selected Seeds

**NEW FOR
YOUR CUT
FLOWER
LINEUP.**



'Sylphid' Celosia
Pale lime green, feathery plumes.



'Elegance White' Sweet Pea
Pure white blooms.



'Sunrich Orange Summer' (F1)
Golden yellow rays, black disk.

- 1 Unique, specialty varieties for all markets.
- 1 Superior products, service, and information since 1973.

1-877-Johnnys
(564-6697)

Visit us online
Johnnyseeds.com

Winslow, Maine U.S.A. #5387

Generating Good Will and More Through Applied Research

Barbara Murphy

Research that involves field trials is a fairly cut and dried process: grow the product, measure relevant data, harvest it but, then what? Oftentimes, the research product is thrown away, given to staff or composted. Perhaps there is a better solution.

As part of my work for the University of Maine Cooperative Extension, I am involved in research comparing the productivity and quality of cut flowers when grown in high tunnels versus field conditions. One hundred twenty plants of twelve different flowers are grown indoors and out. Data on stem length, number of days harvested and total stems harvested are collected. The total harvest for the 2006 season was about 14,300 marketable stems. The question quickly becomes “What to do with all the flowers?”

Rather than compost buckets of beautiful flowers, it was decided to fill vases with bouquets and leave them at public areas (libraries, town halls, hospitals, etc.) to promote locally-grown flowers and educate consumers on the advantage local flowers have in terms of variety and vase life. A total of 13 locations received a vase weekly for 12 weeks. Each vase carried the label “Compliments of Oxford County Cooperative Extension” and came with an information card that identified the flowers in the vase.

At the end of the season a questionnaire was placed next to the vase to gauge public knowledge and appreciation of local flowers. A total of 175 people filled out the survey. The questionnaire was not administered in any manner; those who were interested took the time and filled out a form.

Here is what we learned:

Question 2

Are you aware that the flowers were grown in South Paris?

Yes 102 No 73

Despite the “Compliments of Oxford County Cooperative Extension” label on every vase, 73 respondents, or 42% of the sample population did not realize the flowers were grown locally. So, if your business donates vases of flowers for community events, perhaps the better notice to put on the container is “Grown By Your Business Name”.

Question 2

Pictures were shown of the 11 flowers trialed throughout the season.

People were asked to rank their top 5. The flowers were: zinnia ‘Zowie Yellow Flame’, rudbeckia ‘Prairie Sun’, craspedia ‘Golden Drumstick’, trachelium ‘Devotion Purple’, lisianthus ‘Grand White’, snapdragon ‘Attraction Yellow’, gomphrena QIS Mix, sunflower ‘Strawberry Blonde’, agrostemma ‘Purple Queen’, dianthus ‘Amazon Duo’, and godetia ‘Grace Pink’.

Not surprisingly, the lisianthus was by far the favorite first choice with the sunflower coming in a distant second (Table 1). However, when the total number of votes each flower received is considered, the differences between the top three - lisianthus, zinnia and godetia - basically disappears. So, a bouquet containing those three is certain to be a hit. What is interesting is that even the “filler” flowers craspedia and trachelium were popular with 26 and 18 people respectively.

	1 st	2 nd	3 rd	4 th	5 th	Total
Zinnia	25	28	34	11	22	120
Rudbeckia	14	22	23	23	17	99
Craspedia	2	1	10	6	7	26
Trachelium	2	1	1	9	5	18
Snapdragon	5	14	18	12	8	57
Gomphrena	7	10	9	21	16	63
Lisianthus	61	23	15	12	11	122
Sunflower	28	29	15	24	15	111
Agrostemma	8	13	17	21	19	78
Dianthus	4	7	8	20	19	58
Godetia	19	27	25	16	32	119
No Answer					4	4
Total	175	175	175	175	175	875

Question 3

A picture of a standard bouquet (approximately 20 stems) is shown right. What would you expect to pay for these flowers?

Monetary Value	# of Responses
\$5.00 - \$7.00	8
\$7.50 - \$10.00	34
\$10.00 - \$15.00	59
\$15.00 - \$20.00	49
More than \$20.00	21
No answer	2
Total	175

An amazing 40% of respondents (70 people) expected to pay at least \$15.00 for the bouquet. This is good news considering that many of the bouquet components were minor, less expensive flowers.

Question 4

Have you purchased flowers in the last 6 months?

Yes 119 No 55 No Answer 1

Question 5

As a result of seeing the flower vases this summer, are you more likely to purchase local flowers in the future?

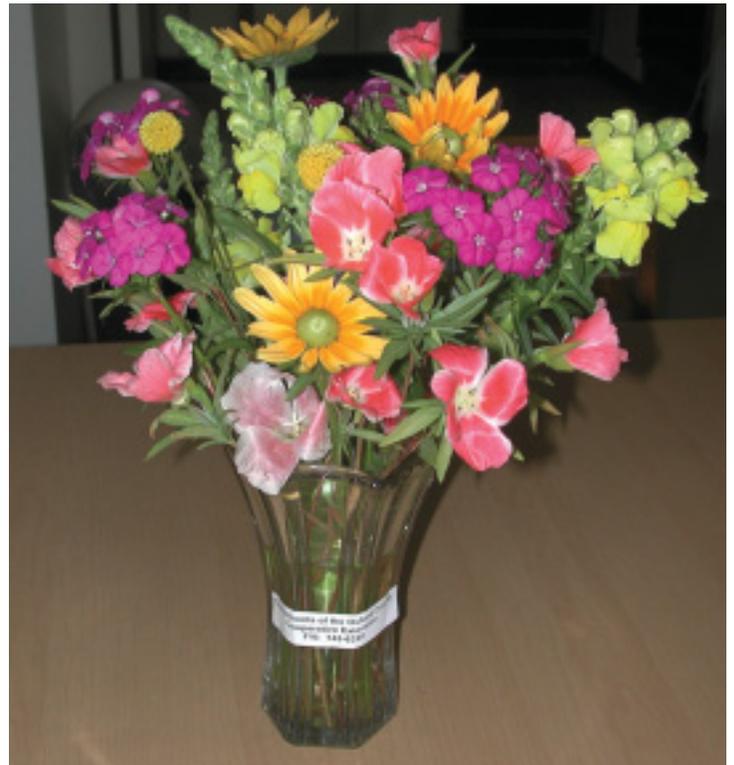
Yes 157 No 16 No Answer 2

Some interesting findings from the data.

- Of the 119 people who did purchase flowers within the last 6 months, 110 of them responded that they would be more likely to purchase local flowers in the future.
- Of the 55 who hadn't purchased flowers in the last 6 months, 46 of them would look locally for flowers in the future.
- All of the people who indicated they would be willing to pay more than \$20 for flowers also indicated they are more likely to purchase local flowers in the future.

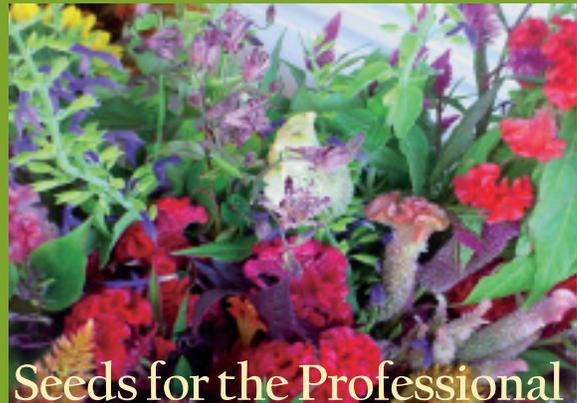
The interest and enthusiasm from the public for the cut flower project is very encouraging. General comments indicated amazement at the variety of flowers that could be grown here in Maine and surprise that the flowers lasted so long without any additional care. It is hoped that this interest will translate into purchases for the 2007 season.

*Barbara Murpy is Extension Educator,
University of Maine Cooperative Extension, South Paris.
Contact her at bmurphy@umext.maine.edu*



Modena Seed Company

... since 1946



Seeds for the Professional



Contact us for those specialty items you are looking for:

415-585-2324 ph. 415-585-6820 fax
P.O. Box 12007 San Francisco, CA 94112

www.modenaseed.com

GROWER Profile

Megan Bame

Matt Gerald Sweet Pea's Farm Store

When John Dole suggested Matt Gerald as a subject for the Grower Profile, he noted in his email that Matt was “fun and a bit quirky.” Partway through our interview, I mentioned John’s assessment of Matt, and after some mention of a pot and a kettle, we agreed that it’s an apt description of most specialty cut flower growers. While fun and a bit quirky may be accurate, perhaps forward-thinking could be added to Matt’s list of character traits.

From vegetable production to cut flowers is not an unusual farm transition, but Matt—in his third year as a producer of wine grapes and in planning for the future of his farm with an eye toward non-profit development—is thinking outside the box for profitability and farm preservation.

When he and his father bought the 138-acre farm in 1984, Matt was fresh out of college with little experience or farming know-how. “I was a kid from the suburbs,” he recalls. He attended the College of the Atlantic in Bar Harbor, Maine and earned a degree in Human Ecology. The farm in Bar Harbor was too good of an opportunity to pass up, and he found that he was soon enrolled in “the school of failures.” The learning curve may have been steep, but the experiences he gained from those failures have resulted in many successes.

He started off growing mixed vegetables and sold primarily to restaurants. At the time, there were no farmers’ markets, and Matt worked as a blacksmith and landscaper to supplement the farm income. In 1995, he read Allan Armitage’s book *Specialty Cut Flowers* (1st edition), and doubled the size of his garden for cut flowers over the next four to five years. In 1998, he built a farm stand for retail sales, and shortly thereafter, the farmers’ markets were introduced on Mount Desert Island and met with great success.

Matt attends three farmers’ markets, none of which is on Saturday. They fall on Wednesday, Thursday and Sunday mornings. Though there is another one that is open on Friday, its location directly across the street from one of his florist customers keeps him from attending. Many of the affluent ladies who summer on the Northeast end of the island spend upwards of \$1,000 weekly on flowers, buying from all the vendors. Several of the summer cottages have a “flower arranging room.” For perspective, Matt defines a “cottage” as a home with at least 30 rooms.

Matt mostly sells one-size mixed bouquets at the market for \$15. In addition to the farmers’ market and florists, he sells from the on-farm retail store and to some restaurants. His



marketing plan consists of being a “motivated seller” at the market. Until this year, his season typically ran from March through October. He would start heating the greenhouse February 1 to force tulips. However, he is experimenting with a wood boiler to heat his largest greenhouse (150’ x 30’) through the winter to grow year round. With 130 acres of managed forest and a 3,000-gallon water tank beneath the greenhouse, Matt hopes that the wood boiler will be an efficient energy alternative.

The local florists will be his primary market for winter flower production. He’s considering crops such as ranunculus, anemone, freesia and winter flowering sweet peas. Despite his location in the northernmost continental state, Matt considers daylength more of a challenge than temperature. Mount Desert Island is actually in USDA Zone 4, and he’s even observed some folks trying their luck with Zone 5 plants. The outdoor growing season is about 120 days and he will usually start planting outside in late May or early June. At their latitude, the short days in December are very short (December 21 sees only 8 hours and 50 minutes of daylight), so Matt looks for varieties that grow well under those conditions.

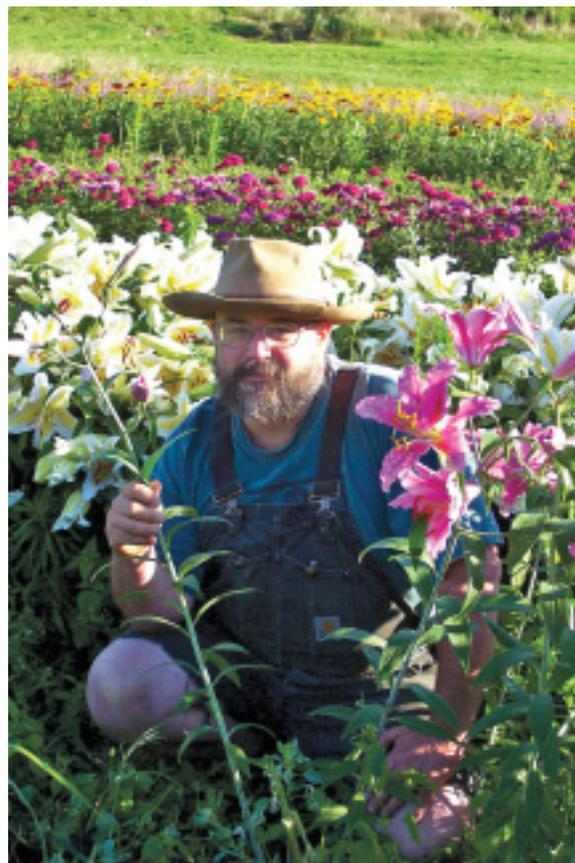
His spring and summer production includes 10,000 tulips, 17,000 lilies (60% Oriental, 40% Asiatic, and some experimentation with OT hybrids), 3,000 lisianthus, 3,000 field and greenhouse snapdragons, 3,000 zinnia and 30 other varieties in smaller numbers including all of the Karma dahlias.

The farm's cut flower production area consists of 2.5 acres of field production and 14,000 square feet of greenhouse space. Some of the greenhouse space is still used for tomatoes, but Matt ceased most vegetable production when he planted the wine grapes. He recognizes that there are a number of family farms in the area that can supply vegetables, so he'll focus more on cut flowers.

He's looking to simplify his operation by growing the things he grows well, reducing costs and reducing employees. He currently has one to two employees who work seasonally, but he hopes to offer them year round work if the wood boiler allows for winter greenhouse production.

He doesn't grow many woodies, but does like curly willow. Unfortunately, the deer like them too. There is essentially no population control for the deer since the surrounding area is either residential or National Park land. He's used deer repellent products in the past with some success, but was disappointed last summer when he lost nearly \$10,000 worth of lilies in only a couple days of deer feasting. Fencing is becoming a real consideration.

One advantage of the northern winter is natural population control of many pests. The western flower thrip and aphid are his primary insect problems. He uses biological controls, including predatory insect populations that overwinter in the greenhouse. Though he's not certified organic, nor is he working toward certification, he uses organic agricultural practices. He produces 150 tons of aerobic compost a year. His primary ingredients are cooked barley, a by-product from his winery partner, Atlantic Brewing Company, and horse manure from a local source. He turns the piles with the tractor, and gives away a fair amount to community gardens, friends and new farmers, as a sort of farm-warming gift.



Matt views farming as an “endangered lifestyle.” He recalls that when he bought the farm, there were only old farmers dying out. He's seen some relief in new farms starting up due to the success of the markets, but he also recognizes that there are tremendous hurdles, including land costs, that the new farmer must surmount.

Mount Desert Island, home of Bar Harbor and Acadia National Park, is a summer destination. The winter population is a scant 10,000 residents compared to a summer peak around 4 million. There is significant development pressure on farmland. In order to preserve his farm, Matt is exploring the idea of starting a non-profit operation on the farm. He envisions limited vegetable production that would be given away to those with food needs. In conjunction, the non-profit would manage a youth development program using farm therapy, where disadvantaged and troubled kids could learn the reward of growing things. He considers this a 5-year goal and plans to work with local Heritage Trust Organizations for funding and strategy to make this progressive idea a reality.

A member of the ASCFG for 11 years, Matt boldly encourages his fellow farmers at the market to give cut flowers a shot. Though it may create more competition, his primary goal is to promote the availability of fresh cut flowers working to emulate the European market's fresh expectations and keeping dollars in the community by supporting locally grown products. Of course there's that one catch for perspective growers...you have to be fun, and a bit quirky.



*Megan Bame is a free-lance writer in Salisbury, South Carolina.
Contact her at meganbame@yahoo.com*

CULTURE Profile

Frankie Fanelli and John Dole

Dahlia

Dahlias, the national flower of Mexico, are among the most popular flowers grown in American and European gardens. Early breeders were interested in dahlia as a food source rather than for the insignificant blossoms. The Dutch resumed breeding in 1872 following the development of the first fully double flower in the early 18th century.

Dahlia flowers are now available in a virtually unlimited range of colors, sizes, and flower styles. The American Dahlia Society recognizes nine flower size categories that range from over ten inches in diameter to the mignon single that is two inches or smaller, 18 flower form classifications and 15 different colors. The bi- and tricolors are especially striking. Presently the Royal Horticultural Society lists over 20,000 cultivars.

The strong hollow stems, deep green foliage and showy daisy-like flower heads make dahlia a desirable cut flower. While the “dinner plate” size dahlias are particularly impressive, the best cut flower cultivars have medium-size flowers with many petals. The relatively short vase life, seven to ten days, tends to limit sales but contributes to the success of dahlia in local and regional markets.

Cultivars from the dahlia Karma series, developed for field or greenhouse cut flower production, were used in a variety of tests from 2002 to 2004. Karma dahlias are patented and propagation is illegal. Our testing evaluated aspects of the field production and examined the optimum handling procedures to extend the postharvest life.

Field Production Trials

Rooted 72 cell liners were planted in late April, after the danger of frost passed, at North Carolina State University’s Horticultural Field Lab in Raleigh, which is located in cold

hardiness zone 7b and heat zone 7. Plants were spaced on one-foot squares. Nine Karma dahlia cultivars: ‘Amanda’, ‘Bon Bini’, ‘Corona’, ‘Lagoon’, ‘Naomi’, ‘Serena’, ‘Sangria’, ‘Thalia’ and ‘Ventura’, were surveyed the first year. Dahlia ‘Naomi’



(this page) and ‘Thalia’ (cover) were selected for subsequent production and postharvest testing since both cultivars readily produced marketable stems from late summer until frost.

Traditionally, dahlia cut flower production techniques include pinching back the plants, leaving 3 to 4 sets of leaves. Tests were conducted using ‘Naomi’ and ‘Thalia’ leaving half of the plants to grow without pinching. For both cultivars, pinched plants flowered approximately two weeks later than the plants that were not pinched; however, the plants that were not pinched produced more stems. ‘Naomi’ produced 36% and ‘Thalia’ produced 48% more marketable stems than plants that were pinched. Average stem length was one inch longer on the plants that were not pinched back.

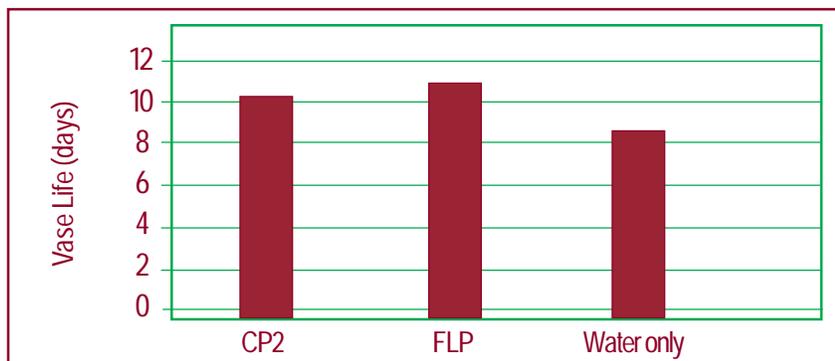
Plants of both cultivars that were planted April 2003 were cut backed at the end of the cutting season, well mulched and left in the field through the winter. In April 2004 rooted liners of both cultivars were planted. The year-old dahlias of ‘Naomi’ and ‘Thalia’ produced marketable stems beginning midsummer while the 2004 plants began producing marketable stems in September.

Postharvest Work

Field-harvested stems of ‘Naomi’ and ‘Thalia’ were subjected to a range of tests in 2003 and 2004. The purpose of the tests was to determine ethylene sensitivity, optimum cold storage duration and the effects of commercial pretreatments and holding solutions. Unless otherwise indicated fully expanded flowers were harvested. After treatments, stems were placed at 68±4°F under approximately 200 ftc light for 12 hours a day.

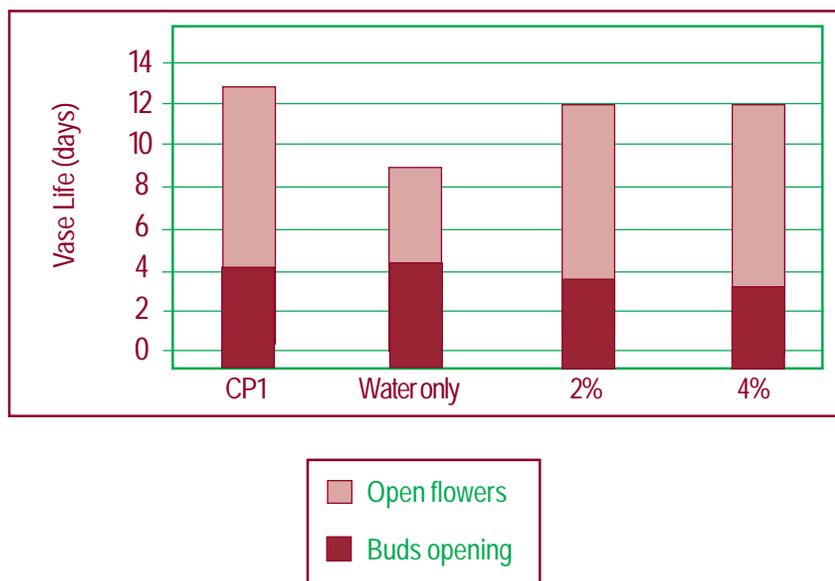
Flowers were monitored daily to determine the end of the consumer life which occurred when browning on the petals was noticeable when looking directly at the flower head. Pretreating with commercial hydration solutions did not affect vase life. Commercial holding solutions such as Chrysal Professional 2 Processing Solution or Floralife Professional increased the vase life of both cultivars from 6-9 days for flowers in water to 10-11 days (Fig. 1). Floral foam had no effect on vase life indicating that the flowers can be readily used in foam floral arrangements.

Figure 1. Effects of Chrysal Professional 2 Processing (CP2) or Floralife Professional (FLP) on vase life of dahlia 'Thalia'.



The longest vase life was obtained when flower buds were cut at the breaking stage (one petal open) and 50% color. The buds required 3.1 to 4.5 days to fully open and lasted a total of 12.1 to 12.8 days if placed in 2 or 4% sucrose or commercial holding solutions (Fig. 2). Fully opened 'Thalia' flowers attained full size and color with this treatment. However, many 'Naomi' stems cut at flower bud stage did not fully open or develop true color regardless of whether the stems were held in water (control), sucrose, or commercial holding solutions.

Figure 2. Effects of either Chrysal Professional 1 Processing (CP1) or 0, 2 or 4% sucrose on dahlia 'Thalia' stems cut as buds.



Gloeckner
YOUR SOURCE FOR CUT FLOWERS

NEW

YIN YANG

The Karma Dahlia® Series is a line of vegetatively propagated dahlia. Cuttings are virus indexed and come from a certified, clean mother stock program resulting in faster and higher production. Karma Dahlias® are more uniform and have a longer post harvest life than dahlias grown from tubers. Karma Dahlias® are available in 14 different colors, including 3 new varieties for 2007. The Gloeckner Karma Dahlia® Sample Package is again available for first time users. Please contact us for more details.

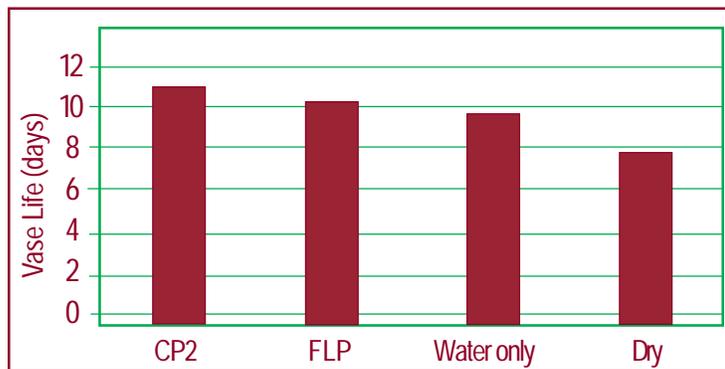
Your Complete Source for:
 SEEDS
 PLUGS
 BULBS
 PLANTS
 CUT FLOWER SUPPLIES

For More Information Contact:
Fred C. Gloeckner & Co., Inc.
 Phone: 800-345-3787
 Fax: 914-698-0848
 info@fredgloeckner.com
 www.fredgloeckner.com

Greenhouse Production

'Thalia' stems could be cold-stored at 34°F for up to one week, but this reduced the vase life to 6.6 days as compared to 8.4 days for unstored flowers. Storage of cut flower stems in commercial holding solutions, such as Chrysal Professional 2 Processing Solution or Floralife Professional, increased the vase life compared to storage in water or dry storage (Fig. 3). Ethylene at 0.1 to 1.0 ppm had no effect on dahlia stems, indicating that they are not ethylene sensitive. STS and 1-MCP had no effect on vase life.

Figure 3. Effect of storage on vase life of cut dahlia 'Thalia' stems in Chrysal Professional 2 Processing (CP2), Floralife Professional (FLP), water or dry storage.



Field Production

Dahlias require full sun and moist, organic soil that drains well. Planting disease-free rooted cuttings or tubers each year and maintaining the best sanitation practices are necessary to avoid diseases. Controlling thrips and aphids will help reduce spread of such diseases as tomato spotted wilt virus and prevent damage to foliage and flowers. Dahlias are subject to a number of other insects including grasshoppers, cucumber beetles, caterpillars, and leafhoppers. A number of diseases including root and crown rot diseases and powdery mildew can occur. Botrytis is always an issue.

Cuttings or small tubers can be spaced at one to 1.5 plants/ft² in 3-foot wide beds. Larger clumps may need to be spaced further apart, up to 2 feet apart. Plants can be fertilized with a dry fertilizer side-dressed after cuttings root out or after tubers produce shoots. Fertilization can be delayed if the soil has been properly prepared with organic matter such as compost before planting. Liquid fertilization can also be used, especially late in the season. Support of some type is preferred for these large, heavy plants. One to three layers of plastic mesh can be used; however, the plastic mesh may not be strong enough to hold up the plants. An alternative is to encircle the bed with metal t-posts and form a cage with one or more layers of strong metal wire. Flowers are more easily harvested from the cage system than from the plastic mesh but the bed must not be too wide or the plants may fall over within the cage.

In the United States dahlias are most commonly grown in the field, but the longest stems are harvested from greenhouse- or hoop-house-grown plants. Planting instructions are the same in the greenhouse as in the field. Since plant growth is not as heavy in the greenhouse, plastic mesh works well as a support. Maintain a substrate pH of 6 to 7. The optimum temperature for high-quality flowers is 50 to 59F, but plants can be grown at a higher night temperature of 62F for faster development. Plants can tolerate temperatures as low as 40F, making them excellent candidates for extending the season with unheated hoop-house production. Try to maintain a day temperature of at least 68F but less than 90F.

While research has proven that most dahlias flower best under short days, 12 to 14 hour days, there is a potential problem with providing short days. In the greenhouse 11 to 12 hour short days may induce tuberization. Therefore, dahlias should be given long-day lighting during the fall, winter and spring to prevent tuberization and promote flowering. Growers often provide at least 14-hour long days. Long-day lighting also tends to increase stem length. Flowering should start 9 to 11 weeks after planting depending on the temperature. The first flower is often short stemmed and surrounded by axillary shoots but later flowers will have longer, more easily harvestable stems.

Summary

In recent years dahlia breeders have produced cultivars specifically for cut flower production that appear to handle various climatic conditions and a broad spectrum of postharvest treatments. However, this study explored a variety of postharvest tests on two cultivars and a limited number of observations on field production in one climatic zone. Specialty cut flower growers from various parts of the country have reported success with many of the other Karma cultivars. As with growing any new species or cultivar, growers should conduct their own "mini" tests covering both production and postharvest handling. Climatic conditions vary from season to season impacting field production and postharvest performance. The Karma dahlia series offers specialty cut flowers growers new possibilities for a species that has been popular with the public for many years. Since this study was completed, additional cultivars have been added to the series.

Acknowledgements

Thanks to the Fred C. Gloeckner Company for providing the rooted cuttings and to Beth Harden, Ingram McCall and Diane Mays for assisting with plant production and harvest.

*John Dole and Frankie Fanelli are at
North Carolina State University
Contact them at*

john_dole@ncsu.edu or frankie_fanelli@ncsu.edu

GROWER GRANT *Research Results*

These grants were supported by the ASCFG Research Fund.

To see how you can apply for an ASCFG Grower Grant, go to www.ascfg.org and click on Research Activities.

Growing and Marketing Specialty Cut (Fragrant) Roses in a Northern Climate

Ralph Thurston, Bindweed Farm, Blackfoot, Idaho

Introduction

Early in 2006, the ASCFG provided grant money (totaling \$1695) for Bindweed Farm to trial a number of roses as cut flowers, with cold hardiness, vase life, and market reception as primary factors to study. Located in a zone 4 climate (zone 5 since the onset of global warming) in Blackfoot, Idaho, Bindweed sells to high-end markets in Sun Valley, Idaho and Jackson, Wyoming, both quite distant from major airports. We hoped the extra shipping costs incurred by this distance would make local rose sales competitive with South American roses, which one of our customers once purchased for a nickel apiece (plus freight) in midsummer—a price not easy to compete with.

Since customers can get typical roses so cheaply, the grant was designed to test the marketability of roses not often sold by large wholesalers—those with atypical shape (i.e., “cabbage” or “peony” types) and/or fragrance. Initially, we intended to concentrate on David Austin’s “old-fashioned” type roses, which were bred to bring back fragrance and shape, but we found an almost black non-Austin called ‘Barkarole’ that we had to try to augment the Austins. Then, at the last moment before planting, we found a series of German roses bred specifically for outside cut flower production available through Newflora in Oregon, so we tacked on two varieties from them to test, as well. Newflora, who brokers and grows for Kordes, a famed German rose company, was gracious enough to send (at no charge) small numbers of five of their other varieties, too.



We ordered 12 varieties of roses, twenty-five specimens of each, but, as is typical when buying plant material, one of the suppliers (Hortico) was, unlike Newflora, unable to fulfill their entire order, so we planted a smaller number of 4 of the varieties. We chose Hortico as our supplier because they had a wider selection of offerings at a lower price than our initial supplier choices, who all hedged as to the hardiness of the Austin roses we sought to plant. Roses, more so than many perennial cuts, are apparently so susceptible to grower abuse and climate problems that wholesalers shy away from commitment to buyers.

Most of the Hortico roses came on very substantial rootstock, though one variety (‘Edward Elgar’) was much smaller—obviously at least a year younger in growth. The Newflora roses were quite a bit smaller than the Horticos, leading us to change our initial intent of harvesting cut stems the first year. Fearing that extensive harvesting would weaken the small roses, we decided to only disbud the first year to make sure they would

have the greatest strength possible to make it through their first cold Idaho winter.

Materials and Methods

We planted the roses in holes dug with a twelve-inch post hole digger, in rows 4 feet apart with the specimens spaced in three foot increments. We filled the holes with a combination of potting soil, milorganite and our clay-based Idaho soil, then covered the just-budding roses completely with wood chips in order to eliminate damage from desiccating wind and heat. One hundred percent of the Kordes roses began leafing out in two weeks, after which we pulled the chips away to use as weed control. The Horticos, though larger, leafed out much later—some taking more than a month—and mortality was high: Nearly 25% of the Horticos did not live, some of the varieties had almost a fifty percent loss. There was considerable mortality difference between varieties—only 13 of 25 ‘Sir Edward Elgar’ survived, for instance, while 24 of 25 ‘Pat Austins’ lived. ‘Barkarole’ saw only 10 of 25 live, while 23 of 25 ‘Hyde Hall’ survived. Only ‘Dark Lady’, with 10 plants of 10 sent, had a 100% survival rate.

Hortico explained the problem as caused by us—most rose sellers recommend soaking their roses in water for as long as 24 hours before planting, but Hortico, according to them, uses rootstock that cannot take more than ninety minutes of soaking. We had “drowned” the roses—though we wondered how to explain the varying

continued on page 37

MOVING *the Needle*

Charlotte Morford and Joseph Caputi

Using the Internet to Market Your Cut Flower Business

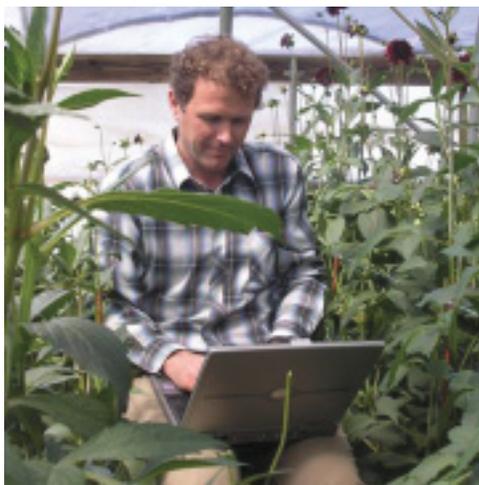
Do you know what the term “digital native” means? And no, we didn’t say digital native plant. A “digital native” is someone who was born during or after the World Wide Web revolution, someone who possesses the ability to type with his thumbs, email, instant message, play video games while eating a Big Mac, surf the web, chat, program, multi-task, and cruise through an increasingly technical world with the greatest of ease; someone who has no problem using a digital camera, juggling remote controls, or setting up a laptop connection.

Well, that’s not us. We’re still flummoxed—regularly—by the whims of our dial-up (a reality out here in rural Louisa County) connection, what happens when we’re told to upgrade to the latest version of your system software, and manage the five zillion passwords that we, uh, have written down someplace. And despite all the reading we try to do of the computer magazines and web sites, there’s still a learning curve that isn’t always pleasant.

However, as flower growers, our personal computers give our business a potential most of us may never have imagined. This tool that never sees the natural light of day, feels a warm summer breeze through its cables, or gets dirt under its keyboard, is in many ways as important to our cut flower business as our tractors, our shovels and rakes, our seeders and tillers. We wouldn’t think of leaving the house to work in the field without a hat and sunscreen, and we couldn’t imagine running our cut flower business without our computers.

Here are some of the ways the computer helps manage and build our business, despite that learning curve and having to squeeze computer time into an already jam-packed day in the fields.

The Cut Flower Quarterly



Email

- Better than faxing
- Easily keep in touch with other growers, customers, and vendors

In the good old days—say, the 1980s and 90s—the fax machine was cutting-edge technology. When Joe was in the restaurant business he’d send a daily fax to a list of customers who wanted to receive his lunch menu. He noticed a significant increase in business after employing this simple, yet effective, method of communication. So when we started growing and marketing cut



flowers, it was a no-brainer for us to use the fax machine to send florists and wholesalers our weekly flower availability. This gave our customers a good idea of what they could expect when our van pulled up in front of their shops.

Today, using email to connect with the same customers is simpler and faster. It is far easier to send that flower availability list to many recipients by email than to repeatedly send the same fax as many times, not to mention having to pay for long-distance phone calls. Additionally, if a customer has a question about what’s on your list, he or she can contact you quickly by return email. It is an easy way to start a conversation with your customers.

If you want to protect your list of recipients who are receiving your email, learn how to use the BCC (Blind Carbon Copy) line for your outgoing email. This way those who are receiving your document won’t be able to see the email addresses of the others on your list.

In short, by using email to send your flower availability list, you can send one document via one email to many recipients. It’s easy and fast, saving you time to get those zinnias planted.

If you have only a few customers (ideally large, generous ones who pay on time and order lots of stuff) who prefer a weekly faxed price list, great. Some florists don’t have time to open up email and actually prefer receiving a fax, although these days practically everyone has an email address and uses it frequently. We’ve weaned our customers off the practice of faxing, however, and onto a regular email that arrives every Monday. It saves us time.

Business Web Site

- Continuing the relationship after the sale (customers)
- Developing sales leads (prospects)
- Reinforcing/building your identity
- Basic costs
- Maintenance requirements

We believe having a web site for your cut flower business is as essential as the banner you hang across the front of your farmers' market tent or your name painted on your delivery truck.

While we do not use our web site for e-commerce (selling our flowers over the internet), we do use it as an essential tool for communicating information and building sales leads. Our web site is our billboard to the world.

Our web site address is prominently displayed on everything that carries our business name. We consider the site a great way for our customers to find out about our cut flower farm, and continue their experience with us well after the sale. It's a place we can put information on how to take care of their flowers at home, and what flowers to expect when.

The majority of our wedding business comes either from referrals at the farmers' market or, increasingly, people discovering the web site when they're poking around the web using keywords such as "Virginia", "weddings", and "flowers." Brides will also search for specific flowers—such as sweet peas—and if you've posted a list of what you're growing, they can find you that way, too.

Creating a basic web site doesn't cost much. In general, you pay a yearly fee (\$20) for the site's "domain name" or web address (www.yourfarm.com), another yearly or monthly fee (as low as \$6 per month) for site "hosting" (the machines out there that serve your web site to the inquiring masses), and perhaps a

professional designer to make the site look really nice, though you can knock out a basic site with some basic tools that are often built into your computer's operating system.

Maintaining the site takes some time and work. Admittedly, the Charlotte's Garden web site doesn't get updated nearly enough, but we have everything we need to keep things interesting for our customers. The off-season is a great time to take care of your web site.

When you break it down over time, its daily cost is pennies. We estimate our web site costs us no more than 35 cents per day—a very good investment in your marketing plan.



Research on the web

- Growing techniques and cultural information
- ASCFG Bulletin Board
- Seed and plant vendors
- Extension Service/University web sites
- FREE information

Who among us hasn't heard of Google? There are, of course, other "search engines", but Google is by far the most widely known. Whichever your preference, it is nearly undisputable that using the Internet for research is fast, easy, and comprehensive. We can't tell you how often we use the Internet to find information that was once only found in

the library, or books that had to be purchased. Whether you're searching for cultural information about new varieties, or how-to's about growing techniques, by simply typing your query in the search line you'll have a multitude of responses to choose from. You will nearly always get the answer you need. And, most seed and plant purveyors have web sites where you can find valuable information, place orders for seed, plugs and shrubs. Even if you eventually pick up the phone and place a call to speak to a human being, you can first do your research and find out what's available.

Another tool we find to be invaluable is the ASCFG web site and the members' Bulletin Board. By now every ASCFG member should be receiving emails of questions and responses from fellow members that are sent and responded to via the Bulletin Board. Where else can you find such an invaluable tool? And, when you go to the Bulletin Board you'll find all of that information, those *conversations*, archived there.

How do we know we're getting the right bang for our buck out of our Internet marketing efforts? Because week after week, we hear from our customers telling us they love our web site, or, thanks, they got our email, or, they'll call or email to place an order. And that furthers the conversation between Charlotte's Garden and those who buy our flowers.

Charlotte Morford and Joe Caputi own Charlotte's Garden, a flower farm in Virginia's historic Green Springs District of Louisa County. Contact them at flowermarketing@gmail.com

IPM Update

Stanton Gill and Raymond Cloyd

Wipe it Out?

Ever wish you could wipe out all of the bad insects in your cut flowers? Well, you can't, so just get over it. The best that you can hope for is to keep them at levels at which you can still harvest some flowers with minimal damage. How do you do this? Well, if you get to know the pests, then you can destroy them. We have made it easy for you because in September of 2006 we published the second edition of *Pests and Diseases of Herbaceous Perennials: The Biological Approach*, from Ball Publishing Company. Now you can flip through thousands of pictures of your favorite insects, find out all of their secrets, and learn how to wipe them out—or at least suppress them for a while.

One of the most popular groups of insecticides are available for cut flower growers is systemic insecticides. Probably most common is acephate (Orthene), which has been around since the 1970s. The EPA reports that acephate is the systemic insecticide most widely used by professionals and home gardeners in the United States. It is relatively cheap and it controls a wide range of pests in cut flower operations including aphids, thrips, caterpillars, whiteflies, harlequin bugs and leaf-feeding beetles. It is labeled for use only as foliar spray and gives control for 7–14 days for most pests. We have conducted trials with acephate applied to root zones and it gave several weeks of control. One company has a labeled formulation of acephate that can be applied to soilless substrate in nurseries, but it is rather limited for what it can safely be used on. It is not labeled for soil applications in field situations because it is so water soluble it would move in many soils and could possibly end up in water supplies. So, field growers are basically limited to foliar applications.

How Systemic Insecticides Kill Insects

Systemic insecticides available to cut flower growers are associated with two modes of action: nicotinic acetylcholine receptor disruptors, and selective feeding blockers. The neonicotinoid-based insecticides kill target insect pests by acting on the central nervous system, causing irreversible blockage of the postsynaptic nicotinic acetylcholine receptors. These systemic insecticides disrupt nerve transmission in insects causing uncontrolled firing of nerves. This results in rapid pulses from the steady influx of sodium, leading to hyperexcitation, convulsions, paralysis and death. Sounds gruesome, but just how attached to the insects that damage your cut flowers are you?

This article originally appeared in the Winter 2007 issue without both authors' name. We regret the omission

What are some of these neonicotinoids that are on the market for controlling pests? There are presently five neonicotinoids out there: imidacloprid (Marathon), thiamethoxam (Flagship), dinotefuran (Safari), clothianidan (Celero), and acetamiprid (Tristar). Some are labeled for foliar applications, some are labeled for soil applications and some have labels for both. Systemic insecticides applied as soil applications take a little longer to be carried through the plant compared to foliar applications, but they generally remain toxic to pests for longer periods of time.

One of the main concerns with using systemic insecticides having a single or site-specific mode of activity, such as the neonicotinoids, is that the selection pressure placed on insect pests from continual use of these systemic insecticides may result in the development of resistant genotypes or biotypes. Most cut flower growers use these products once or twice during a growing season, whereas greenhouse growers have longer periods of pest activity and often make multiple applications, increasing the chance of resistance. With increased chance of resistance developing.

Some systemic insecticides are classified as selective feeding blockers, which have a broad or physical mode of activity. These products kill insects by interfering with neural regulation of fluid up-take, thus blocking their stylet (feeding tube), which prevents them from withdrawing plant fluids. As a result, the insects starve to death. This mode of action is less susceptible to insects developing resistance—in the short term. However, continued use of this mode of action for long periods of time may eventually reduce the effectiveness of these systemic insecticides.

Making the Most Effective Applications of Systemic Insecticides

Systemic insecticides must be applied to the root zone when plants are actively growing and have an extensive, well-established root system, in order to enhance the uptake of the active ingredient through the vascular tissues. Applying systemic insecticides on warm, sunny days will also lead to increased movement of the active ingredient through the transpiration stream. In contrast, uptake is inhibited when plants don't have well-established root systems. In addition, high humidity and low light conditions can lead to reduced uptake of systemic insecticides. Any delayed movement of the active ingredient may result in the material taking longer to kill insect pests.

Continued on page 19



Osborne Seed Company, LLC

360-424-7333 800-845-9113

www.osborneseed.com

The crew at Osborne has been searching to bring the most intriguing, exciting and productive new varieties to **you**.

Our dedicated sales staff provide professional and friendly service. Chris, Jenn, and Vivian look forward to helping you!



Customer satisfaction through
superb service is our goal.

Let us serve you!

The Power to turn

Night Into Day



See what the power can do for you.

Call for a personalized Lightsmith™ Lighting Design,
let us help you design the ultimate lighting system
for your greenhouse.

PARsource[®]
lighting solutions

Contact GARTH CARR 800.634.9990 x115 National Sales Manager
www.PARsource.com

INTRODUCING Solutions for Greenhouses

**A NEW Cleaning and Wash System
for Greenhouses, Nurseries, Production and Packing Areas!**

Floralife®, Inc. combines its vast knowledge of postharvest products, cleaning procedures and research to help you produce products meeting the highest quality standards.



**Floralife
P.A.C.
PROFESSIONAL
AGRICULTURAL
CLEANER**

Chlorinated Sodium Hydroxide Cleaner
Cleaner for
complete greenhouse
cleaning including
pots and trays



**Floralife
STRIP-IT**

Emulsified Sulfuric Acid Cleaner
End-of-season
cleaning including
irrigation lines and
sunblock remover



**Floralife
MicroBLOC
GREENHOUSE WASH**

Unique Oastery Ammonium Formulation
Use for the
final wash in our
SPECS program



Floralife®

The Care and Handling Experts

888.323.3659 • 843.528.3839 • www.floralife.com • info@floralife.com



EthylBloc® is a registered trademark of the Fries & Wess Company.



RESEARCH Update

Megan Bame

Variable Salt Tolerance of *Statice*

Scientists with the United States Department of Agriculture's (USDA) research arm, the Agricultural Research Service (ARS), along with faculty from the University of California-Davis, have evaluated various cut flower crops for their productivity when irrigated with saline wastewater. The studies were initiated in response to the increased competition between urban and agricultural use of high quality water. This study focused on two species of statice: *Limonium perezii* 'Blue Seas' and *Limonium sinuatum* 'American Beauty'.

Three-week-old seedlings were planted in greenhouse sand beds and irrigated with prepared water solutions that simulated the saline drainage waters of the San Joaquin Valley in California. The treatments consisted of seven EC levels (Electrical Conductivity measures amount of soluble salts). The control water had an EC of 2.5, while the other treatment ECs were: 7, 11, 15, 20, 25 and 30 dS/m.

Though all treatments resulted in flower production, stem length declined significantly as salinity increased. Overall, *L. sinuatum* performed better than *L. perezii*. Since both species completed their lifecycle at salt concentrations exceeding 30 dS/m, they can be considered halophytic plants.

From a production perspective, *L. sinuatum* 'American Beauty' was shown to produce commercially acceptable cut flowers with moderately saline water. It was rated moderately tolerant, compared to *L. perezii*'s rating as salt sensitive.

Grieve, C.M., J.A. Poss, S.R. Grattan, P.J. Shouse, J.H. Lieth, L. Zeng. 2005. *Productivity and mineral nutrition of Limonium species irrigated with saline wastewaters*. HortScience. 40(3):654-658.

Midas: A Methyl Bromide Alternative for *Celosia* Production

With the continued elimination of methyl bromide use for soil fumigation, alternatives are continually being tested in field trials for acceptable weed, nematode and pathogen control. Midas is a commercial product consisting of a 50:50 mixture of methyl iodide and chloropicrin. ARS scientists conducted a study on the effectiveness of Midas by evaluating the production of *Celosia argentea* in Martin County, Florida.

The three treatments consisted of 200 lbs/ac of Midas, 200 lbs/ac of methyl bromide:chloropicrin (98:2), and control plots that were untreated. The treatments were covered with metalized film for 15 days. Five days after removing the film, seeds of *Celosia argentea* 'Chief Rose' were planted. Data collected at mid-season and harvest included weed density, fungal colony formation, disease incidence, gall ratings and nematode counts.

In every data category, the incidence of weeds, pests and pathogens was greater in the untreated control plots. The plots treated with Midas had comparable control to the methyl bromide treatment. The stem diameter and height was lowest in the untreated control, with no difference between the two fumigants. The number of marketable stems was significantly higher in the fumigated treatments than the control group.

The use of Midas provided weed, pest and pathogen control in *Celosia* production comparable to what is achieved using methyl bromide.

Roskopf, E., N. Burelle, R. Driggers, R. Kreger, J. Holzinger. 2006. *Evaluation of Midas for production of ornamental cockscomb (Celosia argentea) in Florida*. <http://www.ars.usda.gov/research/publications> Acquired 2/27/2007.

Funding for this column is provided by the ASCFG Research Committee.

"I discuss the importance of cut flowers—both globally and domestically—in my horticulture classes. I introduce my students to the ASCFG, and talk about the relationship of cut flower research to cut flower production and marketing in this country. They go hand and hand; ignore the research and the industry suffers. This is true in any industry, but particularly obvious in one for which efficiency and quality are so important. When my students ask "Who is doing the research in America?", the list is surprisingly small. Don't let it get any smaller - help to support your future."

Allan Armitage, University of Georgia

To donate to the ASCFG Research Fund (to provide grower grants) or to the ASCFG Research Foundation (to support university research), contact the ASCFG at ascfg@oberlin.net

Another Closer Look at Temperature and Humidity for Botrytis Control In Freesia

It is widely recognized that temperature is a principal environmental factor affecting initial infection by *Botrytis cinerea*, and relative humidity (R.H.) affects conidial germination and lesion development. The specific temperature and relative humidity as it affects *B. cinerea* in freesia flowers was the focus of research conducted in the United Kingdom. The study mimicked the cold chain from harvest to wholesaler monitoring the development of *B. cinerea*.

Flowers of *Freesia* cv. 'Cote d'Azur' were harvested at a commercially mature stage, with the oldest bud fully developed but still closed. At harvest, no symptoms of *Botrytis* specking were evident. Flowers were artificially inoculated with *B. cinerea*. The humidity treatments were 100% R.H. or 80-90% R.H. Inoculated flowers were held for 24 hours at 5, 12 and 20C (41, 54, and 68F). On the second and third incubation days, the flowers were moved from 12 and 20C to 5C simulating the wholesalers storage room temperature.

Data were collected 24, 48 and 72 hours after inoculation. Disease severity was measured according to an arbitrary scale from 0=no lesions on the petals to 4=50-100% of petal surface area affected by lesions. The number of lesions and diameter of lesions were also measured. The lesions are brown or white volcano-shaped specks that decrease flower quality.

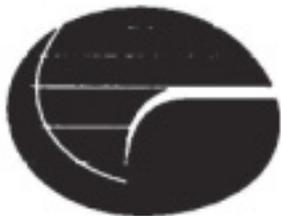
The study suggests that R.H. is a critical factor for infection of *B. cinerea* in freesia flowers. At 100% R.H., at 5, 12 and 20C, disease establishment occurred within the first 24 hours of inoculation. R.H. below 90% suppressed disease incidence at all treatment temperatures. In fact, only at 12C were lesions produced at 80-90% R.H. Previous studies suggested that 20C was the optimum temperature for *Botrytis* infection; however, this experiment did not generate visible lesions at 20C and 80-90% R.H., even after 72 hours.

After the initial 24 hours, disease severity, lesion numbers and lesion diameters showed a marked increase when held at 5C compared to 20C. Flowers held at 20C did produce lesions, but they did not expand over the 72 hours of data collection.

While temperature is a factor in *Botrytis* infection, this study suggests relative humidity should be the greater consideration for reducing disease incidence in freesia.

Darrau, A.I., D.C. Joyce, L.A. Terry and I. Vloutoglou. 2006. *Postharvest infection of Freesia hybrida flowers by Botrytis cinerea*. *Australasian Plant Pathology*. 35:55-63.

Megan Bame is a free-lance writer in Salisbury, South Carolina. Contact her at meganbame@yahoo.com



GeoSeed

- Dedicated 100% to Seed. Serving your seed needs is our only business.
- Over 7,000 varieties in stock - 1,700 recommended cut flower items.
- Seed is stored in the most modern standards for moisture and humidity control.
- Seed conditioned and stored to newest requirements.
- Testing of Germination and quality is constant and comprehensive.
- Personal service and product knowledge of highest standard.
- Our people pledge the care and commitment of lifetimes in seed.

Yours truly,
George B. Park

121 Gary Road Dept. 502
Hodges, SC 29653

Call Toll Free: 888-645-2323 USA

Outside USA: 864-227-5700

Email: geo@geoseed.com

Fax: 864-227-5108

Website: www.geoseed.com

SMALL *Things Considered*

Gay Smith

Quality, Quality, Quality

Have you noticed a recurring theme that is the topic of many articles dealing with retail business? It is the battle between big and small. I first started noticing it in articles discussing the impact of Wal-Mart's entry into organic produce. Discussions and subsequent articles got me thinking about the pros and cons of big vs. small in the world of food products. There are many examples—coffee, for instance. Many welcome the easy availability of the ubiquitous Starbucks, but not everyone perceives endless expansion as positive. Some Starbucks sites in Portland have been picketed to save independent coffee shops from going under. What about micro-brews? Does your perception change when you find out your favorite beer is actually not a micro-brew at all but instead owned by one of the huge mega-breweries like Anheuser-Busch? What about the big vs. small organic debate? Some folks are saying that so-called “big organic” is somehow less pure than small organic. How does the debate play out in flowers? Somehow there is an extra “feel good” when you purchase blooms from a local source compared to those churned out in huge farms via agribusiness companies located in Latin America.

Or is there? What really matters to consumers when it comes to coffee, organic produce, micro-brews or flower bouquets? Quality! If quality is not part of the equation, John and Jane Public turn away regardless of how warm and fuzzy the product positioning may be. In the case of flowers, vase life is the overwhelming consumer barometer indicating quality. Vase life answers the ever-important consumer question “Did I get my money's worth?”

It is no secret that quality starts with careful variety selection and sound production protocols, but the quality equation doesn't end once blooms are harvested. Correct postharvest treatments make a significant difference in customer satisfaction. As an independent businessperson, you want to know about new treatment innovations to determine which ones best fit your flower types. Let's start with new products.

One of the newest products available is safe, easy to use and inexpensive: slow-release chlorine pills. The continuing surge in popularity of gerberas fueled this product development. Gerbera performance is all about cleanliness. Those hollow stems get easily plugged with bacteria if they are not placed in clean buckets with clean solution. Lots of flowers are prone to getting clogged with bacteria and droop because flow is blocked. Think of sunflowers, celosia, amaranthus, daffs, stock, hyacinths, etc. These pills are a different formulation of chlorine than common household bleach. Bleach (sodium hypochlorite) is aggressive, but short lived—as short as 4 hours depending on temperature and light conditions. The new chlorine pills are “active” for 2-3 days, long enough for flowers to get a good (sanitized) first drink and become fully hydrated before they are sold at the local market or packed for shipping.

Both Chrysal and Floralife have developed slow-release chlorine products. Chrysal offers 2 sizes: a small pill for 3 quarts of water or a large pill for 3 gallons of water. Although the product focus is on gerberas, slow-release pills are suitable for all kinds of crops, especially field-grown flowers that are loaded with bacteria (from wind and mud splash) at

time of harvest. The pills are easy to apply out in the field when you fill buckets, but keep in mind, it is a waste of time to use any kind of chlorine in dirty buckets because the “active” antibacterial power of chlorine is a one-time expenditure. Whether it is fighting the bacteria in a dirty bucket or bacteria clinging to the stem of a flower, once chlorine kills microbes, it is rendered inactive. This means that flowers going into dirty buckets never receive any benefits from chlorine's “kill” power, because the antimicrobial action is completely depleted just fighting the pollutants in/on the bucket—it never gets around to cleaning up the solution the flowers will drink.

Vase performance and longevity of flowers from bulbs, corms, rhizomes and tubers are much improved with new postharvest innovations. Flowers in this large “family” are not hard to hydrate nor do they suffer major problems with bacteria plugging stems, but they do suffer an imbalance of plant growth regulators (hormones) when harvested. The symptoms are easy to spot: premature yellowing foliage, bud or bloom stagnation, short vase life and loss of color vibrancy.

New treatments are available that act to rebalance the hormones thereby obviating the symptoms. To keep lily foliage green, consider using a lily/alstro t-bag. This solution is a pre-measured dose of food and hormones formulated to give energy to open buds and hormones to keep foliage vibrant and green. Iris, freesia and glads suffer from bud stagnation and are best treated in water containing a bulb t-bag. This formula contains a different hormone mix of plant growth regulators designed to insure bloom opening and food to insure a long vase life. T-bag technology has been available from Pokon & Chrysal

since the early 2000s. It is an easy way to deliver the right amount of treatment per bucket and have a visual aid (empty t-bag) to remind you the flowers are in treated solution.

Postharvest information would not be complete without mentioning ways to protect flowers against ethylene damage. Ethylene is a naturally-occurring hormone that hastens maturation in some flowers, fruits and vegetables. Borrowing a tagline from Raid commercials, *ethylene kills flowers dead!* The most effective protection is a first drink after harvest of silverthiosulfate (STS). The commercial name is Chrysal AVB. This solution is a must for any flower that is ethylene sensitive like delphinium, larkspur, sweet pea, monkshood, freesia, agapanthus, veronica and agapanthus. STS is not new, but there is some confusion about it because it is not registered for use in every state. In fact, it is legal to use only in CA, TX, OR, WA, FL and MI. Because silver is a heavy metal, STS must be neutralized

prior to disposing. The neutralizing process involves precipitating and filtering out the silver before the spent solution can be dumped in the sewer or soil. If you live in a state in which STS is not available for use, consider another method of protection: 1-MCP (commercial name is Floralife Ethylbloc). This compound works as a gas and is now available as sachets that are activated by dipping them in water immediately prior to packing.

Considering it costs a fraction of a cent to treat flowers, using the right product is the cheapest and most effective insurance policy in which you can invest to guarantee customer satisfaction.

Gay Smith is the Technical Consulting Manager for Pokon & Chrysal USA. Contact her at gaysmith@earthlink.net

IPM Update

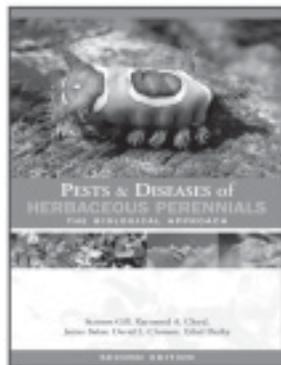
continued

Systemic insecticides are also more effective when plants are herbaceous rather than woody, particularly on sucking insects such as aphids.

Systemic insecticides, when applied to the growing medium, need to be used preventatively in order to control phloem-feeding insects such as whiteflies, aphids, and mealybugs. If systemic insecticides are applied after insect pest populations are already established on plants, this may delay control, resulting in insect pests causing damage before ingesting enough active ingredient to kill them.

Want More Information?

Buy our book and start reading! Meanwhile, if you have insect questions you can call me at (410) 868-9400 or email me at Sgill@umd.edu



Stanton Gill is Principal Agent & Regional Extension Specialist, Nursery and Greenhouse Management at the University of Maryland.

Raymond Cloyd is Associate Professor of Entomology, Kansas State University. Contact him at rcloyd@ksu.edu

ATTENTION!
Commercial Growers

Flower Bulbs direct from the grower in Holland.
Pre-cooled or non-cooled Flower Bulbs for:
Greenhouse production
Field production
Support and service to growers.
Specializing in Dutch Iris, Lilies and Tulips

BulbMark
"The basics of growing"

Ph: 1-800-868-0426 Fax: 1-910-762-4148
E-Mail: orders@bulbmark.com
Website: www.bulbmark.com

BACK to Basics

Peg Godwin, John Dole, and Paul Nelson

Managing Cut Flower Nutrition in the Field

Proper fertilization is an important factor in producing high quality long-lasting cut flowers. A fertilization program for field-grown cuts provides adequate levels of nutrients for early vegetative growth, promotes the development of long, strong stems and encourages the growth of consistent quality flowers throughout the entire season. Continuous flowering is also promoted by removal of old or faded flowers and pinching to encourage production of new stems and flowers. Weeds must be controlled to eliminate competition for nutrients and water.

Soil Testing

Soil testing is a critical tool in field cut flower production to determine the soil type, percent organic matter, pH, acidity and the nutrient levels in the soil. The information gained from a

careful soil test is a prerequisite for determining application rates of lime and fertilizer. Adding unneeded nutrients is costly in materials and labor, may damage the crop with toxic levels of certain nutrients and may contribute to ground water pollution. Soil type and specific crop requirements are also needed for optimum growth.

The root zone pH greatly influences the nutrient availability of micronutrients and the activity of beneficial soil microorganisms. A soil pH range of 5.5 to 6.8 is best for most cut flowers. The addition of lime to an acid soil increases the phosphorus available to the plant. Lime is also an excellent source of calcium and magnesium if ground dolomitic limestone is used. A soil analysis completed after a finished crop will provide the time needed for the grower to apply lime and time for the beneficial effects of the soil reaction before planting a new crop.

Table 1. Approximate rates of limestone and sulfur for altering soil pH

Existing soil pH	Sandy Soils		Loam Soils		Clay Soils	
	to pH 6.0	to pH 6.5	to pH 6.0	to pH 6.5	to pH 6.0	to pH 6.5
<i>Pounds of limestone per 100 ft² needed to raise soil pH</i>						
6.0	0.0	2.0	0.0	4.0	0.0	5.0
5.5	2.0	4.0	4.0	7.0	5.0	10.0
5.0	4.0	6.0	7.0	11.0	10.0	15.0
4.8	4.5	7.0	8.0	12.0	12.0	17.
<i>Pounds of sulfur needed per 100 ft² to lower soil pH</i>						
7.5	—	1.0 to 1.5	—	1.5 to 2.0	—	2.0 to 2.5
8.0	—	2.5 to 3.0	—	3.0 to 4.0	—	4.0 to 5.0
8.5	—	4.0 to 5.0	—	5.0 to 6.0	—	6.0 to 7.5
9.0	—	5.0 to 7.5	—	—	—	—

The accuracy of the soil report depends on the quality of the sample submitted. Divide the area to be sampled into nutritional zones determined by differences in the soil type (color and texture), history (previous crop and fertilization), environmental conditions and future crop. Collect samples in a random pattern with stainless steel or chrome-plated tools avoiding brass, bronze or galvanized materials that can contaminate the sample. Collect 10 to 20 subsamples to a depth of 6 inches from each zone. Mix the subsamples together to obtain one total sample. Remove large debris including stems, leaves and rocks. Test materials should be available through your local extension office.

Tissue Testing

Soil testing together with plant tissue analysis forms important tools for assessing nutrient availability and avoiding environmental damage due to excess nutrient loading. Plant tissue analysis measures all essential plant nutrients that can be supplied through fertilizers and indicates whether the sample tissue contains adequate concentrations. Plant tissue analysis can be used to monitor plant nutrient status or to diagnose current nutrient problems.

Monitoring or predictive analysis includes sampling healthy plants to adjust fertilization strategy and identify potential nutrient problems. Growers can monitor the nutrient status of healthy crops to identify changes in nutrient needs during the growing season. Rainfall can leach nutrients such as sulfur, nitrogen and potassium out of the root zone. Regularly collected tissue samples can identify nutrient problems before symptoms appear. Monitoring nutrient status is most advantageous for high-value crops.

Diagnostic analysis involves taking samples from unhealthy plants to find out if any nutrient concentrations are too high or too low. Separate tissue samples should be taken from plants that appear healthy and comparing them with samples from those that are not growing as expected. Soil samples supplement tissue samples and should be taken from the root zones to match each group of plants. Comparison of the two samples can indicate whether other factors, such as insect and disease or drought stress, are involved.

Enhancing reliable results with plant tissue analysis depends on collecting the best indicator samples. The best time of take samples is between mid-morning and mid-afternoon. Selecting the tissue to sample depends on the crop, its stage of growth, uniformity of growth, and the purpose of sampling. The most

Vita One-Step[®]
Hydra & Nutra Solution
for Fresh Cut Flowers

• GENTLE TO THE EARTH & TO YOU
• BIODEGRADABLE • ENVIRONMENTALLY SAFE

One-Step Care & Handling Technique

- Extend cut flower and foliage quality for long vase life and satisfied customers
- Mixes instantly in any water temperature with sparkling clarity
- Decreases floral shattering and ethylene damage without silver
- Automatic temperature compensation (ATC) adjusts pH to water temperature without buffers
- No slime, odor, foam or sticky residue
- No more sanitizing buckets — contains natural antibacterial agents
- Can be used in underwater cutters — won't clog injector systems
- Cost effective — makes up to 50% more than other products

USDA National Organic Program Compliant

VITA PRODUCTS, INC.
1-800-874-1452
www.vitaproducts.com
e-mail: info@vitaproducts.com

recently matured leaf (MRML) is usually the best indicator of nutritional status. The MRML is the first fully expanded leaf below the growing point which is neither shiny green from immaturity nor dull from age.

When symptoms appear in different zones on a plant, take a separate sample of the affected tissue in addition to the MRML. In this case, comparative samples of the same tissue from symptom-free plants are also helpful in isolating small differences

between the two areas. The sample should contain enough leaves, usually about ten to 15 leaves (about 1 ounce), to represent the average condition of the crop and should be kept free of soil contamination. Paper bags or the envelopes provided by testing labs should be used for tissue samples. Include a completed plant analysis information sheet and the processing fee with each sample sent to the laboratory for analysis.

Tissue nutrient levels of high-quality plants. Indicated values are general recommendations.

Species	N%	P%	K%	Ca%	Mg%	Fe ppm	Mn ppm	Zn ppm	Cu ppm	B ppm
<i>Achillea millefolium</i>	2.8-3.1	0.3-0.4	5.1-5.6	0.8-0.9	0.2-0.4	127-135	60-70	40-50	-	25-35
<i>Aster</i>	2.2-3.1	0.2-0.7	3.3-3.7	1.0-1.7	0.2-0.4	162-180	65-273	26-121	-	37-46
<i>Celosia</i> 'Chief'	3.0-3.2	0.5-0.6	4.7-4.9	2.5-2.6	1.3	75-84	305-315	111-123	17-18	49-53
<i>Coreopsis grandiflora</i>	3.1-3.3	0.2-0.3	2.7-3.4	1.1-1.4	0.4-0.5	53-61	74-101	64-75	4-7	26-30
<i>Cosmos</i> 'Sensation'	3.0-3.2	0.2-0.4	1.8-2.2	0.9-1.2	0.3	69-76	68-119	28-39	11-16	53-66
<i>Gerbera</i>	2.7-4.1	0.3-0.7	3.1-3.9	0.4-4.2	0.3-2.8	60-130	30-260	19-80	2-10	19-50
<i>Hydrangea</i>	2.0-3.8	0.3-2.5	2.5-6.3	0.8-1.5	0.2-0.4	85-115	100-345	50-105	5-10	20-25
<i>Lilium</i>	2.4-4.0	0.1-0.7	2.0-5.0	0.2-4.0	0.3-2.0	100-250	50-250	30-70	5-24	20-24
<i>Sunflower</i> 'Sunbright'	3.1-3.5	0.3-0.4	5.2-5.4	2.0-2.5	0.6	93-115	72-83	65-78	14-18	73-80
<i>Sunflower</i> 'Sunrich Orange'	3.2-4.7	0.3-0.4	4.0-5.0	2.1-2.3	0.6	89-103	68-93	56-62	13-18	70-76
<i>Zinnia</i> 'Benary Giant Mix'	2.1-3.2	0.2-0.4	3.1-3.4	1.5-1.8	0.8-0.9	80-109	99-190	46-54	7-9	119-154

Soil Preparation

Based on the soil test results, amendments should be added to the soil prior to planting. Unless growing in the perfect sandy-loam soil, organic amendments will probably be needed. The addition of organic matter can correct many problems including increasing the aeration and drainage of heavy clay soils and increasing the nutrient and water retention of sandy soils. A variety of different sources of organic matter can be added including compost, cover crops, manures, straw, hay, silage and wood chips. Organic matter can be applied in the fall after the fields are cleared, in the spring prior to planting or as a mulch during production to aid in the reduction of weeds and water loss.

Cover Crops

Planting a cover crop is another way of adding nutrients and organic matter to the soil. Cover crops are capable of trapping residual soil nitrogen and leguminous crops can replace some or all of the nitrogen fertilizer needed to produce cut stems by fixing atmospheric nitrogen. Both legumes and non-legumes cover crops can help recycle and increase the availability of phosphorous, potassium and micronutrients. Cover crops reduce erosion and improve soil structure. They will benefit any area that will remain unplanted for four or more weeks. The alternative is to allow the area to grow up in weeds which will make weed control more difficult when the area is later planted. Aisles can also be planted in a low growing cover crop to reduce weeds. Cover crops and their residues can also reduce weed populations by altering light, temperature and providing a barrier to emerging weed seedlings. Different species for winter and summer cover crops are recommended across the United States and each requires intensive management. A number of leguminous cover crop are available including alfalfa (*Medicago sativa*), cowpeas (*Vigna unguiculata*), crimson clover (*Trifolium incarnatum*), hairy vetch (*Vicia villosa*) and Austrian winter pea (*Lathyrus hirsutus*).

Fertilizer Formulation

Fertilizer products come from organic and inorganic sources and are available in a variety of formulations including gases, liquids and solids. Organic fertilizers are derived from living or once living material. Materials include animal manures, crop residues, compost and many other byproducts of living organisms. One advantage of organic materials is that they provide beneficial organic matter that improves soil water and nutrient holding capacity. Organic matter creates an environment that encourages beneficial soil organisms. Nutrients in organic materials are released by soil microorganisms through a decaying process called mineralization which is affected by moisture, temperature, and the numbers and species of soil microbial populations. Organic materials are therefore less predictable in nutrient content, release, and efficiency than commercial grade fertilizers. Most organic materials can only be applied by hand or specialized, mechanical applicator but should be applied well in advance of crop need.

Inorganic fertilizers are derived from non-living sources and include most of our man-made, commercial fertilizers. Granular is the most common form of fertilizers. Soluble fertilizers are manufactured in powder, granular and liquid forms to be applied in water. Nitrogen is the element most easily applied in water and can be soil or foliar feed.

Slow release or controlled release fertilizers like organic fertilizers release nutrients over time. Coatings with different release rates are used to control the period of nutrient availability. Sulfur and resin are used to help formulate products that will last from three to twelve months.

The selection of fertilizer is best made by considering the cost of the product, ease and safety of handling, application cost and application equipment.

Application Methods

Many fertilizer application methods are available to the grower. Choice of application methods depends on the type of fertilizer used, cost, equipment available, irrigation system and grower preference. The physical makeup of the fertilizer will guide the method of application and the kind of equipment needed. Fertilizers should be delivered uniformly over the determined area.

Granular types of fertilizer can be broadcast on the soil surface with either a drop or rotary spreader and incorporated into the top 4 to 6 inches of soil prior to planting. Drop gravity spreaders pass the fertilizer through adjustable openings at the bottom of the hopper. Rotary or centrifugal spreaders use an impeller attached beneath the hopper that spins as the spreader is moved. Both spreaders require calibration to accurately deliver the prescribed amount of product. See the North Carolina Agricultural Chemicals Manual for a guide to calibration.

Another method is to broadcast and incorporate 3/4 of the recommended fertilizer and to band the remaining fertilizer in the row 2 to 3 inches on the side and 2 to 4 inches below the seed at planting. Sufficient distance between the seed or plant roots and the fertilizer must be allowed to prevent injury to the plants. The greatest risk of injury occurs at higher fertilizer rates. Banding and side dressing can be used to apply any form of fertilizer. Banding is done to the side of the seed in rows at the time of seeding while side dressing is used after crop establishment and may be preferable if soil fertility is low. Nitrogen fertilizer applied pre-plant, often leaches or washes out of the crop root zone. Fertilizer is commonly side dressed in annual production when the first flower buds begin to open. More frequent side dressing may be required on sandy soils or where leaching and heavy rainfall occurs. Frequent, light side dress applications are costly in labor but provide more consistent nutrient levels. A single application of slow release fertilizers can be used to save labor cost but the product has a higher cost.

Plasticulture necessitates the use of fertigation where liquid or water soluble fertilizer is fed through irrigation lines to fertilize plants. This method of application is generally used in conjunction with other methods and is commonly used on sandy soils to reduce the losses due to leaching. Transplants may also benefit from the use of a liquid fertilizer solution.

Application Rates

Results of the soil analysis should be carefully considered for proper preplant fertilization. Add phosphorus and potassium only at the soil test recommendation. Calculating the desired amount of a fertilizer begins with the recommended rates and the fertilizer type.

For example, to determine the amount of 5-10-15 required to supply 20 pounds of N to an acre multiply 20 by 100 and then divide by 5 (the percent of N in 5-10-15). The answer is 400 pounds of 5-10-15 per acre. To reduce this to the equivalent pounds of 5-10-15 needed for 1,000 square feet bed divide by 44 (since there are approximately 44,000 square feet in an acre). The answer is 9 pounds of 5-10-15 per 1,000 square feet.

*Contact the authors at
peg_godwin@ncsu.edu
john_dole@ncsu.edu
paul_nelson@ncsu.edu*

Annual Flowers, Roses and Perennial Flowers

Desired pH 5.8-6.5

Phosphorus	Potassium			
	Low	Medium	High	Very High
<i>Pounds of N-P₂O₅-K₂O per Acre</i>				
Very Low	120-120-120	120-120-120	120-120-60	120-120-0
Low	120-120-120	120-120-120	120-120-60	120-120-0
Medium	120-120-120	120-120-120	120-120-60	120-120-0
High	120-60-120	120-60-120	120-60-60	120-60-0
Very High	120-0-120	120-0-120	120-0-60	120-0-0

Phosphorus and potassium should be uniformly spread over the area and mixed into the top 6 inches of soil before planting. Nitrogen fertilization is the most important segment of fertilization after planting since it is quickly used by the plant and/or rapidly leaches from the soil. Field-grown cuts benefit from split nitrogen applications or usage targeted at particular growth stages. Growers can choose single element carriers like ammonium nitrate or potassium chloride to fill the precise needs of the crop. If no recommendation is available for a particular crop, use 1 to 2 pounds of actual nitrogen per 1000 square feet or 44 to 88 pounds of actual nitrogen per acre.

Growers have the option of many fertilizer sources including conventional fertilizers, slow-release and organic fertilizers. Slow-release, compost and organic fertilizers provide nutrients at a slower rate than conventional fertilizers and consequently reduce leaching and loss of nutrients to groundwater. Although slow-release and organic fertilizers often have higher initial cost, the slower rate of release results in fewer applications needed which reduces the total application costs. Many organic fertilizers also add organic matter to the soil benefiting future crops as well. Compost materials must be tested by a soil lab to determine the current nutrient content and avoid toxicities. Use of organic fertilizers requires a much larger weight of material to supply the same amount of nutrients when compared to a chemical fertilizer.

Soil Facts, Nutrient Content of Fertilizer and Organic Materials, available from NCSU publications, is a list of popular organic fertilizers and average nutrient contents.

Calculations are needed to accurately determine the exact amount of fertilizer to apply in specific crop settings. Irrigation equipment, area to be fertilized, type of fertilizer and recommended application rate are all needed to determine the fertilizer amount. Recommended rates can be expressed in pounds per acre and parts per million (ppm).

For liquid fertilizers, calculate the amount of material needed to achieve the desired concentration in parts per million (ppm) using the following equation.

$$\frac{(\text{ppm of desired element})}{75}$$

(percent of element in fertilizer)

equals ounces of fertilizer per 100 gallons

Example: using 15-20-25 provides 175 ppm N in 20 gallons of water

$$\frac{175}{75}$$

0.15

equals 15.5 oz in 100 gallons or 0.155 oz per gallon

Percent of element is the percentage of the nutrient present in the selected fertilizer grade: Example: ammonium nitrate has 33.5% N.

The following example is for applying soluble fertilizer with an injector. Example: Calculate the pounds of 15 - 20 - 25 needed to fill a 4 gallon stock tank to obtain 175 ppm N. Injector ratio is 1:100.

Injector rate of 1:100 means that 1 gallon of stock solution goes into 100 gallons of irrigation water. For the 4 gallon stock tank, 4 x 100 gal = 400 gallons that would come from the hose.

Amount of fertilizer needed:

$$\frac{175}{75}$$

0.15

equals 15.5 oz in 100 gallons or 0.155 oz/gallon

To calculate the amount of fertilizer to add to the stock tank, multiply 15.5 oz. by 4 (400 gal. of fertilized irrigation water produced divided by 100 gal. from equation) to yield 62 oz. This amount should be added to the 4 gallons of water in the stock tank and will yield 175 ppm N in the irrigation water.

Summer Annuals

Annuals benefit from constant low feeding to supply continued harvests over the course of a growing season. Application of granular fertilizer should be made at regular intervals to coincide with nutritional needs of the crop. Combine crop growth rates, type of plant material, water needs and temperatures to determine if applications are needed

monthly or more frequently. Crops grown in fields with heavy irrigation or rain and sandy soils are better managed with split applications of nitrogen fertilizer. Young seedlings are susceptible to fertilizer injury so the initial application of fertilizer should be small. Fertilization of annuals directly seeded in the field should begin after seedlings are well established. Hardened-off transplants should be planted into a field prepared with 20 to 30 percent of the nitrogen requirements. Side dress with an additional 20 to 30 percent of the total amount of fertilizer when transplants are about 6 to 10 inches tall. Cut flowers that will be harvested for an entire season should receive several small additional applications.

Sunflower

Sunflowers are considered heavy feeders and after field establishment benefit from two or three monthly feedings of 100 pounds of nitrogen per acre.

Zinnia

Begin fertilization of zinnia shortly after germination using 100 to 150 ppm of calcium nitrate and repeat weekly.

Celosia

The number of cut stems increases when celosia is fertilized with two or three monthly feedings of nitrogen at a rate of 100 pounds per acre.

Winter Annuals

Winter annuals need small amounts of nitrogen as the root system is established during cool temperatures. An increased need for nitrogen occurs with warmer temperatures and top growth. Fertilization should be timed to meet the plant growth.

Dianthus

Early fertilization should occur after plants have become established in the field at a rate of 100 pounds of nitrogen per acre. Dianthus generally respond to early fertilization with increased stem length, number and plant size. Fertilization applied after stem elongation has occurred can delay flowering.

Delphinium

Delphinium fertilization should coincide with early stem elongation after rosettes have formed.

Perennials

Perennials benefit more from a single early spring or late fall application to boost overall growth. Fertilizer needs to be applied so it is available to encourage early spring growth of shoots. Many perennials will benefit from a second application of fertilizer after flowering. Late-season applications of fertilizer may be needed including phosphorus to benefit root and crown development or lime to adjust pH.

Yarrow
Yarrow is fertilized at a rate of 1 to 1½ pound of actual nitrogen per 1000 square feet when growth begins in the spring. High rates of nitrogen will result in fast vegetative growth at the cost of flower development.

Asiatic and Oriental Lilies

Grown as perennials, Asiatic and Oriental lilies are fertilized as shoots begin to emerge from the soil with 2 to 3 pounds of 10 percent nitrogen fertilizer per 100 feet. A second application at the same rate is recommended immediately after flowering.

Woody Cuts

For new plantings, incorporate 50 pounds of nitrogen per acre prior to planting. After planting, side dress at the rate of 0.25 to 0.5 ounce of nitrogen per plant. If supplemental fertilizer is required the first year for fall-transplanted plants, each plant should receive 0.25 to 0.5 ounce of nitrogen before bud break. The second year each plant should receive 0.5 to 1.0 ounce distributed in split applications: the first two-thirds of the total amount should be applied before bud break, and the second application should be applied by mid-June. The third and following years each plant should receive 1.0 to 2.0 ounces in split applications as described for the second year. Slower-growing cultivars or species should be fertilized at the lower application rates, whereas vigorous plants will have increased growth if the higher application rate is used. Rates greater than those recommended have not proven to be warranted and, in fact, have reduced growth and can contribute to nutrient runoff and water quality impacts.

References

Armitage, A. M. 1993. Specialty Cut Flowers: The Production of Annuals, Perennials, Bulbs, and Woody Plants for Fresh and Dried Cut Flowers. Portland, OR: Varsity Press, Inc./Timber Press.

Bilderback, T.E., R.E. Bir, and S.L. Warren. Undated. Best management practices for field production of nursery stock, North Carolina Cooperative Extension Service Bull. AG-511. http://www.bae.ncsu.edu/programs/extension/ag-env/nursery/soil_fertility.html

Cox, D. Soil Fertility for Field-Grown Cut Flowers-Part I. 5 March 2004. <http://www.cfgrower.com/tips/july/soil.html>.

Cox, D. Soil Fertility for Field-Grown Cut Flowers-Part II. 5 March 2004. <http://www.cfgrower.com/tips/august/soil.html>.

Georgia Extension Tele-Tips. Zinnias, Garden or Cut Flowers. 20 March 2004. <http://www.ag.fvsu.edu/html/publications/teletips/lawn%20and%20garden/flowers/527.htm>

Gill, S. 2001. Nutrient Management Recommendations for Commercial Cut Flower Production. 20 March 2004. <http://www.agnr.umd.edu/ipmnet/docs/cutnm01.pdf>.

Greer, L. 2000. Sustainable Cut Flower Production; Horticulture Production Guide. 20 March 2004. <http://attra.ncat.org/attra-pub/cutflower.html>.

Laschkewitsch, B. and Smith, R. 2000. Growing Cut Flowers for Market. 18 May 2003. <http://www.ext.nodak.edu/extpubs/plantsci/landscap/hl2000w.htm>.

Stevens, A. B. and Gast, K. L. B. 1992. Specialty Cut Flowers; A Commercial Growers Guide. 18 May 2003. http://www.oznet.ksu.edu/library/hort2/sections/MF1034_A.pdf.

Stevens, A. B. and Gast, K. L. B. 1992. Specialty Cut Flowers; A Commercial Growers Guide. 18 May 2003. http://www.oznet.ksu.edu/library/hort2/sections/MF1034_B.pdf.

Stevens, A. B. 1995. Fertilization of Field Grown Specialty Cut Flowers. 25 Feb 2004. <http://www.oznet.ksu.edu/library/hort2/MF2154.PDF>.

Tucker, M. R., Messick, J. K., and Carter, C. C. 1997. Crop Fertilization Based on North Carolina Soil Tests. Raleigh, NC: N. C. Dept of Agriculture & Consumer Services.

Whipker, B. E. and Cavins, T. J. 2000. Southeast Outdoor Cut Flower Manual. Raleigh, NC: NC Commercial Flower Grower' Assoc.

Zublena, J. P., Baird, J. V. and Lilly, J. P. 1991. Soil Facts: Nutrient Content of Fertilizer and Organic Materials. 4 April 2004. <http://www.soil.ncsu.edu/publications/Soilfacts/AG-439-18/>

REGIONAL *Reports*



NORTHEAST
Chas Gill
Kennebec Flower Farm

This year brings many changes to my business that are exciting, and motivating me to get the season rolling. I am not only revisiting some cut flowers species, but also have made some major marketing changes. Mostly, I look forward to the return of my partner in crime.

The first major marketing change is my decision to discontinue my wholesale plant business. Over the past 9 years we have been wholesaling 4-inch herbs and specialty annuals to a handful of local nurseries. This has been a good spring cash flow generator and justified the hiring of an employee in March. My primary decision for this was made after closely looking at the net profit from these sales. It proved to not be worth the stress and risk. As a small business we need to make large profits on smaller quantities of plants, rather than average profits on large amounts of material. The energy the wholesaling took was not worth the return. Another major reason was the waste. Wholesale growing is speculative growing and after two consecutive wet, cool springs I threw away too many plants. At a lecture I attended this winter it was stated that each pot you throw away equates to the profit on two sold pots. I shudder to think how much money I have composted. So this season we will concentrate on what we do best: retailing high-margin plants and quality cuts.

I am going to grow anemones and ranunculus this spring in an unheated hoop house. Currently the corms are being sprouted and I am waiting for the weather to break to plant them. I have sort of tried these many years ago with no success. It gets too warm too quickly here in Maine when we plant most crops. By planting in April in a field tunnel, I hope to have a cool climate to get these flowers to bloom. Although the cutting window will be short, no one else will have these flowers at the markets I sell at, and we all know how great that is. I will let you know this summer how it goes.

The most exciting change this year is the return of my wife Linda to the daily activities of the farm. We started and grew

the business 16 years ago and spent a tremendous amount of energy and time together. These were very exciting times and full of great memories. While each worked other jobs we developed a successful and sustainable farming operation. I can remember collapsing exhausted after Saturday markets in the truck and sleeping in the driveway. After the business became viable (about 10 years ago) we settled down and started a family. It was our choice then that Linda would stay home and concentrate on caring for our children, and I would run the business with hired help. After all, this is a major reason we chose this career—to be able to raise our family ourselves. There

were many stressful days for both of us as we could not always be there for each other when we needed it. Each summer in early August we would question ourselves: is this farming stuff really what we want to do with our lives?

The business continued to thrive and change over the years under my guidance while Linda cared for our two children. I can remember one Wednesday when Linda came to visit me at the market and one of her good customers took her aside and whispered, “You know, Linda, that guy you have working for you is not that friendly.” The business did change a bit and customers did miss Linda. I would post pictures of the children and Linda at my booth to share with customers.

So this growing season begins with a return of my chief seed sower, transplanter, cutter, buncher, sleeper, bouquet maker and marketing queen. I am very excited to once again share the daily activities of the farm with my wife and look forward to the increased participation of my children on the farm. Be on the lookout for “Caroline’s Colorful Creations”, my 7-year-old’s bouquet business.

Also watch out for the Northeast Regional Meeting to be held in western Massachusetts this summer. And make plans to attend the Conference in Raleigh this fall. The Conference Committee has done an outstanding job. Have a good spring.

I can remember one Wednesday when Linda came to visit me at the market, and one of her good customers took her aside and whispered, “You know, Linda, that guy you have working for you is not that friendly.”



MID-ATLANTIC
Joseph Caputi
 Charlotte's Garden

Local Schmocal

What has happened to the off-season? Here it is mid-February and suddenly I'm overwhelmed. Even though there's the thinnest layer of snow in the field and temperatures barely climb out of the thirties, I am consumed with placing orders and planning what I'll need to do the instant the ground is ready to be worked. It's difficult to get my head around the idea that my first farmers' market is on April 7th, just seven weeks away!

One of the things Charlotte and I enjoy in the off-season is catching up on our entertaining, getting together with friends and neighbors while we have the time to do it leisurely. On one of these occasions, somewhere between finishing our main course and thinking about dessert, the talk turned to something I'd never heard of, "The Hundred Mile Diet".

It's not a weight reduction diet, but instead a diet that draws its ingredients from a 100-mile radius from where you live. In other words, the only food you and your family could eat would come from an area that would reach no further than 100 miles from where you call home. It's an interesting theory, but one, I think, full of flaws in a modern world. It's difficult to imagine my life without coffee, tea, chocolate, or olive oil.

Diet aside, I'm a huge advocate of buying locally-grown produce and flowers. The advantages are numerous and enormous. Ultimately, the lessened impact on our natural resources and the environment are immeasurable. In fact, I feel strongly that "locally grown" in many ways (and please don't hate me for admitting this) outweigh the benefits of "organic", and not just from a marketing perspective.

Off the top of my head, the benefits of buying locally-grown produce and flowers would minimize the excessive need for fossil fuels since they are shipped shorter distances. Organically-grown anything obviously has a wide range of benefits and using those growing methods is the direction we should all consider. But when I think of the word "organic" as a marketing strategy and, especially when I see organic fruits, vegetables, and flowers in the supermarket, I have to ask, how did they get there? As I write this in mid-February organic berries, apples, citrus, spinach, broccoli, lettuce, tomatoes and more, both fresh and frozen, and organically-grown cut flowers are available in the supermarket where I shop, yet none of it is locally grown. It can't be. As I mentioned, it's mid-February, it isn't growing in the field, and even local greenhouse growers can't produce enough to meet market demand. Yet, what does it take to get these organic flowers and produce in our homes? —A question worth considering.

I could go on and on about the virtues of locally-grown versus organic, or combining the two, but there's not enough time for that now, there's too much to be done in preparation of my own locally-grown season. However, it's clear that both are the foundation of good stewardship of our land, and each is also a powerful marketing strategy.

What I hope to emphasize is that we all use "locally grown" to our advantage in our marketing. Charlotte's Garden uses the term "locally grown" liberally in all of our marketing material: our web site, signage, anything printed. While we do use organic methods extensively —though not exclusively— we are not "certified organic". But because we don't ship a single stem any further than the farmers' market we participate in, or our local florists, we can easily and honestly and proudly proclaim our product as "locally grown".

I recently saw a bumper sticker stating: Be A Local Yokel. Good advice for us all.

Regional Meeting Update

Please mark your calendars with the date of this year's Mid-Atlantic Regional Meeting. It will be held at Wollam Gardens in Jeffersonton, Virginia on Monday, August 27. There will be a farm tour of Bob Wollam's beautiful farm, Wollam Gardens, highlighting his Karma dahlias. Lunch will be served in the air-conditioned Jeffersonton Community Center. I will announce details of the program ASAP on the Bulletin Board.

Best of luck to you all as this season begins!



SOUTHEAST
Leah Cook
 Wild Hare Farm

Here it is late spring and I am going to jump ahead to the fall! You will want to mark your calendar for this year's National Conference and Trade Show. We are in Raleigh, North Carolina the 1st - 4th of October. North Carolina is a special and unique place to farm. For example, we have fantastic farmers' markets: Carrboro Farmers' Market (<http://www.carrborofarmersmarket.com>), the Raleigh Farmers' Market (<http://www.ncagr.com/markets/facilit/farmark/raleigh>) and the Durham Farmer's Market (<http://www.durhamfarmersmarket.com>). These markets have a devoted and growing customer base that avidly supports local agriculture.

We are also proud of the research that comes from North Carolina State University and North Carolina A & T University. Central Carolina Community College in Pittsboro boasts a sustainable agriculture program where students can gain hands-on experience and pursue a degree. We also have beautiful public gardens like the Coker Arboretum, the Sarah P. Duke

Gardens and of course the J.C. Raulston Arboretum. The Conference Committee has worked hard this winter to put together a program and tour that highlights the notion that North Carolina is a special and unique place to farm. The tour features two farms, university research and a fantastic plant nursery. Tuesday, October 2nd we will visit North Carolina State University and Perry-winkle Farm. Wednesday, October 3rd, we'll tour Sunrise to Sunset Gardens and Plant Delights Nursery.

What trip to Raleigh would be complete without a stop to NCSU to see what John Dole and his crew are doing? The visit to NCSU will include tours of the cut flower trials, postharvest laboratory, research projects, and the world-renowned J.C. Raulston Arboretum.

Perry-winkle Farm is owned and operated by Cathy Jones and Michael Perry. Cathy and Michael are producing cut flowers and vegetables on approximately three acres. They have worked hard over the years to build up the depleted soils by using organic mulches, cover crops and pastured poultry. They produce over 120 varieties of cut flowers and that many varieties of vegetables. Cathy told me a rough estimate of their crop breakdown has 40% of their cropland planted in flowers and the flowers generate over 60% of their income. Cathy and Michael's sales are geared towards three weekly farmers' market and high-end restaurants. The first frost is generally mid to late October. So, for the tour we should see summer crops of zinnias, cosmos, celosias, and ornamental Rooster peppers. If we have not had an early frost there may be some basil. Cathy and her crew will be direct seeding over-wintered flowers like larkspurs and bachelor buttons. They will also be in the middle of getting the garlic crop into the ground.

Cathy and Michael looking forward to showing off their passive solar greenhouse that they built using Hebel Block (R30) and hope folks enjoy seeing their highly diversified sustainable farm.

If you did not have the opportunity to attend last year's Southeast Regional Meeting you missed Gary and Sybil Calder's farm. But opportunity knocks again. I recently spoke with Gary about what we might see this October. He told me they would still be cutting annuals and in the process of planting their overwintered flower plugs. We will also be able to see a lot of the woodies that the Calders cut for Christmas greens. Gary listed magnolias, West Coast arborvitae, Chindo viburnum, Japanese cedar, hollies, Carolina sapphire, and that is just a few! They are planting two acres in woodies and Gary is doing most of that propagation work. In addition to plant material, the Calders will have equipment on display. Gary proudly mentioned a bed shaper and referred to it as the "Vicki Stambach Special." The Calders use a lot of leaf mulch on their beds. They have an old manure spreader that has been converted into a side-dress mulcher that they use to distribute the leaf mulch. Sybil is really excited that the Sprinter van is now equipped with a ThermoKing. The Sprinter also has a computer station for a mobile office. You will be able to check out all of this great stuff at their farm.

Many of you are probably familiar with Plant Delights Nursery. The nursery is owned and operated by Tony and Michele Avent. They are a mail order nursery that specializes in new and rare perennials. Plant Delights Nursery happens to be located at Juniper Level Botanic Gardens. This is where new plant material is trialed and displayed. Plant Delights Nursery has introduced a lot of plants to the U.S. market, particularly hostas. In addition to all the work that goes with a mail order nursery and botanic garden, Tony conducts several educational sessions onsite every year. He is also a very popular speaker. We are in for a special treat with a visit to this facility. Be sure to check out the entertaining and informative website at www.plantdelights.com

Over the next couple of Regional Reports look for more information and details regarding this year's Conference. I hope you have a great season.



MIDWEST
Suzy Neessen
The Flower Farm

The alarm goes off, it's 6:00 a.m. But wait—that's right—we're in New Zealand, or paradise as we kiwi visitors came to call this beautiful country. So, up at 6:00, have breakfast, get packed up and loaded on the bus for another exciting day of travel.

I was honestly dreading the 13-hour flight from L.A., but it was overnight and not bad at all. After being fed a delicious meal (which included New Zealand wine) you could sleep or view a large selection of movies or tv on your own private screen in the back of the seat in front of you, or you could listen to music. Upon waking in the morning we were served an equally delicious breakfast and before long we were landing in Auckland.

It was also my birthday, so what a great way to start the day. It ended with us getting to see a comet at the restaurant where we had dinner. Pretty special.

It was 80 degrees and humid, overcast with a little drizzle of rain but not enough to dampen our spirits. Leslie, the bus driver we would spend the next 4 days with on the North Island, had to be the best bus driver in all of New Zealand. He was so gracious in answering all of our questions and trying to make sure we saw as many local interesting sights as we could in between all the farm stops we had scheduled. He was interesting, knowledgeable, courteous, and helpful and we all felt very lucky to have him as our escort.

The farms were fabulous! Sandersonia, calla, hydrangea, hellebores, viburnum, rosehips, weigela, phormium, etc., all planted in paddocks. These were plots of land anywhere from 2 to 10 acres or so surrounded by very tall, sheared evergreen hedges. Constant high winds were the reason, but we never really experienced them until the last day in Christchurch. They

reminded me of formal gardens on grand English estates. Other crops such as kiwi, orchards, olives, etc. are sometimes planted in paddocks as well.

Most of the flowers we saw were exported, mainly to Japan, but some to the U.S. Most farms specialized in one to two varieties of crops. Exports are done through a broker and it really seemed to make marketing a breeze. The other side is, everything has to be top quality and fumigated because of course, if one bunch has bugs, they all do and so much for that shipment.

The two farmers' markets we got to go to were the half-market, half-flea market type, but still interesting and fun. One was a small local Saturday market in Kaikours. No flowers, but fruits, jams, baked goods, a lady with knitted goods from local wool, a lunch wagon, and a little music to top it all off. The other was a large Sunday market in Christchurch with everything you could think of. There was only one flower vendor with some different sized bouquets, but looked like they were from a local wholesaler, not a local grower. Very reasonable prices. A supermarket in Wellington had a fabulous floral department. Lots of variety including greens, and getting good prices for them too.

There were "Flowers for Sale" signs at farms along all the roads and Leslie Garcia and I ran back to one farm just down the road from a break stop. He was growing only callas and lilies in crates, but that day he was more concerned about his sorry tomatoes, which Leslie was kind enough to offer advice on. His hundreds of callas were going to a Saturday market and he said he would have no problem selling them all in a very short time.

Speaking of callas, in New Zealand they are grown in beds of only fertigated pine sawdust. Fabric is laid down first to make the bed, then a couple inches of sawdust, bulbs come next, and another 4 inches of sawdust. This helps to keep the bulbs cool and decreases the chance of *Erwinia* getting the bulbs.

And as long as I'm on the subject of callas, we got to walk through a breeder's normally off-limits greenhouse that had a breathtaking display of up and coming new varieties. Every size, color, or combination thereof you could imagine. No pictures please!

Agapanthus were blooming everywhere and are considered a weed, if you can believe that. Also lots of blue hydrangea, crocosmia, borage, and other flowers blooming along the roadsides that we had no idea what they were. Leslie (bus driver) was very helpful with providing names and info for a lot of plant life.

One other "crop" grown in New Zealand is radiata pine. It reaches maturity in 25 years and there were forests of it everywhere. Sections would be "toppled" all at once and then replanted. Native timber varieties are protected, though, and a permit is required to cut, even if it's on your own land.

The American influence seemed to be mostly TV and movies. 99% of movies were the same ones we could see at home. All pictures of American shows on the covers of the TV guides, but not all channels were U.S. The Maori (native people)

had their own station, spoken in their native language with English subtitles. That was very interesting. Otherwise a McDonalds or Subway here or there, but not too much.

Downtowns seemed to be thriving even in smaller communities. We saw hardly any malls. Most stores are closed on Sundays and evenings. 20% sales tax is included in the price you pay, so you don't even realize you're paying it. Minimum wage is \$10.50 an hour. Average price for a 3-bedroom ranch is \$350,000. Land prices are equally high. We didn't see much new housing development like you see here. Lots of California bungalow-type houses with tile (cement) roofs. Many houses, especially farms have their own rain collection systems with big tanks in the yards.

Lots and lots of sheep, also cows and deer. Venison was on most of the restaurant menus. The food was excellent. Baked tomato slices served with all our breakfasts, as well as vegemite in packets right along with the jelly. Vegemite is a barley product which a lot of us smelled, but few had the courage to taste!

I could go on and on, it was such an unforgettable trip! And the group that went made it really enjoyable and fun. I'd encourage anyone who's ever dreamed of going to New Zealand, like I had for many years, to GO! I'd never hesitate to go again.

A side note: I'm in the process of moving my farm this year, so if you are trying to get a hold of me, you'll have to contact the ASCFG office. I'll be getting all my new information to Judy as soon as I have it.



SOUTH-CENTRAL

Vicki Stamback

Bear Creek Flower Farms

After recently returning from the spring Board meeting, I must say that Leah Cook and John Dole have done an excellent job planning the 2007 Conference in Raleigh, North Carolina in October. I think all of you will be very pleased and excited about the variety of talks and activities. So, put October 1-4 on your calendar and plan on joining us for a great conference.

Speaking of planning and meeting, the South-Central Regional Meeting schedule has been finalized. At last year's Regional Meeting you asked to see Arnoskys' Texas Specialty Cut Flowers, so that is what you have. Pam and Frank have agreed to allow us to visit their farm and see all their new additions. The Regional will be June 2nd. We will begin the day by meeting at Texas Specialty Cut Flowers. Registration will run from 8:00-8:30 a.m. and the tour will begin at 8:30 a.m. We will leave Texas Specialty Cut Flowers at 11:30 and head down the road to McCall Creek Farms to visit Cathy and Mark Itz. Cathy will have lunch ready for us and after lunch we will tour their farm and facilities. After touring McCall Creek Farms, we will sit down under some shade trees and have a quick

meeting to update you on association activities plus plan the Regional for next year.

For everyone who attended the 2000 Conference in Austin, both these farm were on the tour then too but both farms have gone through a number of changes that I'm sure you will all want to see. Not only have both farms physically changed, but so have their marketing strategies. I believe everyone attending will leave with new growing and marketing ideas. Don't wait until the last minute to send in your registration for this meeting. Since lunches will be made specifically for us, we will order them according to pre-registration. If you just show up the day of the meeting, you may not have a lunch waiting for you. Another reason not to procrastinate to register is there are already two major events planned for the area, a family reunion and a huge wedding. So, hotels are filling fast and unless you want to stay in San Antonio, get your registration in right away. Below are some of the choices we currently have.

Best Western, Johnson City, (830) 868-4044. If we have 10 rooms sign up they will give us a rate of 89.95 per night for two people/room. Blanco State Park, if you want to camp out. Fredericksburg: there are about 250 B&B's in Fredericksburg. You can call a booking agency (Gastehaus Schmidt) (830) 997-5612 or call a 1st Class Reservation Service (830) 997-0443.

You can also go to stay@fredericksburg-lodging.com La Quinta is also in Fredericksburg- call their nationwide reservation number. There is always San Antonio and Austin too.

Come with lots of questions and be prepared to have a great day touring two special farms. I look forward to seeing each and every one of you there.

By the time this *Quarterly* is printed, we will in the thick of things with planting in the field. We have already put some things out and March will be a pretty busy month too. We were able to do a lot of farm cleanup this winter because of snow, sleet and cold temperatures which let us do some brush burning. That was so much fun and I think I have turned all my employees into fire bugs. It was especially fun on the days we roasted hot dogs and made s'mores for lunch over our fires. Nothing tastes better on those crisp days with snow on the ground, after a morning of lugging branches and possibly walking what seems like 20 miles. We uncovered an old barbeque pit, made of bricks, on the north part of the property. It was covered with grapevine, trees and debris but now it's ready to use and before it gets too crazy we plan on grilling some hamburgers and chicken and enjoying it while we can. This barbeque is big enough to cook a lot of things at once. The grate on it is 3 feet by 6 feet and it's not too far from the largest pecan tree on the farm. It will make a nice summer cookout place too, if there is time. I hope all of you have a great season this year. We have a lot of things we'd like to accomplish this season, so the pressure is on.

If any of you have any questions about the Regional Meeting or anything else, please don't hesitate to call or email me. I hope everyone is trying something new this season too. I will see you on June 2nd in Texas with your ideas for next year.

"Faith is to believe what you do not see and the reward of this faith is to see what you believe".

-St. Augustine



WEST

Brenda Smith

Smith & Smith Farms

The West Regional Meeting falls in between this year's *Quarterly* publication dates, so I hope by the time you are reading this I have seen you at our meeting in the beautiful Sierra Foothills at Narrow Gauge Farm. Alan Tangren graciously agreed to host this meeting and he put together a top-notch day for all flower growers. Pictures of the day will follow in the next edition of the *Quarterly*. I hope your faces are in those pictures.

As I was reflecting on my return from the ASCFG board meeting last month, I feel we are in exciting times for the ASCFG. There seems to be an upwelling of interest refocusing on buying local. In the U.S. where the bulk of U.S. flowers are now imported, practically all domestic flowers are "local". Most U.S. growers, I think, can take advantage of this renewed interest in "local".

Speaking of local, there are lovely banners, bags, posters and such available at www.eatlocalfood.com. I know you might not have clicked on this website because you might think the focus is on food but once you are at the website click on the "Give Local Flowers" link. If you need a little something to dress up your flower stand or take a bonus to your favorite florist or to the market that sells your flowers, these folks have a very nice campaign. So check out this website.

My winter work this year was to focus on the business side of my farm. Over the last couple of years I have been trying envision when, how and even why to take our farm to the, it is hoped, better level. I started reading a book I picked up at the airport last summer called "The E-Myth Revisited" with the subtitle "Why Most Small Businesses Don't Work and What to Do About It" by Michael E. Gerber. I don't usually fall for the "self-help" type books because most books really don't "get it" about agriculture on any scale but I admit the title caught me.

Early in the book I read the following: "The work that was born out of love becomes a chore, among a welter of other less familiar and less pleasant chores...the work becomes trivialized, something to get through in order to make room for everything else that must be done." This kind of struck home, I kept reading. I have indeed felt that crushing feeling of not getting everything done and wondering what I can do about it.

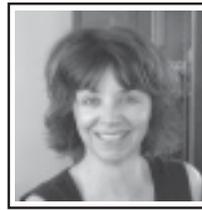
In the end the book essentially took the path of recommending small businesses set up as franchises. I am farming because I want to be unique and don't want another farm like mine, let alone a franchise farm...ugh, that is indeed not the scale I wish to pursue. I still extrapolated some good information and took some of the guidelines suggested such as having standard operating guidelines and putting together an organizational chart. "What?" you say, "I do all the jobs on my farm!" Even if you do all the jobs on your farm, as I pretty much do, making this chart was very helpful for me to see all those jobs lined out on paper. Making a description of all those jobs helped me get my mind around the whole business; there are a lot of jobs on a farm.

Good record-keeping, especially considering all the varieties and different ways we grow specialty cut flowers, is crucial. Vicki Stamback wrote a terrific article in *Growing for Market* last year on this very subject. Developing guidelines for each crop is time-consuming; I have started on working on this. I basically am asking myself this question: "If I was gone for a day or more, could someone come to farm and keep it running by reading the guidelines I have written?" It is quite liberating, at least for me, to have things down on paper, in a place that I can find it. Frees up the mind for other creative thinking.

Along with working on crops guidelines, I have also signed up for the community college offerings of QuickBooks courses. I decided after fussing around with that program for 2 years I just needed some help using it, again for better record-keeping.

I also have in past years been involved with Holistic Resource Management (HRM) which was developed by Alan Savory, primarily for ranchers. The tenets of HRM, however, can be used by anyone, so I went back through and reworked the Goals Statement that we developed when we started the farm. It was good to look at where we were 10 years ago and I realize we are still making forward progress. I picked up another good book from the Fedco Seed catalog, located in Maine—Whole Farm Planning – Ecological Imperatives, Personal Values and Economics—published by the Northeast Organic Farming Association. This is a short little book and it helped be refocus on what I really want my farm to look like and helps define HRM philosophy in more farming type situations.

All in all what I have obtained from my season of introspection of our farm and business is to reaffirm that I want to keep growing! Including growing the business, especially for the long term. I ask myself: if I wasn't farming what would I be doing? Nothing even comes close. I also have realized that I need to be continually reevaluating and replanning and thinking of ways to be smarter not only growing but at the 'business' side of the farm. It's not just about choosing varieties! But you knew that, right?



NORTHWEST

Jerriann Sabin

Bindweed Farm

Wow, my head is absolutely spinning! Having just returned from my first Board meeting as an ASCFG Regional Director I must thank everyone for this opportunity. I am awestruck at the level of passion and professionalism represented by this board. Bindweed Farm is a rare breed out here in the high deserts of Idaho and as cut flower growers in the center of the "Potato Capital of the World" we are odd ducks; we could not be more isolated geographically or mentally. My first night in Raleigh, at a potluck supper graciously hosted by John Dole, I was surrounded by vibrant people who care deeply about not only growing beautiful things but offering local and sustainable products and creating healthy environments and lifestyles.

As the landscape flowed beneath during a beautiful flight home I was struck by how varied and vast this country is and realized how valuable it is to be connected to every part of it through the ASCFG.

Now, to do my part to better connect the Northwest Region we have been busy planning a Regional Meeting. You are all invited to Bindweed Farm Thursday, June 14. We will start early in the morning with a brief welcome/ introduction to the farm and then Ralph (Thurston—owner/planter/husband) and I will offer a talk and tour of our roses. We were awarded an ASCFG Grower Grant last year to research the feasibility of growing and marketing fragrant old-fashioned roses (see report in this issue). As of this writing we have invited Gary Pellet of Newflora to speak about Kordes roses and outdoor production.

The rose talk will be followed by a color primer presented by yours truly. With paints in hand I'll demonstrate a little color theory by mixing and painting a full color wheel. We'll then explore the color potentials of bouquet making through color families—primary, secondary, tertiary, warm, cool and monochromatic. Weather depending (meaning what we have in bloom) we will have buckets of flowers that correspond to color families and we'll have a hands-on "color wise" bouquet making session.

Next Ralph will address zone 4 crop staggering, focusing on sweet peas and peonies by touring sequenced production in our hoopouses, greenhouses, shade house and fields.

Participants are then invited to enjoy an alfresco lunch in our new drying house (barn). After this Ralph will offer a tour of our ranunculus/freesia house outfitted with radiant soil heat enabling the overwintering of these tender flowers.

For the remainder of the afternoon the experts at Bindweed are available for an open forum/discussion where we can all hang out and talk about growing things.

By the time you are reading this tentative schedule we will have firmed up and may have added more sessions. Please check the ASCFG website, as well as our own at <http://bindweedfarm.com> for details.

GUEST editorial

John Friel

Swan Song

Many years ago, I worked in a factory and belonged to a union. We weren't much of a union, or at least not much of a local: The only sign we ever saw that our dues were doing something was the annual meeting and elections, held at a nearby bar, where most members couldn't wait to get the business over with and start in on the pitchers of beer that always followed.

It was a joke. My friends and I scoffed at the very concept of unions. We knew nothing—nothing of the long history of abuses that necessitated the often-violent formation of unions, nothing of the major role they played in this country's history, and nothing of subsequent abuses on the other side of the coin.

Most of all, we hadn't yet assimilated this basic fact: When you scoff at an organization of which you are a member, you insult yourself. Like the machinery in that factory, a union is made of parts, and if the whole isn't working it's because the parts have failed.

Fast-forward a bunch of years. I'm in the plant business, the predominantly non-unionized, disorganized plant business, gradually becoming aware of the alphabet soup of associations that serve the green industry's various sectors. I can be quite a slow learner. I go to the trade shows, I attend the seminars, I (grudgingly) pay the dues. And like many of my peers roaming the aisles at OFA, FarWest, NEG, PPA, etc., I assume that all this just happens. Some big machine is rumbling along, churning out the details, choosing speakers, making rules, collecting money. What a dummy.

Fast-forward another few years and I'm starting to get involved. Helping to choose good exhibit venues for a former employer. Getting invited to (reluctantly) stand up on my hind legs and speak. Helping with a regional conference here, sitting on the local site committee for a national symposium there. Gradually figuring out that the only thing that "just happens" is the weather. Shows, tours and symposia work because people work them. They happen because people—your peers and colleagues—make them happen.

There were occasional epiphanies along the way, signs steering me toward more involvement. First was a quote by

Theodore Roosevelt, who is more famous for his war exploits than his business acumen; his best-known quotes are "Speak softly and carry a big stick," and "Bully!"

But here's what Teddy had to say on the subject of trade associations: "Every man owes a part of his time and money to the business or industry in which he is engaged. No man has a moral right to withhold his support from an organization that is striving to improve conditions within his sphere."

Another moment of revelation came during a business meeting at the OFA Short Course. A fellow who had served in a planning capacity for about a year described how the experience opened his eyes.

"A trade show is like a swan on a pond," he said. "When you see him from up above, just gliding along, everything looks beautiful and smooth and easy. But down below the surface, there's a whole lotta kicking going on to keep things moving."

Yes, they also serve those who only stand in their booths and pay their dues, or their rental fees. No shame in that. But there's so much more to see and do and influence on the other side of the registration counter. There is no Them. There is only Us.

I'm nobody's role model in this department. I'm now on the Board of Directors of the Perennial Plant Association, but it took me 20 years to get there. Like I said: slow learner. Meanwhile, my employers for those two decades have benefited enormously from PPA membership. It would be nearly impossible to calculate the value of the contacts, customers and cultivars we've found. Most of your colleagues could say similar things about their involvements, be they OFA, state or regional organizations, the Garden Writers Association or the Association of Specialty Cut Flower Growers.

Don't take my word for it. Get your feet wet, and start kicking.

This article previously appeared in *GrowerTalks*.

John Friel is marketing manager of Yoder Brothers' Green Leaf Perennials brand and a freelance writer.



The ASCFG Welcomes its Newest Members

Jan Barker, The Garden House, Lawton, MI
Flora Berg, Flora Fauna Farm, Spokane, WA
Anastasia Casale, Sag Harbor Florist, Sag Harbor, NY
Becki Conner, Green Trail Flower Farm, La Porte, IN
Kathy Fliegau, Stone Row Acres, Oxford, NJ
Christopher Ike, Apple Tree Hill of Maine, Cape Elizabeth, ME
Deborah Jackson, Passion for Flowers, New York, NY
Suzanne Montie, Red Chimney Flower Farm, Bowie, MD
Pam Mount, Terhune Orchards, Princeton, NY
Phil Peattie, Antrim, Northern Ireland
Evelyn Pence, The Flower Farm, Columbus, IN
Jon Perdew, Coleman Falls, VA
Mike Reeves, Alabama Coop. Ext., Hartsell, AL
Scott Smith, None Such Farm, Buckingham, PA
Annette Van Auken, WildHeart, Schodack Landing, NY
Rodney Voisine, Apple Tree Hill of Maine, Cape Elizabeth, ME
Lewis Zarfoss, Dayton, ME
John Zysk, Zysk's Farm, Zeeland, MI

Thanks for the Good Word!

Allan Armitage	Cathy Jones
Jeannine Bogard	Howie Lubbers
Katie Brown	Bonnie Marquardt
Sybil Calder	Peter Mitchell
Joe Caputi	Ruth Moore
Leah Cook	Suzy Neessen
Ralph Cramer	Keith Pierpont
David Davidson	Ed Pincus
Melanie DeVault	Joe Schmitt
Dave Dowling	Gay Smith
Chas Gill	Vicki Stamback

New members named you as the reason they joined the ASCFG.

An ASCFG Regional Meeting is Coming to You!

All members are welcome at any Regional Meeting. You may attend a meeting in a Region other than your own.

Watch www.ascfg.org for details.

West

April 14-15, 2007

Narrow Gauge Farm, Chicago Park, California

South-Central

June 2, 2007

Texas Specialty Cut Flowers, Wimberley, Texas

Northwest

June 14, 2007

Bindweed Farm, Blackfoot, Idaho

Midwest and Southeast

July 1-2, 2007

Winchester, Kentucky

Mid-Atlantic

August 27, 2007

Wollam Gardens, Jeffersonton, Virginia



Marta Mason and Shannon Fulton, of Three Petunias, spent a few days with Bob Wollam of Wollam Gardens in Jeffersonton, Virginia. They also visited Joe Caputi's farm and Dave Dowling's farmers' market.

Next time you travel to another cut flower farm, nursery or botanical garden in the United States or beyond, send us your photo! We'll put you in *The Cut Flower Quarterly*.

Callas, Comets and Vegemite

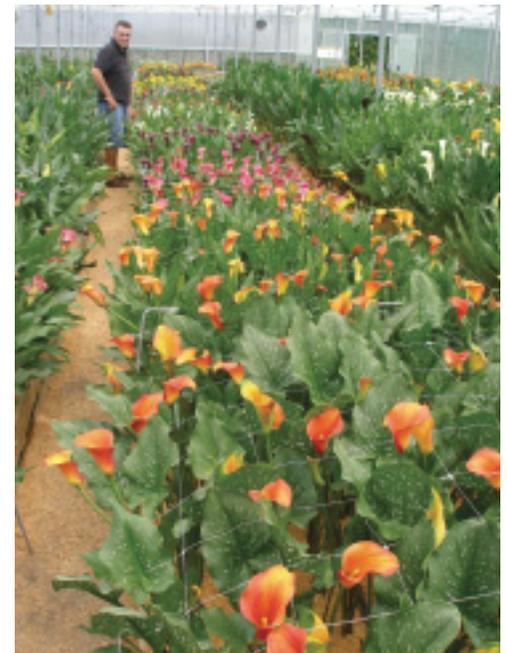
Ray Gray

The main nature of our business, Sunset Flowers of New Zealand, is importing and distributing cut flowers and foliage primarily from New Zealand. Several years ago, I had the opportunity to visit many of the New Zealand farms that supply our products. I was impressed with many similarities between their farms and the farms of ASCFG members, in that for the most part they are smaller, and family owned and operated. One notable difference is that while most of our businesses concentrate on local markets, nearly all of the NZ farms focus on export markets, and must maintain very high standards of sanitation for insect and disease control. I began to dream of bringing small groups of members to NZ to tour farms and meet the farmers.



On Saturday, January 20, 2007 nineteen intrepid ASCFG travelers boarded Air New Zealand Flight 5 in Los Angeles at 9:00pm, had dinner on the plane, went to sleep, and woke up on Monday morning January 22nd a couple of hours before touching down in Auckland, New Zealand. In a way it felt a little like a scene from Twilight Zone – boarding the plane in the evening in the middle of winter, leaving the plane in the morning in the middle of summer! That was the beginning of our week-long adventure visiting specialty cut flower farms from the north end of the North Island to half way down the South Island of New Zealand.

During the next seven days we were welcomed on to eleven farms, were invited to “tea” at several of the farms, visited a Maori Arts and Crafts Cultural Center (saw a live pair of kiwi birds), enjoyed lunch at the Grand Chateau Hotel built in 1929, sailed across Cook Strait on a ferry from the North to South Island, took a wine-tasting tour at a South Island vineyard, toured a chocolate factory, went on a whale-watching excursion, snooped through a huge farmers’ market in Christchurch, and relaxed at a NZ homestyle barbeque hosted by the Mason and Inch families. On the North Island we were very fortunate to have a very friendly and knowledgeable bus driver who continually pointed out points of interest and went out of his way to make our trip enjoyable and educational.



Take the Trip...

Yourself. We couldn’t print in these pages the hundreds of photos the group took. Ray has set up an online account at www.kodakgallery.com to share the pictures with the rest of us. After you access the site, enter raygray@hotmail.com in the email address field, with password of `ascfg2007` in the password field.



**Introducing our
NEW Bulb
Flower Food!**



It will extend vase life, prevent leaf yellowing and adds color to bulb flowers, such as tulips, irises, oriental lilies, asiatic lilies, LA hybrid lilies, dahlias, gladiolus, anemones, hyacinth, nerines ranunculus, liatris and many more....

**Try our latest innovation!
Don't just let us tell how great it is,
View it with your own eyes!**

Call our toll-free number and request a free trial sample of Chrysal Clear Bulb Flower Food.

800-247-9725

CHRYSAL 75 years
POKON
CHRYSAL
What's in your Water?™





ASCFG Bulletin Board

The following is a selected (slightly edited) string of conversations from the ASCFG Bulletin Board. It makes clear how much valuable, hands-on information is exchanged between growers. If you have not taken advantage of this member service, contact the ASCFG today to sign up.

Karma dahlias: Postharvest

David Delbo, zone 5: Could someone give me some idea of when the best time to cut karma dahlias is and any post harvest secrets (other than placing in hot water) are you letting them open a little or is it best to cut at a real tight bud stage?

Joe Caputi, zone 7a: I cut Karma dahlias at more than one stage. In the beginning, they send up a large center stem. I cut that when the first flower blooms on it. If you don't cut it they don't seem to branch very well. Then I cut them with a flower blooming on the lower part of the stem with an unopened bud above it. The best cut is when they are tall, single stems, but that doesn't come until mid-August through October, at least here in Virginia. As the Karmas bloom, if there's a bloom at the bottom of two stems with blooms on them, that bottom flower goes. They never seem to require a "hot" water treatment. In the field, I cut as many as I can hold in one hand then re-cut the stems before putting them into plain water. After they're all cut, I take them to my processing area where they're cut again, "quick-dipped", and put into a solution of warm water and floral preservative, such as "Floralife", or, "Crystal Clear". I have never had a hydration issue with Karma dahlias, even after cutting in temperatures well into the 90's.

Kathy Horn, zone 4b: I, too, am removing the lower center flower in order to get the side stems to elongate. However, rather than discard it, I have been taking them to market and giving one away to every customer who buys a certain amount from me. I tell them it will be great in a small vase or bowl, and the customers are delighted! I figure it builds goodwill, rewards customers who spend more at my booth, and gets them primed to want MORE dahlias as the longer stemmed ones become available! My question is this: What is the going price for Karma dahlias, this year, when they are sold by the stem or bunch rather than included in a mixed bouquet?

Janet Foss, zone 7: At the 2005 Northwest Regional Meeting, we heard they were selling on the auction for 85 cents a stem (Canadian) to wholesalers. For our area it's a good price. Dahlias have had a late start here so the demand has been high.

Alissa Kattenberg, zone 4: Bumped up into 4" pots upon reception. Transplanted April 15 into a hoop house with roll-up sides and backup heat. Netted with Hortonova. The first flower bud was deadheaded. The local floral wholesale house had dahlias priced at \$1 a stem and we also received \$1 a stem from flower shops. At the local farmers' market, we charged \$6 for a bunch of seven, 3 bunches for \$15. From 250 plants, we had 85 bunches on June 25. 'Bon Bini', 'Thalia', 'Sangria', and 'Ventura' had 30 to 36" stems. Very nice. Folks loved the bicolor 'Bon Bini'. 'Ventura' was almost like a huge mum. We had only one complaint late in the season that the dahlias only lasted two days. We cut into clean water, transferring to Chrysal 2 or clean water upon processing.

Joan Thorndike, zone 7: I sell Karma dahlias in bunches of 10 to the florists, 50 cents a stem (you do the math). They all get bought.

Lisa Biggar, zone 7: I'm having trouble with Karma vase life this year—getting only 4-5 days—with the same treatment as last year: cut into water, then quick-dipped and transferred to Floralife. Any suggestions? We're growing mostly Naomi.

Ray Gray, zone 8: Staff at Swan Island Dahlias recommends dipping about 3" of the stem in very hot water (160 - 180F) and allowing to cool for about an hour. They say they stand them in the hot water for about an hour as it cools.

Janet Foss, zone 7: I'm not a big fan of the hot water treatment. We used it before Hydra-flor100 was around, but I think Hydra-flor100 as a dip is better than hot water. My dahlias last better if they get cold storage to get the field heat out. I think the buckets need to be really clean or bacteria can get carried over from the last time they were used and decrease vase life. Flowers put in 160 to 180 degrees get cooked on the ends and if that part is not cut off, they are mushy and how could they take up enough water? I have seen flowers revived with hot water. but just warm to hot tap water. I cut dahlias only about 3/4 open.

John Bennett, zone 4: We grow dahlias; not Karmas, just regular. We try to cut all very open but not showing seed center. We cut to either Quick Dip or OVB, then move into solution with bulb T-bags from Chrysal. T-bag do not burn the stem. Yellow on edges of dahlias is caused by thrips (not easy to see) or a bad infestation of leaf hoppers (easy to see). Thrips may overwinter on bulbs unless you clean and wash in bleach solution.

degrees of mortality from cultivar to cultivar. In any case, Hortico graciously agreed to replace the failed roses this spring.

It did not take long for the Kordes roses to begin blooming, and we judiciously set about snipping the buds off in order that the plants put their efforts into growing more leaf and root, rather than toward reproduction. On June 11 we were pinching Kordes buds, while we had yet to completely uncover the Horticos, waiting as we were for them to leaf out.

We saved a few buds to see how the roses would look, and on June 18 we made our first cuts of Kordes' 'Antique Carmel' and 'Mondiale' (a Newflora free sample cultivar). Our first bout with aphids (one of many) occurred shortly after. Spider mites also reared their heads late in the season, along with powdery mildew in late August and early September.

Results

We continued disbudding until we couldn't stand it anymore. Excited to show our customers what they would be getting the following year, we collected a small bucket of roses with six-inch stems to take on the route in mid-July. Before Jeriann could tell her first client that the roses were just for display, she was asked how much they cost. Having not even thought about pricing, she offered the short-stemmed roses for a dollar apiece, and our clients could not get enough all summer long.

Production varied greatly. The Kordes roses far outperformed the Horticos (including the Austins). 'Antike Carmel' produced 214 stems in just two weeks (nearly ten a plant), but 'Ice Girl' did better than that with 483 stems in a 29-day period. Of the Austins, 'Charles Darwin' (171 on 15 plants), 'Falstaff' (121 on 21), 'Pat Austin' (186 on 24), 'Pilgrim' (202 on 21), 'Hyde Hall' (323 on 23), and 'Dark Lady' (an even 100 on ten plants—a ten stem average). 'Barkarole' (5 on 10 plants), 'Rosemary Harkness' (16 on 14), and 'Sir Edward Elgar' (0 on 13) did very poorly. On August 12 we resumed disbudding in order to assure the greatest possibility of the roses' winter survival.

Market reception could not have been better. Only the 'Ice Girl', a white variety that bruises easily and was by far the most productive cultivar, did not sell out completely.

Vase life favored the Newflora offerings, with all of their cultivars getting 7-12 days in plain water. 'Magma', 'Mondiale', 'Cinderella', and the two trials of 'Ice Girl' and 'Antique Carmel' all fared well. No Austin ('Falstaff', 'Charles Darwin', 'Pat Austin', 'Dark Lady', 'Hyde Hall') did better than 4 days in the vase. However, as most of our clients used the roses for events, vase life was no problem. One client even faked a "peony" wedding in mid-August by using the full-flowered Austins in place of the bride's preferred choice.

'Ice Girl' was the most fragrant cultivar. Clients mixed them with the similarly-colored 'Pilgrim' to take advantage of the latter's shape. 'Pat Austin' was considered an event rose, having a lousy vase life of at most 3 days, but a nice fragrance and a fine deep peach color. 'Caramel Antiques' were only lightly scented, but their durability, color, and shape were great. A Newflora sample of 'Magma' displayed a wonderful yellow



*The Cutting Garden*TM
collection

Outdoor Cut
Rose Varieties from Europe

- A wide variety of colors & styles available
- Cut roses with good vase life that open naturally
- Vigorous and productive
- Proven under commercial conditions
- Technical growing information

'Order now to insure 2008 plants'

Since 1887
W. KORDES Söhne

Die schönsten Rosen der Welt

NewfloraTM **LLC**

tel. (541) 941-4378 info@newflora.com
fax (541) 245-0503 www.newflora.com

with sunset edges. 'Charles Darwin' and 'Pilgrim' had the best shapes, with 'Pilgrim's' vase life fairly good for an Austin. 'Falstaff' was a "fabulous" cool red with good petal count and a relatively good vase life, and 'Dark Lady's' color was likewise stunning—a pink red. 'Hyde Hall', while having a nice sweet fragrance and lush pink, many-petalled blossoms, was very thorny—but not thorny enough to hold back sales. All in all, we were shocked to see how receptive clients were to what we once thought was a "commodity" flower—something we wouldn't be able to compete with, it being so omnipresent throughout the industry.

We continued to disbud well into October, and when mid November rolled around we piled bark around the roses to protect them from zone 5 withering cold. When the sales were added up, we determined that we could have actually planted the roses as annuals and made a profit, had we not disbudded. As it was, even with disbudding as extensively as we did, sales receipts (at just over \$1700) were greater than the cost of the roses themselves (though it did not fully pay the attendant costs of labor, irrigation, soil amendments, etc.—see chart on next page).

Costs

50 roses Newflora	\$ 154.00
250 Roses from Hortico	\$1,431.00
300 ½ gallon emitters @ .20	\$ 60.00
700 feet ¾ inch tubing @ .20 ft.	\$ 140.00
Soil amendme	\$ 100.00
Bark for cover/weed control	\$ 200.00
Labor (planting, weeding, disbudding, spraying)	
100 hours @ \$10.00	\$1000.00
Sales route	
(600 miles per week, 4 weeks)	\$1000.00

Conclusions

If mortality rates are not too high when spring rolls around, it seems evident that rose growing in the U.S., for a long time now seen as a nonprofit enterprise considering the plethora of imported roses, is feasible on a small scale, at least, and even in a northern climate. Indeed, given the prolific production of Kordes Roses, a grower could make money treating them as annuals, not worrying about their winter hardiness.



Investigation of Various Mulches to Reduce Weed Pressure and Increase Quality of Lisianthus for Cut Flowers

Brenda Smith, Smith & Smith Farms, Dayton, Nevada

Introduction

In December 2005 the ASCFG Research Fund funded an on-farm study for a proposal I had written to investigate the use of different mulches to improve lisianthus flower quality. I felt since lisianthus is slow growing and fairly non-competitive against weeds, that mulching might improve the crop for us. However, I was hoping some of the alternative biodegradable mulches to the standard black plastic might work as well and provide a better fit for my cultural practices. I already send miles of drip tape to the landfill each year and have been reluctant to send miles of plastic mulch along with it. Biodegradable also fits in with my idea of end-of-season cleanup—the less I have to pull up, the happier I am. We are not certified organic growers but we do grow all of our crops using organic methods.

Although lisianthus is not native to our area, our climatic conditions are similar to the high prairies where it is native. We have low humidity, well-drained sandy soil, and hot, dry summers.



Materials and Methods

I obtained three different mulches in spring 2007. I set up my 4 different treatments, 2 rows (20" centers) X 50 feet:

1. Garden Biofilm – 100% biodegradable, manufactured by Polar Gruppen, Norway.
2. Planters Paper - 100% biodegradable, manufactured by Ken Bar, Reading, Massachusetts.
3. Alfalfa hay, obtained from a local source.
4. Untreated, bare soil

Lisianthus plugs were obtained from Germania Seed Co. The following varieties and plug sizes were transplanted:

1. 'Mariachi Blue Picotee' – 125 tray
2. 'Mariachi Mist Pink' – 125 tray
3. 'Cinderella Pink' – 125 tray
4. 'ABC Purple 3-4' – 125 tray
5. 'Mariachi Mist Pink' – 280 tray
6. 'Mariachi Blue' – 280 tray
7. 'ABC Deep Rose 123' - 280 tray
8. Goldsmith Seeds also donated 'Twinkle' seeds to be included, I started those transplants myself.

Our field was prepared by spreading compost, California Organic Preplant Fertilizer 7-5-7, Algit Sea Kelp and Azomite amendments. The amendments were disced in. We do something like a reverse listing of beds, by putting in a furrow, laying t-tape (10 mil, 4 inch spacing) in the furrow and then covering the t-tape. When this is done there is only a slightly raised bed, especially in sandy soil. I then run the irrigation to wet up the soil. I rolled out 50 foot sections of the Biofilm mulch and the Planters Paper mulch and then went along the edges with a hoe to cover the edges. On May 19, 2006 I transplanted an equal number of each variety and plug sizes in each treatment on 6-8 inch spacings on both sides of the t-tape. Two lines of plugs are planted to one bed. I made holes by

hand in the Garden Biofilm and the Planters Paper mulches and then planted the plugs through the holes. After planting I scattered the alfalfa mulch around the newly transplanted plugs.

Results

First let me say right off, the results of this trial were nothing what I thought they would be. It basically became a failed experiment about 2 weeks after planting due to several fierce windstorms. There was something to be learned from this failure. However, because the Research Committee entrusted me with hard-earned funds for this trial, I am planning to repeat the trial at my cost this season and hope to obtain better results.

Within 2 days after carefully laying out this trial and transplanting all the lisianthus, our spring winds came in. I did try to plan for the winds by using wind fencing along field borders. I also felt I had adequately anchored the edges of the Biofilm and Planters Paper. The wind kept lifting the mulches through the planting holes made for the plugs and lifted the mulches off the ground. Because the soil is so sandy, it kept falling away from the edges and a couple hours into the windstorm the mulches were flapping in the wind and damaging the tender plugs. What alfalfa mulch didn't actually blow away ended up burying the small transplants. I had to keep pulling the alfalfa from the plants. I even tried putting light rowcover over the mulched rows and this did not help keep the mulches from coming unraveled either.

All of this re-laying and replacing of mulch quickly became much more time-consuming than I felt was worthwhile. After all, I have been able to grow fairly nice lisianthus without mulch, and with significantly less time and frustration. I ended up pulling up the Biofilm completely after re-laying about 4 times in less than 2 weeks. Some of the Planters Paper remained in the field through the season. We ended up harvesting lisianthus from all trial rows as would be expected, with no discernable differences in stem length, bloom time or flower quality. I did not take measurements or counts however, since the mulch treatments were compromised

from the beginning. Some plants that were not unburied from the alfalfa did not grow through the mulch and died.

Conclusions

So what useful information, if any, came out of this trial? A couple of ideas come to mind: These mulches don't stay down in our winds. Sandy soil used to hold down the edges of the mulch actually blows off the mulch edges. Since the soil is so sandy, I don't think I can get a big enough raised bed to really stretch the mulches over the beds and secure them properly. If I were to use alfalfa again, I would put it down after a first weeding of the lisianthus, once the transplants were bigger and would not be buried by shifting alfalfa. I am currently going back to the drawing board to rework this idea for the upcoming season. I will report back again next year at this time to let everyone know how round two in the battle of mulches vs. climatic conditions goes.

2,900 varieties of perennial seed.*
One source.

*Including Echinacea 'Ruby Star', ASCFG Cut Flower of the Year →



Jelitto USA Office
125 Chenoweth Lane
Louisville, KY 40207
Phone (502) 495 0607
Fax (502) 895 3934
abush@jelitto.com
maryv@jelitto.com
www.jelitto.com



ASCFG Membership Application

Name _____

Additional Company Member _____

Company _____

Address _____

City/State/Zip _____

Phone _____ Fax _____

E-Mail _____

Website _____

How did you learn about the ASCFG? _____

Your membership is valid for one year from date of application.

- \$175 U.S. & Canada Company
- \$ 75 Each Additional Company Member
- \$175 International Company
- \$110 Educator
- \$ 45 Student *(Currently enrolled in accredited horticulture program, not growing commercially. Include copy of current student I.D. card.)*
- \$ 45 Cooperative Extension *(magazine subscription only) Available only to full-time USDA Cooperative State Research, Education and Extension Service Agents. Please include franking slip with application.*
- \$2000 Lifetime Membership

_____ My donation to the ASCFG Research Foundation
(a non-profit 501(c)(3) organization)

_____ Total Amount Enclosed

Check enclosed Bill my: Visa Mastercard

Card # _____ Exp. _____ 3-digit Sec. Code (back of card) _____

Name on card _____ Phone # of card holder _____

Mail or fax form to: ASCFG • MPO Box 268 • Oberlin, OH • 44074

(440)774-2887 phone • (440)774-2435 fax • ascfg@oberlin.net • www.ascfg.org

FROM *the Director*

Judy M. Laushman

Two of the most important articles in this issue are written by growers. Brenda Smith's and Ralph Thurston's summaries of their grant projects provide insight into how on-farm research really works. Sometimes, it doesn't work the way you planned.

Some of Ralph's roses did not live. Brenda's experimental mulches blew away to Reno. (just to watch her lisianthus die.). But in the true nature of cut flower farmers, and researchers, both Ralph and Brenda kept on. Brenda even promised to continue her project this year, at her own cost.

That growers just like yourselves: family-oriented farms, selling to local markets and with a limited labor supply, can apply for an ASCFG Grower Grant, gain approval and conduct the experiment shows that any cut flower grower can do this. Take some time to visit the Research section of the ASCFG web page, and consider applying for a Grower Grant yourself. If you have questions, talk to us, or contact Ralph and Brenda. They'll be happy to share their experiences.

Joe and Charlotte's column about the importance of online communications should also strike close to home. A recent Short Cuts outlined the use of ASCFG's electronic services, including the web site and Members Only, the Bulletin Board and the Price Index. More than half of you opened and read this Short Cuts (we know who you are) and many of you did ask for help with Members Only or setting up a Bulletin Board account. Since then, there has been a substantial jump in correspondence on the Bulletin Board.

In this issue's Culture Profile, John Dole and Frankie Fanelli of NCSU provide recommendations for dahlia production. At the same time, we include a recent string from the Bulletin Board where growers tell you what they have found works for dahlia harvest and postharvest, firsthand. You don't get a better combination of information than this.

Find this out yourself. Go to the Bulletin Board, search for a subject you're interested in, and see how many times it has been

discussed. Some of the strings may be a couple years old; if you're looking for an update, post your own question to the string and bring it up again.

We are very happy with the way this year's Buyers' Guide has turned out. Yours should be delivered any day. Remember, only members who returned the postcard with an updated Description of Business are included. If you missed this edition, make sure you're in the next one. If you'd like additional copies to distribute to your local wholesalers and retail florists, call the ASCFG. We'd be happy to send you more.

LOOK TO HARRIS SEEDS FOR YOUR CUT FLOWER NEEDS

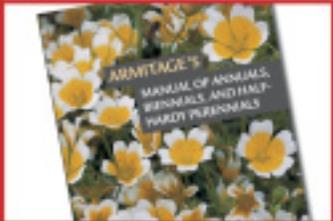


Look to Harris Seeds for a well-rounded selection of products that is certain to serve your cut flower needs:

FLOWER SEED
Look for a complete selection of flower seed varieties for both field and greenhouse production environments. In addition to our core varieties in Asters, Gladiolus, Sunflowers and Zinnias, you will also find some more specialized varieties in Asclepias, Knautia, Campanula, and Dianthus.



PLUGS
Look for 2 top plug growers (Raker and Gro 'n Sell) to choose from when you order cut flower plugs from Harris Seeds. Each offers an extensive cut flower variety selection, in a number of different plug sizes, to suit any growing operation. Be sure to check out our extensive selection of Lisianthus plugs, including the 'quadruple' flowered Mariachi series.



SUPPLIES
Look for cut flower sleeves, knives, books, containers, preservatives, and field netting as part of our supplies dedicated to cut flower production, including our best selling book, "Specialty Cut Flowers" by Alan Armitage and Judy Laushman.

Look for these products **and more** (including one of the largest selections of sunflowers in the industry) in our 2007 Ornamentals Catalog for the Professional Grower, or our 2007 Professional Vegetable Growers' Catalog.

Call us toll-free at 800-544-7938 or visit us on the web: www.harrisseed.com



HARRIS SEEDS
A Grower Friendly Company

355 Paul Rd., PO Box 24966
Rochester, NY 14624-0966



To the Editor and Staff at the ASCFG:

I received the last edition (Volume 19, Number 1) of *The Cut Flower Quarterly*, and I can't begin to tell you how impressed I am with the depth of information and the quality of the journal. Each issue just keeps getting better—my word, even the ads are good.

I have been associated with ASCFG from the beginning, and while I never had any doubt it was an association with staying power, it is obvious that it not only has it demonstrated staying power but visibility, credibility and, most important, usability.

Congratulations to all the people who make it work so well; people like Judy Laushman, Linda Twining, Dr. John and Dave Dowling, to name but a few. Your efforts have made me proud to be associated with such a wonderful group of people.

Allan M. Armitage
Professor of Horticulture
University of Georgia

NORTH WICHERT GARDENS



Tuberose. Mexican Singles 10-12 cm
\$60/100, \$450/1,000, topline, hand-cleaned.

3237 S. 8500 E. Rd., St. Anne, IL 60964 (815) 427-6020

PEONY ROOT DIVISIONS

from

MAPLE RIDGE PEONY FARM

Conway, Massachusetts

Top-quality

3- to 5-eye divisions

September shipping

'Sarah Bernhardt.'

'Charm'

'Festiva Maxima'

& more.



'Gay Paree'

— ORDER EARLY —

'Festiva'

alicevig@crocker.com ph. 413/369-4018

Label your boxes with the ASCFG Member Logo!



Contact the ASCFG office for the member logo ready for placing on your price lists, business cards, sleeves, boxes and website.

(440) 774-2887

ascfg@oberlin.net

BANNER FLOWER FARM

Alegan, Michigan

DAHLIA TUBERS

Large selection for cutflower production

ph: 269/686-8994
email: dahliafarmer@aol.com
website: bannerflowerfarm.com

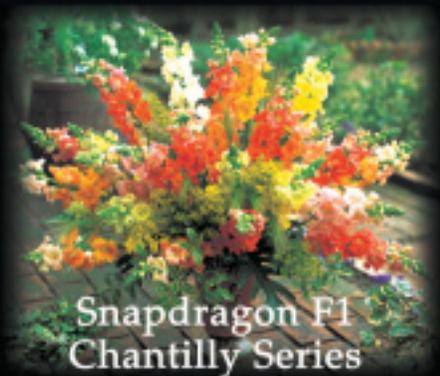


REAL ESTATE



- 5 acre flower farm in central Illinois.
- 3 bdrm., 2 bath, modular home.
- Deep well, Never dry.
- 2 story barn/packing area with walkin cooler.
- Sales to 4 wholesalers and 2 farmers markets.
- 3 wholesalers pick up at farm.
- Largest farmers market has 100-150 vendors per Sat., only us and one other flower grower.
- Very good customer base. 100 + regular weekly customers and growing.
- 2 acres in cuts 2 acres in woodies.

American Takii offers a magnificent range of cut flower varieties. Whether you're looking for long or short crops, growing in hot or cool conditions, greenhouse or field, we have a variety that will fit your program.



Snapdragon F1
Chantilly Series



Stock Glory Pink

New for 2007-08!



Delphinium F1 Aurora White

For more information contact your preferred broker or American Takii, Inc. at 831-443-4901, or www.takii.com.



Want to grow quality Cut Flowers.....??

Start with the right beginning

Quality Bulbs, with Service and Expertise to back them up.

Ednie Flower Bulb inc.

1-800-24-Ednie - www.ednieflowerbulb.com
37 Fredon Marksboro Road, Fredon NJ 07860

IDEAS from the FARM



**2007 ASCFG National
Conference & Trade Show**

October 1 - 4

*North Raleigh Hilton
Raleigh, North Carolina*

Monday, October 1
Growers' School

Tuesday, October 2
Morning Tours,
Afternoon-evening Trade Show

Wednesday, October 3
Morning Tours
Afternoon Sessions
Evening Banquet

Thursday, October 4
All-day Sessions

Friday, October
On-your-own Tours



Association of Specialty
Cut Flower Growers, Inc.
MPO Box 268
Oberlin, OH 44074

PRST STD
U.S. Postage
PAID
Permit 94
Oberlin, OH 44074