

Volume 30, Number 3 Summer 2018

The **Cut Flower**

Q U A R T E R L Y

Association of Specialty Cut Flower Growers Inc.

for growers of field and greenhouse specialty cuts



Inside this Issue

- 3 From the President
- 4 The Farmer and the Florist
- 6 Grower Profile
- 8 IPM Update
- 10 Culture Profile
- 12 Flowers from the Farm Wins Big at Chelsea
- 14 Is Your Land an Asset or a Liability?
- 16 Tropical Gingers for Spring Cut Flowers
- 20 Extending Postharvest Vase Life of Dahlia
- 22 Postharvest Disease of Zinnia
- 24 A Survey of Peony Diseases
- 31 Regional Reports
- 44 ASCFG News
- 52 From the Director

Cover photo courtesy of Tanis Clifton, Happy Trails Flower Farm

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.
2018 ASCFG
ISSN 1068-8013

PUBLISHING SCHEDULE

ISSUE	DEADLINE
Spring	March 1
Summer	June 1
Fall	September 1
Winter	December 1

All articles, features, and display advertising must be received by these deadlines for publication. *The Cut Flower Quarterly* welcomes advertising. Contact ASCFG for advertising insertion order form.

Contact Judy Laushman
(440) 774-2887 or mail@ascfg.org
www.ascfg.org

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.

Dave's Penultimate Letter as ASCFG President

Dave Dowling



Now that summer is in full swing, and everyone is on autopilot, it's a good time to look back at the past few months and see what you can do different the rest of this year, to make next year better. Here are some things to think about now:

1 Better planning and planting of perennials this summer and early fall to get a jump on those early-summer flower sales. Crops like *Campanula glomerata* (clustered bellflower), *Achillea* 'Moonshine' (yarrow), *Platycodon grandiflorum* (balloon flower), *Convallaria majalis* (lily of the valley), Delphinium Guardian series, *Polygonatum variegatum* (variegated Solomon's Seal) are popular favorites, and fairly easy to grow. I could go on forever listing varieties, but you can view any perennial catalog or website for hundreds of possibilities. Many perennials perform great when planted from plugs or liners in late summer or early fall. Phlox, sedum, yarrow, baptisia, and others planted this summer will yield a sizable crop next spring and summer.



2 Hardy annuals were once something only our grandmothers grew. Now commonly known as "cool flowers" to our members (thanks to Lisa Ziegler), they can provide the bulk of late spring to early summer sales. Incorporate items like biennial sweet William's Tall Double Mix, larkspur, *Rudbeckia hirta* 'Indian Summer', and *Bupleurum griffithii* into your rotation. And don't forget bachelor buttons. You're gonna love 'em, or hate 'em, but in the words of the 70's group America, "You'll never know until you try." Think of cool flowers like Nike: "JUST DO IT."



3 Work more this year on fall bed prep, getting cleanup work done, and beds and fields ready for planting early crops. If spring is premature, you'll be ready to put in an extra-early planting of sunflowers that will be blooming in May or the first of June. You could put up "Joe Schmitt" hoops this fall over prepared beds, ready to add row cover or plastic for protection over an early spring planting.



4 Find new customers now for next year. Check out the florists in your town, and the next two or three towns, looking for the ones who need your flowers. Visit farmers' markets to see if there might be a need, and room, for your farm. Check out the better restaurants near you and see if they have fresh flowers on their tables and hostess stations. If not, they should have yours. If you don't have a subscription/CSA, now is the time to plan ahead to have one next year. Partnering with a traditional veggie CSA, where members have the option to add a flower share, is a great way to get your flowers out of your field and into local homes. All these ideas need to be acted on this year, for next year. Waiting until next spring is too late.



Someone on Facebook recently asked "Can you make money grow growing cut flowers?" My answer was that you make money *selling* cut flowers. If you don't sell your cut flowers, you'll never make money *growing* cut flowers. Marketing is a huge part of any business. Success rarely just "happens". You must plan for it, and work for it. A lot. Every day. Remember:

Sales = Income ⇔ Income = Profit ⇔ Profit = Vacation

Now go plan a vacation.

Dave Dowling is a Sales Representative and Warehouse Manager for Ednie Flower Bulb. Contact him at dave@ednieflowerbulb.com

Competition: The New Norm

Ellen Frost and Laura Beth Resnick

Competition is complex, uncomfortable, exciting, stressful, and an integral part of business. In the local flower community, competition is nothing new. However, in the last few years, more and more people have become flower farmers and/or floral designers. Influenced by Amy Stewart, Floret, the Slow Flowers movement, and the work of the ASCFG, flower lovers, home gardeners, artists, vegetable farmers, retirees, millennials, and everyone in between are viewing flower farming and floral design as more than just a hobby—they want it to be their business.

Five years ago, a few flower farmers in one town could do business without competing with each other. Now, sometimes dozens of flower farmers in that same town may find that the market is getting crowded, and competition is getting fierce.

You're probably thinking "What's the problem with that? Don't we want there to be more flower farmers? More floral designers using local products?" The basic answer is YES, we want more flower farmers and more floral designers using local flowers. Some positive outcomes of the rapid growth in our flower communities include more awareness about the benefits to buying local flowers, more local flowers available, better varieties, and higher quality all around.

With more people farming and designing, there is bound to be more competition. In many urban and suburban areas, the flower marketplace may feel as if it's filling up. Five years ago, a few flower farmers in one town could do business without competing with each other. Now, sometimes dozens of flower farmers in that same town may find that the market is getting crowded, and competition is getting fierce.

This increased competition is causing some new issues between farmers, and between farmers and their designers.

Community Over Competition in Farming

In some industries, competitors are nothing more than nameless, faceless adversaries to beat. But farming is an inherently collaborative industry. Farmers need each other and enjoy each other. In our region, the Maryland Cut Flower Association is a strong group of farmers who happily come together several times a year for knowledge sharing and community building. Over the past five years, the group grew from 20 or so members to over fifty.

Most farmers operate according to unspoken rules for competition based on the collaborative nature of farming. For instance, it's assumed that if a flower farmer is already at a good market, another flower farmer shouldn't apply to that market. Additionally, if a farmer is selling to a grocery store, another farmer shouldn't approach the owner with lower prices. These "rules" may seem counterintuitive to outsiders. But to farmers, they make sense. It is Community over Competition at its most basic.

Since the recent boom of flower farmers began in Maryland, many farmers' markets are full of cut flowers, and florists have a bounty of local options. New farmers may find that there is no easy way into a saturated market, and more experienced farmers may feel protective of their customers. Farmers may be tempted to compete by leaving behind the idea of Community over Competition in favor of more traditional competition methods that put relationships second to things like moving into a market, or selling some surplus flowers at too low of a cost that undercuts everyone else.

There are two problems with focusing less on community values. The first is that reputation matters. Being respectful and honoring other farmers will help your business in the long run. When your high tunnel comes down under wind and snow, you'll want to call upon your fellow farmers to help you put it back up. When you're not sure how to price that weird variety of fritillaria, you'll want to text other growers to ask what the normal price range is. If a flower customer asks another farmer about you, that farmer will tell them honestly. Putting your relationships with other farmers above competition can only make your business stronger.

The second problem with losing sight of the traditional farmer “We’re all in this together.” attitude is that it’s a rarity in an increasingly polarized world. Showing our customers and each other that we care about community has a ripple effect. Making another farmer’s day by offering kindness will likely inspire that farmer to offer kindness to someone else. Kindness and goodwill in our communities is much better for business than negativity and division.

When the Going Gets Tough, The Tough Get Creative

If you’re just starting out, or if you’re an experienced grower expanding your business, you might be thinking, “How can I compete in a crowded marketplace with a Community over Competition mindset?” and, “How can I deal with competitors who don’t share the same values of Community over Competition?”

We Have a Few Ideas!

- Grow something no one is growing: fancy peonies that few are willing to invest in, tropicals in your greenhouse, unusual varieties of dahlias that may produce less but you could sell for a higher price.
- Develop an expertise few farmers in your area have. Try growing in the winter, or get a USDA Organic label.
- Customer service can always be improved. Focus on having the very best!
- Market your flowers in a new way. Have an employee who’s really good at drawing? Post some original comics to Instagram. Team up with a local coffeeshop for a pop-up.
- Seek out new customer groups to sell flowers to. How about funeral homes? Proms and graduations? How about starting your own farmers’ market or co-op?
- Understand your competitive advantage and use it. Do you have a really nice delivery truck? Start bringing flowers once a week to a group of florists and let them buy off the truck. Are you good at teaching? Start a class series for local gardeners.
- Focus on best serving your customers’ needs over growing what you like growing. If your customers want more foliage, take out some of those fancy sunflowers and plant dusty miller. It’s less sexy, but it sells.
- Focus on retention rather than seeking out new customers. A general rule of thumb for business owners is to sell more to the people you sell to, rather than start a whole new enterprise. Put your creative energy into thinking about how to get your current customer base to buy more.

Most importantly, remember compassion. All business relationships should be approached through a frame of compassion first. If a farmer is stepping on your toes, it can feel like a direct affront, but most conflicts that arise from competition can be resolved through respectful conversation. Reacting to neighbors from a place of compassion is a special farmer skill, let’s keep it honed!

In the next *Quarterly*, we’ll tackle the new competitive challenges that come with farmers becoming farmer florists. Send us your stories of competition in the marketplace at butterbeefarm@gmail.com and ellen@locoflo.com.



If a farmer is stepping on your toes, it can feel like a direct affront, but most conflicts that arise from competition can be resolved through respectful conversation.



*Ellen Frost is owner of Local Color Flowers. Contact her at ellen@locoflo.com.
Laura Beth Resnick is owner of Butterbee Farm. Contact her at butterbeefarm@gmail.com.*

The Garden That Keeps on Growing

Jodi Helmer

A Washington State flower farmer embodies the adage “Bloom Where You’re Planted.”

Growing up in a family of gardeners helped Janet Foss develop a love of growing things. For her eighth birthday she asked for her own garden plot, where she planted her first flowers—purple petunias.

Foss carried her childhood love of gardening into adulthood. Her husband, Jim, called it “an expensive hobby,” when the couple married in 1981, so Foss decided to start selling the flowers she grew on their two-acre property in Everett, Washington, to prove that her hobby could generate a good return on investment.

Jim, a teacher, went to City Hall during a school break to get her a business license—a move Foss, a self-described procrastinator, admits she might never have made on her own. She started selling at the local farmers’ market the following week.

The cut flower bouquets proved popular and, once Foss started generating revenue from her fledgling flower farm, things happened fast. It wasn’t long before Foss and her husband moved to a 20-acre property in Lake Stephens, Washington, where she set to work expanding the farm.

Truly a Specialty Cut Flower Grower

In addition to growing tried-and-true cut flowers like dahlias, tulips, poppies, sweet peas, and roses, Foss admits, “I like to have unusual plants to offer people; that has always been my niche,” and dedicated significant space to experimenting with varieties like greater burnet saxifrage, astringia, and clematis. As the selection of cut flowers continued growing, so did J. Foss Garden Flowers.

Foss rented a stand at the iconic Pike Place Market in Seattle (where she was a vendor for 16 years) and established wholesale accounts. The farm grew from a small operation to a major undertaking. Foss raced to keep up with the demands.

“I was [at Pike Place Market] from 5 a.m. to 5 p.m.,” she recalls. “I’d drive home, pick more flowers, load the van and do it all over again. It was a lot of work.”



Janet Foss, J. Foss Garden Flowers

Foss wanted to switch from retail sales to wholesale. Her grandmother, also a cut flower grower, mused that wholesalers would never have worked with small growers in the “olden days” but it didn’t take long for Foss to land an account.

Wholesale proved to be a better option. Foss partnered with a wholesaler who purchased all of her flowers, allowing her to make a few quick trips into Seattle each week, unload the van, and make it home before lunch, allowing her to devote more time to the farm.

Multitasking Before it Was Cool

Just when Foss got into a good groove, things changed again. The wholesaler went out of business and Foss lost the account; after almost two decades in Lake Forest, Foss and her husband purchased a farm in Chehalis and, not long after their move, Jim suffered a stroke. Foss stepped in as caregiver, putting the flower farm on autopilot.

“I thought about not doing cut flowers at all,” she recalls. “We still had the old farm and things were still growing there so I did some mass sales to wholesalers but I was not focused on it.”

As Jim grew stronger, Foss recommitted to the farm but moving from a wetland site to a drier climate created a steep learning curve; flowers that grew well in Lake Stephens failed to thrive in Chehalis. Where she once grew calla lilies with thick, five-foot stems, the flowers she grew on the new site were smaller and less impressive.

“Things we could grow and make a ton of money on [at the old farm] wouldn’t grow here,” she recalls.

Moving the calla lilies into the greenhouses proved to be a turning point; the flowers grown in the controlled environments are bigger and more beautiful than ever.

Having a greenhouse was new for Foss. Though she’d longed for greenhouses on her previous farm, the location in a floodplain meant the structures would have been underwater for months. On the 40-acre site in Chehalis, there was enough dry land to accommodate several structures.

Foss also embraced the features of the site: In addition to seven acres of annuals and perennials, she harvests moss and twigs from the 15-acre forest to add to bouquets, and cuts log rounds to sell as décor pieces; pussy willows, spirea, and birch trees thrive in the 15-acre wetland.

“When I started out, no one was publishing books on how to make \$100,000 on two acres,” she recalls. “Now, information [about starting a flower farm] is all over the place. People get into it without knowing how much work it will be.”

Although she has been growing flowers for almost four decades, Foss is still experimenting and still learning. The veteran flower farmer has witnessed significant changes in the field: She remembers taking phone orders (from a landline) and promoting her business without the internet and social media.

The demand for certain flowers has changed, too: Foss recalls a time when wholesalers had no interest in sunflowers; she was the first grower in the Seattle area to grow pollen-free sunflowers and

sold upwards of 500 bunches per week. Now, the colorful blooms are staples on flower farms. The biggest change, she believes, is the interest in growing flowers.

“When I started out, no one was publishing books on how to make \$100,000 on two acres,” she recalls. “Now, information [about starting a flower farm] is all over the place. People get into it without knowing how much work it will be.”

Despite the hard work, Foss retains her childhood passion for growing flowers. She appreciates the opportunities to experiment with new flowers and decide on the rhythm to her days, explaining, “I like being outside and walking to the beat of my own drum.”

*Jodi Helmer is a freelance writer in North Carolina.
Contact her at jodi@jodihelmer.com*



Using Good Fungus for Insect Control in Cut Flowers

Stanton Gill

It is summer and your cut flowers are looking great. Unfortunately, our buddies, the bugs of the world, are highly focused on and enthralled with your beautiful blooms.

As cut flower growers you want perfect flowers with minimal pest damage. The question is how to deal with major plant-feeding insects without using harsh, broad-spectrum, and expensive insecticides.

The answer may lie in use of beneficial fungi called entomopathogenic fungi. Over the last 18 years we have conducted many field trials with two, *Metarhizium anisopliae* and *Beauveria bassiana*. Both are readily available from commercial sources.

The one we have had the most experience with is *Beauveria bassiana*, sold by Bioworks under the name BotaniGard as a liquid or wettable powder formulation. BotaniGard contains conidia of *Beauveria bassiana* combined with a wetting agent. The conidia are mixed in water and applied as a fine mist onto the insect. When the conidia make contact with the insect, they germinate, producing hyphal growth that penetrates the insect resulting in its death.

In Canada, many growers dunk trays or flats of susceptible plants in a water trough containing the BotaniGard mixture, submerging the plants for 15-20 seconds. This coats the foliage, and any

insect present. It is effective in dealing with aphids, thrips, and whitefly. BotaniGard now has labeled instruction for dunking plants using this methods. Several growers in Maryland use this practice to reduce insects on young plants.

Thrips. Actually a Single Noun

Thrips are one of the most important summer problems for cut flower growers. Populations can build quickly if not controlled early; spraying should begin at the first sign of thrips activity. We have had a fair amount of success using *Beauveria bassiana* applied as a fine mist, and have achieved excellent



GeoSeed
Seed For Professionals

**When You Want Your Blooms
To Stand Out From The Crowd,
Our Seeds Get You There.**

121 Gary Road | svc@geoseed.com | 1-888-645-2323
Hodges, SC 29653 | www.geoseed.com | Fax: 864-227-5108



Adult thrips

thrips control in the greenhouse with *Metarhizium anisopliae*.

With both of these entomopathogenic fungi, the thrips need to be hit by the spray or come in contact with spores on the leaf surface. In our trial we generally use a backpack motorized mist sprayer. Its fine mist is more likely to allow the conidia to make direct contact with the insects, especially with thrips, which tend to be rather cryptic. Aphids tend to feed out in the open so it is easier to make contact with them. For whiteflies you need to make sure the mist lifts the foliage to make contact with the sessile stage on the underside of the leaf.

Western flower thrips tend to congregate in flowers or clusters of flowers, so spray should be concentrated there and on the upper foliage. If the plant is not flowering, Western flower thrips may be found in the leaf axils. They no longer have a migratory path, and effective spray coverage becomes even more critical. In our trial we've had our best success in greenhouse systems, and are just beginning to conduct field trials. Applications during more humid parts of the summer should increase the efficacy. I have had conversations with Dr. Chris Hayes of BioWorks, which is effectively using BotaniGard on outdoor field crops and some fruit crops in Mexico.

For thrips, whitefly, and aphids, the label rate is one quart of BotaniGard in 100 gallons of water. For thrips I suggest applying every 5 to 7 days during high activity. If you are going after aphids the intervals must be tightened up to every 3

to 4 days. Aphids grow rapidly in early summer and shed their skins quickly. If you apply the conidia to the exoskeleton the aphid may shed its exoskeleton before the fungus effectively penetrates its body. For whitefly a 7-day interval should be adequate.

BotaniGard is compatible with most beneficial insect programs. When sprayed according to label directions, BotaniGard will not reduce populations of most predatory mites such as *Amblyseius cucumeris* used for biological thrips control. Apply when bumblebees are not foraging.

The *Metarhizium anisopliae* is good for thrips, whitefly, and spider mite control. I have not had as much success with this material with aphids. It is sold under the name Met-52. This is a liquid bioinsecticide labeled for use in the United State and Canada. It is a naturally-occurring fungus, meaning it has not been genetically modified.

Keep in mind that *Metarhizium anisopliae* does impact both plant-feeding and predatory mites. If you are using predatory mite release for thrips control, this is not the best choice of materials for you. Met-52 has range of rates on its label, from 8 to 32 ounces in 100 gallons of water for foliar applications.

I'll see you in September in Raleigh, North Carolina. Take me out to dinner and we can chat about your bugs.

Stanton Gill is an extension specialist (professor-ranked principal agent) in IPM and entomology with the University of Maryland Extension, based at the Central Maryland Research and Education Center in Ellicott City. He is also a professor in the Landscape Technology Program at the Germantown Campus of Montgomery College. Contact him at sgill@umd.edu



The best bulbs
and perennials
for your business

**ourAmerican
Roots.com**

Van der Salm Farms, Inc.

35306 NW Toenjes Rd
Woodland WA 98674
Phone: 360-263-2180
Fax: 360-263-3180

Like **OurAmericanRoots.com**
for news and
up-to-date
special offers!




However You Pronounce It, Clematis is a Terrific Cut Flower

Ralph Thurston, Bindweed Farm

In general, almost all *Clematis* species make good cuts in terms of vase life. However, they just don't make good cutting: most being climbers, they form tendrils that grab every available stick, stake, or neighboring stem, so require more patience than the usual grab-and-cut method used for other flowers.

A number of *Clematis* species, however, grow shorter and more bush like, and while most still need staking, these respond to quicker harvesting and a little more roughhousing.

First on the list comes *Clematis recta*, a vigorous grower we sometimes bunch-cut three times a year, which yields 30 dollars in sales per running foot. Net and stake *recta*, raise the net as it grows (pay close attention, as it's very quick on the draw), grab a bunch of stems at the base when its white, starlike flowers either bud, for long-term holding in the cooler, or form flowers, for immediate sales or use. It grows about three feet tall here in southeast Idaho, so you may not need the entire stem, but harvest deep to make the

second harvest stems longer and easier to cut. Designers can substitute *recta* for jasmine, and its long vase life makes even traditional florists open to using it.

Clematis recta 'Purpurea' has dark leaves like *Physocarpus* 'Diabolo' or *Lysimachia* 'Firecracker', and flowers just like the species *recta*, but doesn't yield much of a second crop, being less vigorous. It too needs staking, reaching three feet tall. 'Serious Black' is one of its cultivars.

Blooms of *Clematis mandshurica*, which look just like *recta*'s, come about two weeks later. We're trialing this somewhat taller species this year, hoping for equal success.

The *Integrifolia* clematis (*C. integrifolia*) belongs to what is now taxonomically known as the *Integrifolia* group of clematis. Crosses with *C. integrifolia* yield a

number of useful species, of which *C. x durandii* (*C. integrifolia* x *C. lanuginosa*) may be the queen, its four-inch, silver-blue flowers lasting ten days to two weeks in a vase. It's a spindly plant that doesn't intertwine, and requires double layers of net, but its three-foot stems reward the grower and designer with multiple harvests through the summer, almost as if it were an annual.

Other *integrifolia* hybrids include a mauve and white variety generally sold as a mixed bag. The white, according to propagators, is less vigorous, which explains why it's hard to find. Since every designer wants white for weddings, if you can find a source for white *integrifolia*, jump at the chance to purchase. Both mauve and white *integrifolia* grow much shorter than *durandii*, requiring only one layer of netting, and can be cut in bud or with its bell-shaped bloom fully open. You can cut a stem at a time, but we like to bunch-cut to the ground, thereby pruning and harvesting at the same time, and preparing for a second and even third harvest. If you tire of the flowers, let it go to seed, as it forms a swirling, nebula-like head that many designers find irresistible.

'Rooguchi', another *integrifolia* hybrid (*C. integrifolia* x *C. reticulata*), poses more of a trellising nightmare than its siblings. We treat it like sweet peas, using vertical netting with T-posts and adding layers of twine to keep its rampant vines upright. 'Rooguchi' blooms prolifically, with purple bells that keep coming all summer. You'll need a number of clients to keep up with even ten or fifteen plants.

Of the clematis we raise, *C. heracleiflora* (part of what is now referred to as the *Heracleifolia* group) grows unusually slowly, yielding flowers only in the third



Clematis recta

year but generously after that. Its silver-periwinkle blooms come late in the summer and should be harvested in fairly tight bud. It too needs to be staked, but only barely, its stems being much stiffer than any other clematis we know of. The leaves are attractive enough to use alone as foliage, though on our farm they tend to get the desert-blight that comes after a summer of sun and wind.

The *integrifolias* and *rectas* grow in full sun, while *heracleiflora* requires a little shade, according to recommendations.

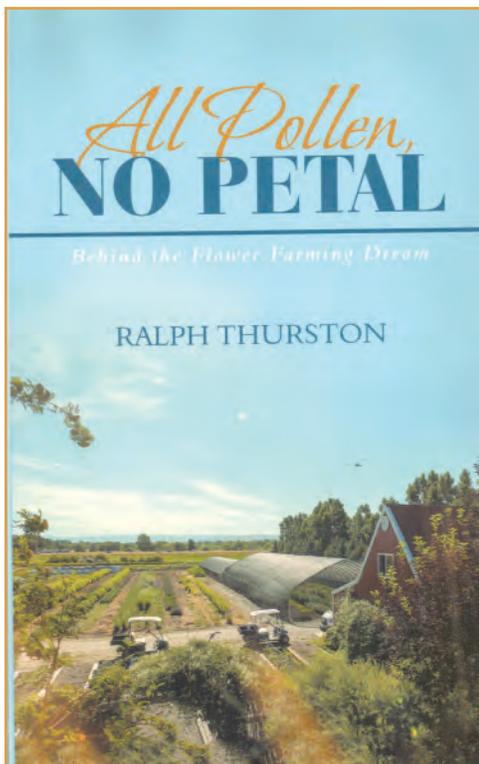
Two vigorous species with small, white starlike blossoms bookend the clematis season. Neither are short by any means. Autumn clematis (*Clematis ternifolia*) flowers in September here, and ‘Paul Farges’ (also sold as ‘Summer Snow’) in late May and early June—later if pruned severely to delay bloom. Both grow and bloom prolifically, require innovative trellising and patience when cutting, but both work equally well in arches or vases—just pick your length of stem. ‘Paul Farges’ is said to grow up to fifty feet over time, but we cut ours back considerably in the spring and it still runs ten to twenty feet. You can’t be afraid when harvesting its intertwined stems. Cut, pull, and when you hear tearing sounds just keep pulling. You may damage some of the plant but there’ll be enough to go around, I assure you. You can harvest in bud or in bloom, depending on when it’s going to be used, and you can take four feet or ten, depending on how comfortable you are transporting it.

A number of other species and cultivars work as cuts: *jouinana*, *hexapetala*, ‘Arabella’ (also an *Integrifolia* hybrid); those listed here are a fraction of the possibilities. Use your imagination, turn your horizontal farm into a vertical one with clematis. You’ll be pleased with the results at sales time, though perhaps a bit petulant as you harvest.



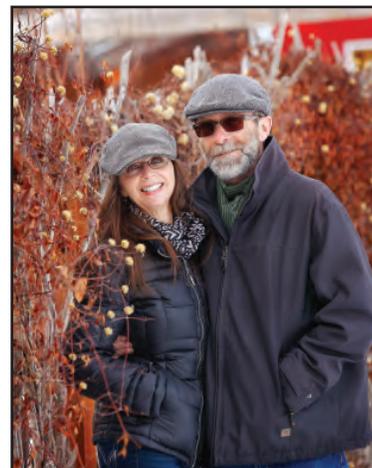
Clematis ‘Rooguchi’

*Ralph Thurston is co-owner, with Jeriann Sabin, of Bindweed Farm in Blackfoot, Idaho.
Contact him at bindweedfarm@aol.com*



Disruption is striking everywhere, including the cut flower industry, where small local growers are trying to upend the decades-long rule of megafarm oligopolies. With disruption comes chaos though, with mimickers and charlatans to obfuscate the efforts of the earnest and honest, the inept and unprepared crowding out the able and cluttering the pathways to success. Straightforward and no-nonsense, *All Pollen, No Petal*, sorts through the misinformation to give clear and realistic advice to prospective growers and those already on their flower farming journey.

For over twenty-years Ralph Thurston and Jeriann Sabin, as Bindweed Farm, have grown cut flowers in the short season, harsh desert climate of Southeast Idaho, and now operate Deadhead Cutflowers, an educational and consulting firm for small growers throughout the United States. After trialing over three hundred species and settling for the ninety that grow and sell best in their climate, soil, and market, they’ve come to know the intricate details of cut flower farming as a business. They hope their years of experience, as detailed in *All Pollen, No Petal* and expressed through their workshops, steer others away from the mistakes they made toward a much quicker success.



Order at Amazon



*Flowers from the Farm
Wins a Gold Medal
at the
RHS Chelsea
Flower Show*

Gill Hodgson, Field House Farm

In May of 2017 I visited the Chelsea Flower Show in London, United Kingdom.

For those of you who haven't come across Chelsea, organized by the 214-year-old Royal Horticultural Society, it's the most famous flower show in the world, and marks the start of the London social season. The rich and famous flock to the 26-acre site hemmed in by the Royal Chelsea Hospital and the River Thames to quaff Champagne, to see, and to be seen.

Behind the razzle dazzle, though, there's a very serious exposition designed to showcase the best plants and flowers, the best design, the pinnacles of excellence.

I looked around the show a year ago and thought, "Yes, Flowers from the Farm [FFTF] could do this." and went home, designed a display, submitted the application to the RHS, and waited.

There are four applications for every space in Chelsea's Great Pavilion and acceptance was by no means assured—but we got in.

Up until the beginning of this year I was a one-woman band running FFTF, the UK equivalent of the ASCFG, which I'd founded back in 2011. FFTF is a not-for-profit company run wholly by volunteers; it had been more or less a full-time job for me and entering us for Chelsea was my final unilateral decision before handing over to a more democratic management committee.

I never had a single doubt that our members would do us proud. A small group came forward to build the stand, more offered to work on the stand for the show's six open days, and dozens more offered to send flowers from all over the UK.

Eventually 94 growers sent flowers by post, by van, and by car, and our team of 5 worked throughout Sunday to display them at their best. In a show where stands are planned meticulously months in advance, we were certainly the only ones who didn't even know what flowers we would be using until 36 hours before judging.

Monday morning saw the panel of judges deliberating over our display, and at 7:00 Tuesday morning we entered to see a Gold Medal Certificate pinned to our stand. There were tears, hugs, screams of delight, and more tears: it is almost unknown to be awarded Gold on one's first appearance at Chelsea and we were absolutely delighted.

As designer, I had the honour to be presented to HM The Queen on her visit, and was also interviewed many times on television—the coverage seen by my daughter in Manhattan and by my cousin in Sydney, Australia.

The RHS organizes a total of 6 flower shows around the country, and Chelsea was the only one we hadn't already attended: every county also has its own smaller show and our members show their flowers there too. These are great opportunities to present local, seasonal flowers to a new audience and promote the case for this kind of floral material.

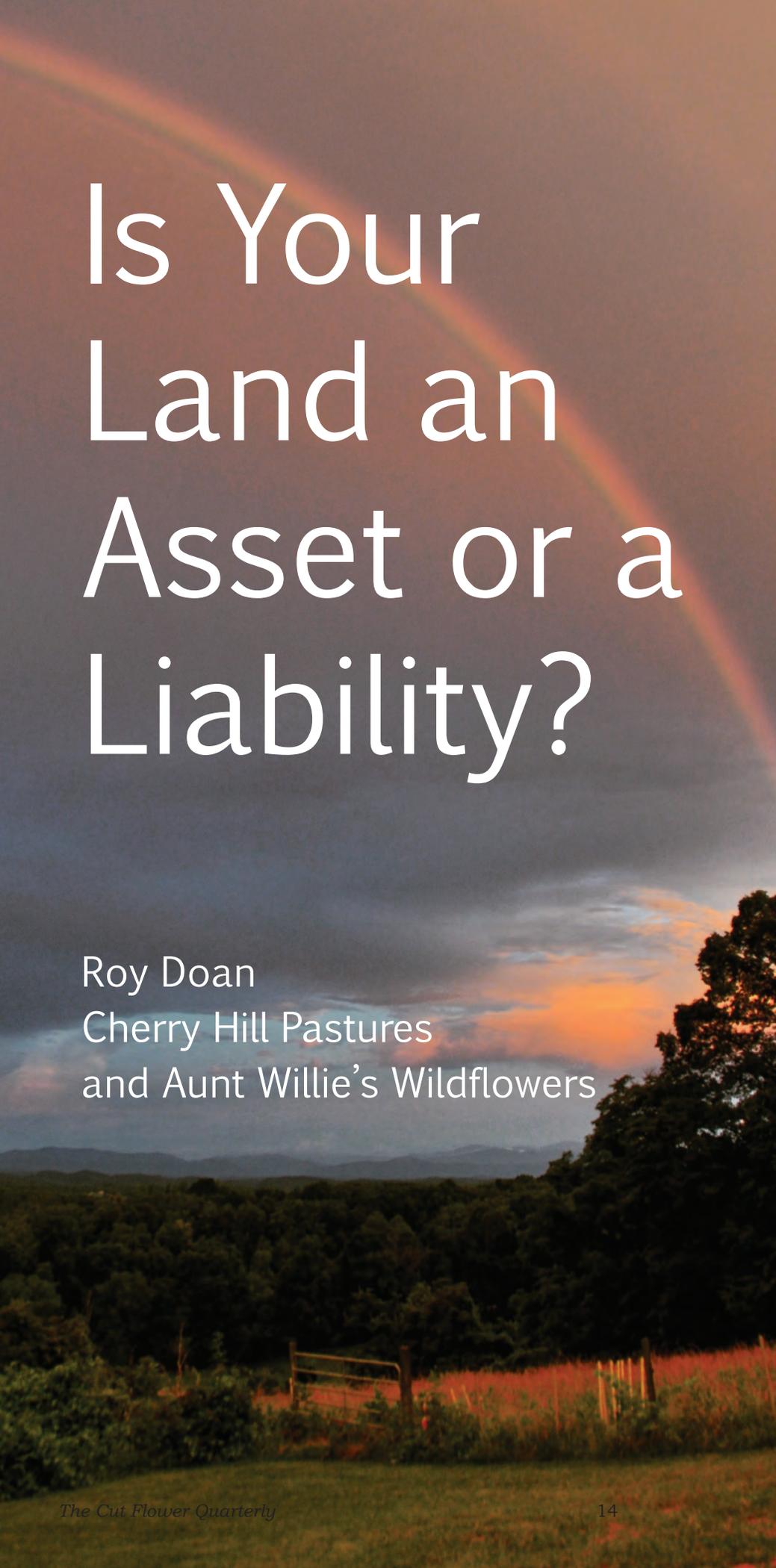
Whichever country we're growing in, we face similar problems—the reluctance of traditional florists to try our flowers, the competition from imports, and the lack of a distribution system. But for just one glorious, unique week it was utterly fabulous to rise to the very top: to woo more florists: to show our detractors what we could do, and we loved every minute of it.



Gill Hodgson and Her Majesty Queen Elizabeth II



In a show where stands are planned meticulously months in advance, we were certainly the only ones who didn't even know what flowers we would be using until 36 hours before judging.



Is Your Land an Asset or a Liability?

Roy Doan
Cherry Hill Pastures
and Aunt Willie's Wildflowers

*The second of a two-part series
about land management*

In the last article I discussed the high cost of buying farmland. But many flower growers already own the land they are farming, and even if it's already paid for, there are costs in owning land that are oftentimes not considered. David Pratt of Ranch Management Consultants uses the expression "Most farms and ranches are structured for failure." to describe the problems associated with these hidden costs.

Now, let me set up the problem, explain why it is a problem, and offer some possible solutions. First, separate the land from the farm business (this separation will also protect some assets from farm business liability). There is a land business and a farming business. The farm (cut flower) business produces income from the sale of the crops, and pays for expenses directly associated with producing those crops. Some examples are seed, transplants, fertilizer, cultivation costs, harvest costs, labor, marketing, etc. The amount of income that exceeds the costs is the farm business profit.

The land business holds ownership of the land and the permanent assets on the land. These assets will include buildings, roads, lanes, fences, water sources, water systems, and any other permanent infrastructure. Many costs are associated with the land and its other assets. These costs include taxes, insurance and the costs of acquisition, maintenance and repairs on all assets plus depreciation, labor, etc. There could also be interest costs if the farmer is still making payments on the land or other assets. Mr. Pratt also includes opportunity cost. As an example, if the farmer sold the land and other assets that on the land he would have a large sum of money, primarily because of the high value of the land, which could then be invested. Let's say the amount is \$500,000, and the return on this investment averaged 6% per year. The farmer would then have an income of \$30,000 per year with no work involved. Mr. Pratt actually makes this amount a cost in his

accounting scheme. Even if the farmer does not want to use such aggressive accounting she should still agree that the land business should return at least the same 6%.

The problem is that the land business produces no direct income to pay the costs of the land business and still return at least the 6% from the above example. There are only two ways a land business can produce direct income. One is to sell the land, which is not an option if the farm business is to continue using that land base. The second is to rent it to the farm business or to someone else. Since the farm business cannot exist without the use of land, it is only fair that it pays rent to the land business.

This leads us to the heart of the problem that Mr. Pratt's comment in the first paragraph refers to. Is the farm business capable of producing enough profit to pay the land business enough rent to pay the expenses of the land business, and provide at least the amount of the opportunity cost or 6%? For most farms and ranches the answer is no. There are many reasons, including too many non-income producing assets and high maintenance costs of these assets. But the largest item in terms of dollars is high-value land.

What can be done to alleviate this problem? Obviously the farmer can eliminate some of the non-income producing assets and reduce the costs of others. These assets can include more than land-related ones such as equipment. A discussion of these problem areas would probably be an overload for this article and can be addressed in the future. I will also eliminate the options of selling the land or renting it to someone else because I assume all farmers who own land will want to run their farm business on that land.

Get Creative with Your Assets

This leaves us with the option of finding alternative income streams. The land has many resources that could be the source of those income streams, such as wind, the sun, minerals, water, wildlife, grass, woodlands, beauty of the farm, and

scenic views. Some income streams can be found in using the waste that a business produces, such as making and selling compost, and drying unused flowers for an off-season market. Some suggestions of alternative income streams for cut flower farmers are classes, workshops, farm tours, bird watching, event destination, photography activities, art activities, solar energy, wind energy, various agricultural recreation events, selling easements, and selling mineral rights. For creative minds the list can go on and on.

Farmers will want to find income streams that match their personal values, and of course the streams can help only if they produce profits. Profitable options that require little time and expense from the farmer are usually good because the income streams should not take away from or harm the core farm business. If time becomes an issue, the farmer can partner with someone who will take on most of the responsibility, or offer the responsibility to an employee, and set up an incentive pay scale for bringing more business.

Good examples to learn from are the many ASCFG members who are already incorporating alternative income streams into their cut flower businesses. Some of these flower farmers have advanced to the point of making major adjustments to and changes in the incomes streams to meet the demands of a changing marketplace. And for some, the flower business is an alternative income stream.

In summary, the reason so many farm businesses "are structured for failure" is that they have too much money invested in high value non-income assets with high costs, and not enough profitable income-producing products. There are many ways to look at farm income, and many expenses that need to be carefully evaluated.

*Roy Doan is
co-owner of Cherry Hill Pastures,
a beef cattle farm, and
Aunt Willie's Wildflowers,
a cut flower farm, in
Blountville, Tennessee.
Contact him at roydoan@hotmail.com*





Tropical Gingers for Spring Cut Flowers

Richard A. Criley

Tropical Plant & Soil Science, University of Hawaii, Honolulu, HI

Looking for a new and exotic cut flower? Consider tropical gingers. While these beauties are most at home in Hawaii, don't let images of warm sea breezes and swaying palm trees distract you. Tropical gingers can also be grown on the mainland, in the summer and as our research shows, in the winter as well.

Research supported by the American Floral Endowment was initiated more than 15 years ago by Dr. Jeff Kuehny (LSU) and myself and his graduate students to develop species of *Curcuma* and *Globba* gingers for cut flower and potted plant uses. At the time, flowering was considered mainly for summertime as this is their normal season for flowering. Reports of this research can be found at <http://endowment.org/afe-floriculture-and-horticulture-research-reports/>. These tropical gingers with their white and soft pink to lavender colors would have much appeal for spring holidays if they could be forced for this season.

About 65 species of *Curcuma* are found in southeast Asia, with a number of these produced for export of rhizomes and cut flowers. With their charming flowers reminiscent of tulips, *C. alismatifolia* has been exported from Thailand since the early 1990s, first for cut flowers,

and later, as breeding and selection progressed, short-stemmed pot varieties were developed.

The genus *Globba* is composed of 40 to 100 species distributed throughout the Malaysia-Southeast Asia region into India and southern China. Plants are usually less than three feet tall with small rhizomes and fleshy storage roots. While they mostly grow in shady areas, species can also be found in moist to dry grasslands. The spectacular purple to white and green pendent flowers are produced during the long days of summer at the tips of upright leafy shoots.

As long-day plants, *Globba* species go into dormancy in the fall months; thus, daylength extension is required to maintain flowering as with *Curcuma alismatifolia*.

Both genera respond to short days by going dormant, and rhizomes are harvested in late fall-winter, air dried, and exported in late winter to markets in

temperate areas where they are forced. Research by Maria Pilar Paz, a graduate student with Dr. Kuehny, found that rhizomes could be stored for up to 4 months and still could be forced into good flowering. The problem with obtaining a longer season of flowering has been the availability of rhizomes earlier or later in the season.

In Hawaii, after the AFE research was completed, I held onto some rhizomes and increased numbers for several years. By using artificial short days, I could induce the rhizomes to go dormant. When dormant, they could be stored and brought out after a period of time for forcing. For winter flowering, this also meant that long days had to be provided, which was done with a 4-hour night break interruption.

The *Curcuma* studies were carried out over several years using Chiang Mai Pink (CMP), Supreme, and Climax *C. alismatifolia* rhizomes produced in

Hawaii so that dormancy and storage times could be controlled. Rhizomes were initially produced in field conditions (Supreme, Climax) in Hawaii and dug in February while still dormant, but later, they were grown indoors in controlled short-day (8-10 hours) conditions so out-of-season dormant rhizomes could be obtained.

Rhizomes were cleaned of substrate and air-dried for 4-6 weeks, then held in a dry peat medium in plastic bags at 60F until planting. Rhizomes stored at 54F had lesser survival and did not survive when stored at 48F. *Curcuma* rhizomes were started and grown out, brought into dormancy, stored, and forced over three different years to create a monthly serial planting schedule. Greenhouse air temperatures ranged from 77 to 102F, depending upon season (Hey, this is Hawaii!).

Potted plants of *G. sherwoodiana* 'White Dragon' were allowed to go dormant under natural short-day conditions in Hawaii. The rhizomes were extracted from the potting medium and air-dried for 3 weeks in shaded conditions in a greenhouse (mean temperature of 75F). Large rhizome masses were cut into units with one or two growing points, and dry rhizomes were packed



C. alismatifolia white and pink

into plastic bags of dry vermiculite and placed in storage at 60F. We started storage in April and removed batches of rhizomes monthly, beginning in July, for forcing over the next 12 months. Fewer rhizomes survived long-term storage as evidenced by lower numbers that sprouted in the following May and June plantings.

Both *Curcuma* and *Globba* were grown in 6-inch standard pots. For both gingers a peat-perlite medium amended with a controlled release fertilizer (Os-

mocote 18N-2.6P-9.9K), treble superphosphate, dolomite, and Micromax™ elements (Scotts Products) at the rates of 17.6, 10.6, 2.1, and 3.5 oz. per 3.5 ft³, respectively were used. Irrigation was as needed until sprouting; thereafter, 1.2 fl. oz./pot/day. During the forcing and flowering period, light levels ranged from a mean summer high of 13 mol·m⁻²·d⁻¹ to a winter low of 6 mol·m⁻²·d⁻¹, including the 4-hour night break from 400 W HPS lamps. For both gingers, the temperatures in the glasshouse ranged from a high of 102°F to a low of 73°F in summer and from 90°F to 68 °F during winter.

The data recorded for both gingers were time from plant to sprout, defined as the day the first shoot appeared above the substrate, and from sprout to flower for each pot with flowering recorded for the first true flower to open on an inflorescence. These data enabled calculation of mean times to sprout (appearance of the first leaves above the soil), sprout to flower, and total production times from planting. While the data reported were for the first open flower on the first inflorescence, additional inflorescences were produced for both species during the following weeks.

Vase life was determined only for *G. sherwoodiana*. The true flowers last only one day, but vase life studies showed that



G. sherwoodiana 'White Dragon'

the colorful *Globba* bracts could last up to 30 days! A related hybrid, 'Blue Hawaii' had similar keeping quality.

In three *Curcuma* forcing trials, plant-to-sprout times mostly ranged from 4 to 5 weeks. Forcing, as defined by plant-to-sprout times, can be delayed by cool substrate temperatures, or enhanced by a period of warm substrate temperatures. It is important to maintain a warm substrate temperature during winter forcing to keep plants growing and maintain crop schedules as rhizomes planted in December and January took longer to sprout than those planted in spring or summer. Sprout-to-flower times ranged from 65 to 99 days in the 2009-2010 summer trial, averaging 78 days with a plant-to-first-harvest time of 13 to 18 weeks, while the winter trial of 2010-2011 had a sprout-to-harvest range of 75 to 94 days, averaging 88 days, and a plant-to-first-harvest time of 14 to 20 weeks. A daily light integral (DLI) of at least $10 \text{ mol} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$ is sufficient for floral stem development, but artificial daylength extension or night interruption is necessary during the short days of fall and winter to prevent the plants from slipping

into dormancy. Figure 1 summarizes responses to planting times for the several forcing series.

Stored *Globba* rhizomes were quick to sprout once planted and placed in the greenhouse, averaging 12.2 ± 5.4 days. However, the rhizomes planted nine months after placement in storage required an extra week to sprout than the first several plantings, and were less vigorous. Sprout-to-first-flower durations increased from about 40 days to more than 60 days as time spent in storage increased. Production time over the 12-month period from plant to first flower averaged 61.8 ± 16 days, with longer production times in the last plantings despite higher summer light levels (Figure 2). The delay is likely due to the rhizomes having lower carbohydrate reserves after the longer storage duration. Over the twelve months of series plantings, pots averaged an additional 4 flower stems in the 60 days after the first one was recorded. Length of the first stalk to flower averaged 19 ± 1.7 inches across all seasons, but we got the longest stems during the high light periods.

Figure 1. Mean durations for plant to sprout, sprout to first flower, and days from planting to first flower for *Curcuma alismatifolia* planted at different seasons over a three year period. N = 10.

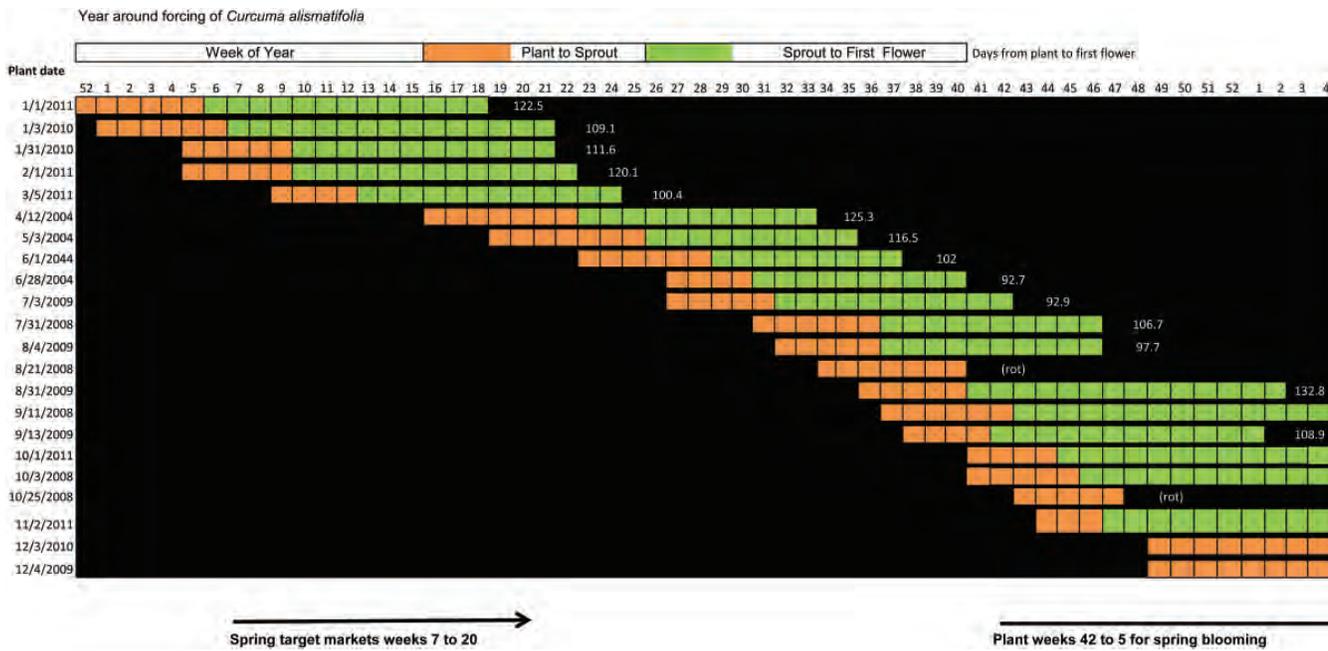
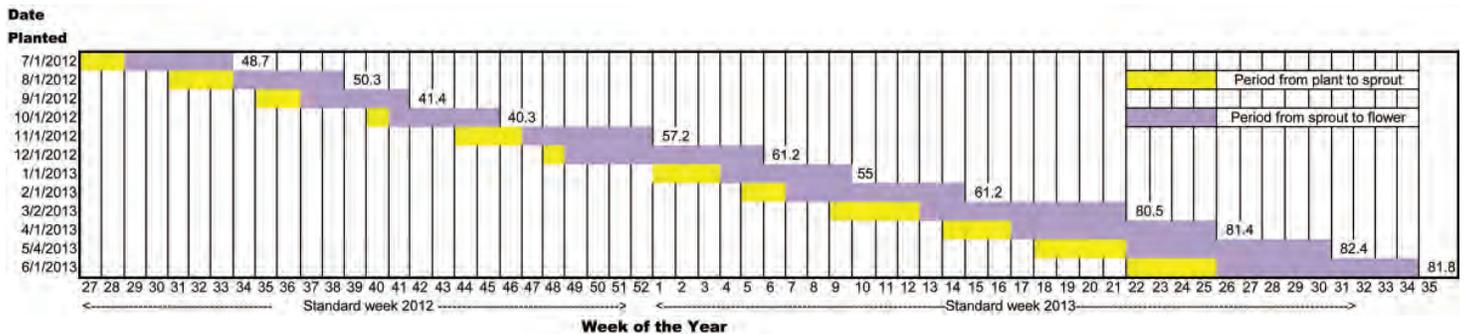


Figure 2. Mean duration for plant to sprout, sprout to first flower, and days from planting to first flower for *Globba sherwoodiana* planted monthly after a period of 15°C storage. N = 12.



Take-home message

To hit prime spring markets, rhizomes need to be planted in late fall and early winter, meaning that rhizomes either have to be stored for many months after receipt from Thailand in late winter, or programmed by short days during summer to go dormant by late summer. Storage at 60F for about 6 weeks seems to be optimum, although shorter durations can be used in conjunction with a post-storage treatment of two weeks at 77 to 86F, which shortens forcing time. Since forcing and development take a little longer in winter, planting intervals closer together than the one month we provided would enable more consistent flower production. Long-day lighting will be required during fall-winter to prevent dormancy.

Selected literature citations

Criley, R. A. 2013. Blueprint programming for year-around forcing of *Curcuma alismatifolia*. Acta Hort. 1000:209-216.

Criley, R.A. and H.-J. Kim. 2015. Year around production of *Globba sherwoodiana* 'White Dragon' cut flowers. Acta Hort. 1097:251-255.

Paz, M.P., 2003. Rhizome Manipulation Affects Growth and Development of Ornamental Gingers Master of Science Thesis, Louisiana State university, Baton Rouge, LA.

http://etd.lsu/docs/available/etd-1110103/unrestricted/Paz_thesis.pdf

Paz, M.P., Kuehny, J.S., McClure, G. and Criley, R. 2003. Effects of rhizome storage time and temperature on growth and carbohydrate content of ornamental ginger. Acta Hort. 624:103-109.

Richard Criley is Emeritus Professor of Horticulture, University of Hawaii. Contact him at criley@hawaii.edu

Exciting New Perennial Varieties from Seed



ECHINACEA purpurea 'Mellow Yellows'

Jelitto

STAUDENSAMEN · PERENNIAL SEEDS · GRAINES DE PLANTES VIVACES

Production · Breeding · Seed Technology

USA Office: 125 Chenoweth Ln. · Louisville, KY 40207

Phone (502) 895-08 07 · Fax (502) 895-39 34 · www.jelitto.com · maryv@jelitto.com

German Headquarters: P. O. Box 1264 · D-29685 Schwarmstedt

Phone 01149-5071-98 29-0 · Fax 01149-50 71-98 29-27 · info@jelitto.com

REMEMBER TO VOTE

when you receive
your electronic ballot
for the
ASCFG Board of Directors



Extending Postharvest Vase Life of Dahlia: the Struggle Continues

Holly Scoggins, Leslie Peck, Margaret Aiken
Department of Horticulture, Virginia Tech, Blacksburg

The inspiration for this research came when my graduate student, Leslie Peck, attended the ASCFG Grower Intensive at Greenstone Fields in September of 2015. The workshop included tours to Don's Dahlias and Wollam Gardens, where Leslie learned much about dahlia production, including their notoriously short vase life. She came back inspired to look at several postharvest aspects, in addition to her work on *Delphinium* and *Helianthus*.

We grew two dahlia cultivars, 'Park Princess' and 'Karma Yin Yang' (it is *really* fun to say "yin yang" in a scientific presentation) in drip-irrigated, mulched rows at our Urban Horticulture Center (Blacksburg, Virginia, USDA Hardiness Zone 6B, elevation 2,100 ft). Stems were harvested beginning 13 weeks from planting. For all studies, vase life was defined as number of days until at least 50% of the flower petals had wilted.

Benzyladenine and vase life extension. Previous research has shown that cytokinins such as benzyladenine (BA) can be an option for delaying senescence of several species of cut flowers. One mechanism proposed is the regulation of ethylene biosynthesis by BA, but other factors may be at work. Researchers found applications of BA (dip or spray) significantly extended the vase life of dahlia 'Kokucho.' Our work was done on the two dahlia cultivars mentioned above. After harvest, stems of each cultivar received one of three treatments: 5-second dip of flower heads into BA at $300 \text{ mg}\cdot\text{L}^{-1}$, a water dip (BA at $0 \text{ mg}\cdot\text{L}^{-1}$), or no dip treatment (dry). Vase life was not significantly impacted for either 'Park Princess' (ranged from 7 to 9 days) or 'Karma Yin Yang' (7 days) as measured among these treatments. So scratch that, at least for these cultivars.

Ethylene. Dahlia is not usually included on lists of ethylene-sensitive flowers, but some research and anecdotal evidence exists to the contrary. The cultivar 'Kokucho' was found to be sensitive to ethylene, the same researchers found application (dip or spray) of the endogenous plant hormone benzyladine (BA) significantly extended vase life. However, Dr. John Dole and crew had worked on extending the postharvest life of dahlia 'Karma Thalia' and found that particular culti-



Ethylene treatment chamber.

var to NOT be sensitive to ethylene at $1.0 \mu\text{L}\cdot\text{L}^{-1}$. The active threshold level for ethylene to have physiological impacts on plants is generally cited as $0.1 \mu\text{L}\cdot\text{L}^{-1}$.

To administer the ethylene treatments ($0.9 \mu\text{L}\cdot\text{L}^{-1}$ or $0 \mu\text{L}\cdot\text{L}^{-1}$ for 18 hours), we built an airtight Plexiglas chamber. Seam integrity was tested with a disco fog machine (science!). Air samples were taken at termination of treatment to verify concentration via gas chromatography. Vase life for both cultivars was similar to that in the BA experiment, and not impacted by ethylene exposure. These studies together suggest the effectiveness of BA in extending vase life of dahlia is tied to ethylene sensitivity and is cultivar-dependent.

What about ethylene sensitivity in other cultivars? We worked with a local grower to obtain stems of dahlia 'Amber Queen,' 'Bodacious,' 'Bride to Be,' 'Cherish,' 'Ginger Willow,' 'Lollipop,' 'Park Princess,' and 'White Fawn.' All were exposed to ethylene levels of $0.8\text{-}0.9 \mu\text{L}\cdot\text{L}^{-1}$ for 18 hours each. Ethylene exposure did not alter vase life in any of the cultivars studied when compared to control ($0 \mu\text{L}\cdot\text{L}^{-1}$). Vase life was, however, widely/wildly variable among cultivars, ranging from 3.8 days for 'Amber Queen' to 9.5 days for 'Bodacious.'

Water temperature. Some sources suggest that placing freshly cut dahlias into hot water will encourage water uptake and extend vase life. In a replicated experiment, flowers were harvested when 50% to 75% of the petals had expanded. Stems were rapidly recut and placed immediately into water that was either ambient temperature (20 to 23°C) or heated to $36\text{-}43^\circ\text{C}$. The hot water treatment significantly increase water uptake for both cultivars and increased vase life for 'Park Princess' from 4.0 to 6.0 days, though the difference between temperature treatments was not significant for 'Karma Yin Yang' (5.5 to 6.3 days). When the experiment was repeated the following week, water temperature had no impact on either water uptake OR vase life, for either cultivar! We did note the weather during the second harvest was cooler and drier with lower relative humidity. Alas, frost came before we could run a third "tiebreaker" experiment. Our results were inconclusive: the hot water treatment is probably not worth the trouble, though growers might want to give it a try for some cultivars with very short vase life.

Harvest stage. Dahlia for local markets are cut mostly to fully open. But some can be cut quite early; performance seems to be cultivar-dependent. For this study, our field-grown dahlia 'Park Princess' and 'Karma Yin Yang' were harvested at the following stages:

- Budbreak: flower head showing color with at least one petal lifted from the bud but less than 5% of flower petals expanded.
- Half open: intermediate stage of opening.
- Open: flower head almost completely open. 80% to 95% of petals expanded.

Vase life of 'Karma Yin Yang' was not altered by flower stage. Waiting to harvest 'Karma Yin Yang' until flowers have fully opened will ensure flowers are open for the consumer but is not detrimental to postharvest longevity. Things got a bit more complicated with 'Park Princess': flowers harvested when half open or earlier had significantly longer vase life than flowers harvested fully open. However, these flowers failed to open completely in the vase. At five days after harvest, flowers harvested at budbreak were significantly less opened than flowers harvested when open, but flowers harvested when open or half open were not significantly different. For 'Park Princess', it may be preferable to harvest flowers when they are half open due to improvements in vase life with minimal impact on postharvest flower opening.

*Dr. Holly L. Scoggins is
an Associate Professor, Dept. of Horticulture, Virginia Tech.
Leslie Peck graduated
from Virginia Tech with an M.S. in Horticulture and is now
an Extension agent in Forsyth County, North Carolina.
Margaret Aiken
was our Research Technician extraordinaire.*

*Many thanks to the fabulous ASCFG Research Foundation
for fiscal support of our research, and Brent and Becky's
Bulbs for the dahlia tubers.*

Grants Available for Cut Flower Research

The ASCFG Research Foundation is pleased to announce the continuation of its Competitive Research Grant program. This year, the fund will provide one or more grants totaling \$8000.

The competition is open to academic and governmental researchers. Horticulture and floriculture extension agents are encouraged to apply, and to consider conducting research on cooperating cut flower farms.

Find details under the "Research" tab at ascfg.org



Postharvest Disease of Zinnia: A New Threat to Cut Flower Production

Fulya Baysal-Gurel, PhD
Tennessee State University

Summary

A survey of U.S. zinnia growers found a range of production systems, zinnia cultivars, and growing conditions, almost all of which may be susceptible or conducive to zinnia melt-down disease. Concern amongst this broad cross section of the industry highlights the need for further research on this problematic disease, which will be conducted over the 2018 growing season.

ASCFG Zinnia Research Project Survey Result

In total, 29 responses were received, and the findings represent only the opinions expressed by cut flower growers in the survey. The responses were received from Connecticut (1), Georgia (3), Illinois (2), Iowa (1), Louisiana (1), Maine (1), Maryland (1), Massachusetts (1), Mississippi (2), New Jersey (4), New York (1), North Carolina (3), Ohio (2), Tennessee (2), Texas (1), Utah (1), and Virginia (1) in the United States, and Ontario (1) in Canada (Figure 1).

Most of the respondents grew their zinnias in open fields (in ground) (83.3%). Just over 13% produced zinnias in hoop-houses, and approximately 3% used greenhouse systems. More than half of the respondents (58.6%) reported postharvest disease of zinnia (zinnia melt-down) somewhat reduced salable quantity or quality of their zinnia crop. Only 10% of the respondents reported that zinnia melt-down caused major reduction on their salable zinnia crops, and over 30% of the respondents had no problem with zinnia melt-down issue but mentioned their concerns about the disease.

According to survey responses, the postharvest disease of zinnia was observed in Connecticut between July-August in 2016; Georgia between June-July beginning in 2012 until 2017; Illinois in August starting from 2009 until 2016; Louisiana between June-November in 2016; Mississippi in August 2016; North Carolina in May from 2015 until 2017; Tennessee between July-Aug in 2015 and 2016; Virginia between July-September from 2014 until 2016; and Ontario, Canada in July 2016.

Cut flower growers surveyed indicated that the cultivars 'Benary Giant' (42.9%), 'Queen Red Lime' (14.3%), 'Oklahoma' (14.3%), 'Queen Lime Blush' (4.8%), 'Cactus' (4.8%), 'Uproar Rose' (4.8%), 'Zowie' (4.8%), 'Whirlygig' (2.4%), 'Mazurkia' (2.4%), 'Peppermint Stick' (2.4%) and 'Persian Carpet' (2.4%) faced problems with zinnia melt-down issue (Figure 2).

Most of the growers surveyed indicated that they purchased seeds from a commercial supplier (93.3%), with only 6.7% of the growers purchasing zinnia seedlings from a commercial supplier. Only 3.4% of the growers indicated that zinnia seeds or seedlings were tested for the presence of plant pathogens by the seed/seedling producers, and another 3.4% indicated that they sent them to a lab for testing. Just over 10% of growers indicated that zinnia seeds were treated for the plant pathogens by the seed company or themselves with either fungicide or Clorox treatments.

Wells (51.5%), city water (21.2%), ponds or lakes (9.1%), rainwater (9.1%), rivers or streams (6.1%) and ditches (3.0%) were the sources of the growers' irrigation water. The growers were not using treated irrigation water to eliminate microorganisms except those who used city water. The majority (75%) of the growers used drip irrigation system in their production.

According to survey responses, only 7% of the growers indicated that no other crops were grown in the same area with zinnias; 34.9% indicated other cut flowers, 30.2% indicated herbs, and 27.9% indicated vegetables were grown in the same area with zinnias.

Of the 29 respondents, 31% used sanitizers (bleach, soap or alcohol swabs) daily or weekly for their cutting tools; 41% used sanitizers (bleach or soap) daily or weekly for their buckets, harvest bins and storage containers; 17% used sanitizers (bleach or vinegar) weekly for hard surfaces; 31% used sanitizers (a drop of bleach, Chrysal gerb pill or chlorine tablets) as needed for water; 17% used sanitizers (bleach, hydrogen peroxide or hot water) as needed for trays/pots.

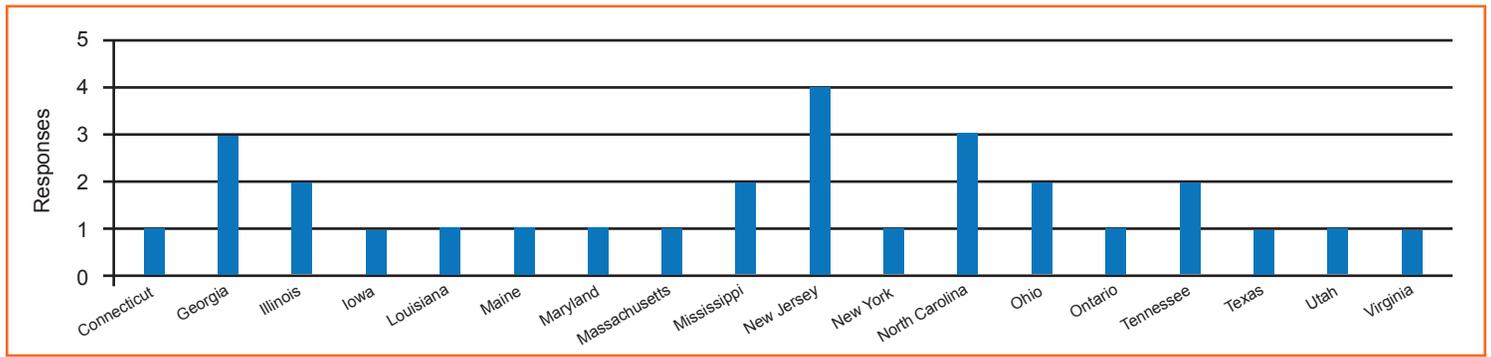


Figure 1. Survey responses from the U.S. and Canada.

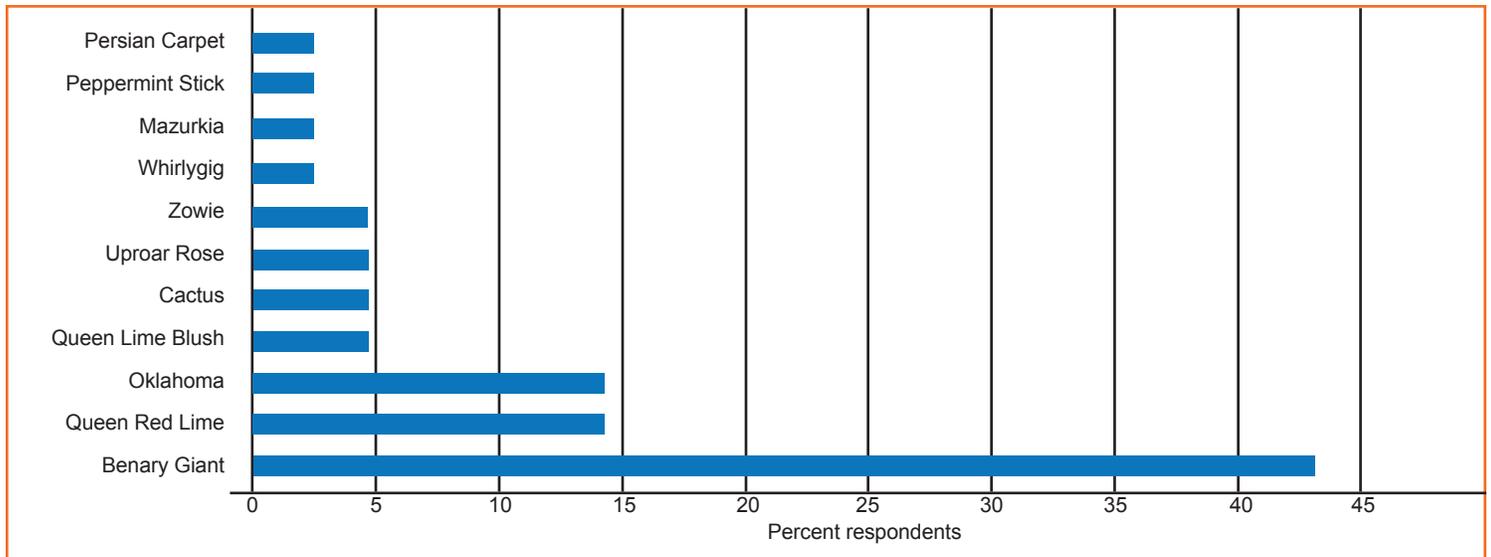


Figure 2. List of zinnia cultivars with zinnia melt-down problem.

The cut flower growers surveyed indicated that they used rotation (33.8%); 23.1% used cover crop/green manure; 18.5% always had a complete cleanout after each crop; 10.8% had complete cleanout only if there had been a serious problem in the previous crop; 4.6% provide a crop-free period; 3.1% conduct solarization in planting consecutive plants.

More than half of the respondents (58.7%) indicated that the environmental conditions were high temperature and high humidity when they had zinnia melt-down issue. More than half of the respondents (53.3%) believed that growing in the field, hoophouse, and greenhouses were likely starting points of their zinnia melt-down issue; 26.7% believed that postharvest was likely to be the starting points, 13.3% believed it to be seedling production; and 6.7% believed that seed production to be likely starting points of zinnia melt-down issue.

Future Direction

Zinnia samples will be requested in 2018 from the ASCFG community (APHIS permit and sample shipment instruction will be provided by Dr. Baysal-Gurel) and Tennessee growers will be visited monthly starting in June through September 2018.

Diagnosis will be done on cut zinnia flowers using diagnostic tools including but not limited to culturing, microscopy, chemical and pathogenicity tests, serology (ELISA, immunostrip tests), conventional PCR, and sequencing. This objective will also result in the development of a comprehensive pathogen collection that will be used in future research. Based on diagnostic results, the possible sources (seed, transplants, irrigation water, bucket water, rainwater, and soil) will be screened and tested using the same diagnostic tools.

Please contact Dr. Fulya Baysal-Gurel via at fbaysalg@tnstate.edu or (931) 815-5143 if you would like to participate on this project by sending zinnia samples.

Fulya Baysal-Gurel, PhD
 Assistant Professor
 Tennessee State University
 Otis Floyd Nursery Research Center
 472 Cadillac Lane, McMinnville, TN 37110
 Office phone: 931-815-5143; Fax: 931-668-3134
 e-mail: fbaysalg@tnstate.edu

A Survey of Peony Diseases in the Central and Eastern United States

Andrea Garfinkel and Gary Chastagner
Washington State University Department of Plant Pathology,
Puyallup Research and Extension Center

Research Results

Background

For the last 5 years, we have been researching botrytis gray mold on peonies. In addition to being a major production problem for peonies, *Botrytis* species are some of the most challenging pathogens to manage for greenhouse and field cut flower farmers all over the world. While conducting our field surveys for Botrytis gray mold throughout the Pacific Northwest (Alaska, Oregon, and Washington) of the United States, it became clear to us that peony growers were encountering diseases in their fields caused by a wide variety of pathogens other than *Botrytis*. Some of these pathogens had never before been reported formerly in the literature; therefore, information on how to identify these diseases on peony in the field was not available. Due to the lack of resources for growers, diseases were often misdiagnosed, which can have negative financial and crop health consequences if subsequent disease management decisions are not appropriate. With the help of funding through the ASCFG Research Foundation, we solicited samples from states in the Central and Eastern parts of the United States to determine which pathogens were most prevalent in peony fields in areas we had not yet explored in our research.

What We Did

Through combined efforts from growers and university extension specialists, we collected samples from 8 states during the 2016 growing season: Connecticut, Indiana, Massachusetts, Maryland, North Carolina, New York, Pennsylvania, and Virginia. The samples were sent to our lab at Washington State University and analyzed visually for the range of symptoms present on diseased tissues. Using standard laboratory fungal isolation techniques, we recov-

ered the pathogen from the tissue and grew it in culture. A combination of morphological and molecular identification was used to determine the identity of the putative causal organism of the symptoms we observed. If the pathogen had not before been reported in the state from which it was collected, we performed a procedure to re-infect a healthy peony plant with the pathogen to confirm its ability to cause disease. We also received one photo from a grower in South Carolina, but the sample did not require shipping for adequate identification of the diseases with which the peony was afflicted.

What We Found

Botrytis gray mold Not surprisingly, we received peonies that were infected with *Botrytis* species, the cause of Botrytis gray mold. Although we identified multiple other pathogens throughout the United States, the presence of *Botrytis* seems to be widespread throughout the country and the most common pathogen of peony. Samples of *Botrytis* were obtained from Maryland, Indiana, North Carolina, and New York. *Botrytis* causes brown, necrotic lesions on stems, foliage, and flowers, and is sometimes characterized by alternating light and dark brown “zonation,” or concentric circles. In humid or moist conditions, the lesions will often appear fuzzy and gray (hence the disease name “gray mold”); the fuzzy gray growth is comprised of the spores from the fungus which become airborne to initiate new infections on healthy tissue. Historically, two species of *Botrytis*, *B. cinerae* and *B. paeoniae*, have been associated with gray mold on peonies. However, our research has indicated that there is a much greater diversity of *Botrytis* species in the Pacific Northwest than previously reported. Additional sampling in the central and eastern portions of the United States would be necessary to determine the range of species diversity present in

these areas. We provided the ASCFG with additional photos of *Botrytis* gray mold on peonies that can be seen in the fall 2015 issue of *The Cut Flower Quarterly*.

Measles Another common fungal disease we identified was measles, caused by a fungus called *Graphiopsis chlorocephala*. Measles, also known as leaf blotch or *Cladosporium* leaf blotch (a name that reflects the old name of the fungus, *Cladosporium paeoniae*), causes reddish-purple to dark purple lesions on the stems, foliage, and flower buds that can range from small flecks to large expanding lesions. The underside of the large lesions is typically light brown. In some conditions, olive green spores within the lesions can be observed using a hand lens. Measles infections were identified from Indiana, Maryland, Pennsylvania, and Virginia.

Alternaria *Alternaria* fungi were frequently associated with diseased peony samples; however, the epidemiology is not well understood. Pathogenicity trials were not conducted due to current taxonomic uncertainties of these fungi. *Alternaria* species were often found in association with irregularly-shaped, uniformly tan brown spots on foliage with well-defined margins. Other reports of *Alternaria* have described the fungus causing reddish-purple, purple-brown, or brown to black. In 2016, *Alternaria* fungi were isolated from samples from Connecticut, North Carolina, and New York.

Anthracnose In our survey, Anthracnose diseases were found in peonies from Connecticut and Maryland. The cause of Anthracnose in these samples was found to be two species of a fungus called *Colletotrichum*. Anthracnose can cause lesions on foliage or cankers on stems. Lesions and cankers are dark purple, sometimes with an ashy gray center. Pink to salmon-colored spore masses, called acervuli, can also be observed in lesions or cankers under humid conditions.

Powdery mildew Powdery mildew is a fungal disease caused by multiple different species. Powdery mildew is often more prevalent in areas that experience drier conditions, as the spores of this fungus does not require moisture to germinate and infect healthy tissue. Powdery mildew was identified on samples from Indiana, Virginia, and New York. The name powdery mildew comes from the white fungal growth that appears on the surface of leaves when infected. In addition to the powdery growth, the tissue underneath can turn purple as a response to the wounding inflicted by the fungus. Later in the season, small, round orange (immature) or black (mature) structures called chasmothecia can be observed among the white fungal growth, often on the underside of the leaves. To the naked eye, the chasmothecia can look like sand grains, but can be observed a little more clearly with a hand lens. This fungus is considered an “obligate” parasite, which means that it requires living host tissue to survive; therefore, powdery mildews do not typically cause death of the host plant.

White stem rot Like powdery mildew, white stem rot gets its names from its obvious white growth that typically

can be observed on the base of the stems. The white stem rot fungus, *Sclerotinia sclerotiorum*, can also cause brown leaf spots on foliage that closely resemble *Botrytis* infections, but without the fuzzy gray growth. Infected stems often appear soggy light brown underneath the fungal growth and hard, black structures a few millimeters in length can develop along infected tissue in later stages of infection. White stem rot was found on samples collected from North Carolina and Maryland during our 2016 surveys.

Pilidium concavum *Pilidium concavum* was identified as the causal organism of foliar spots from a sample collected in Virginia during the 2016 season. We have collected this organism from several other states, including Washington, Oregon, and North Carolina during other surveys not associated with this project, all of which represent first reports of this pathogen on peonies in the United States. This fungus causes tan-brown lesions on foliage, often dotted with concentric rings of orange-brown (young) to black (old) spore masses. Infections not showing these spore masses are difficult to distinguish in the field from other fungal pathogens that cause tan foliar spots.

Botryosphaeria *Botryosphaeria* has been reported in China and Korea on tree peonies as the cause of cankers of woody stems. *Botryosphaeria* was isolated from foliage of an herbaceous peony from New York during our survey, which is a first report of this pathogen on peonies in the United States. The fungus was confirmed as a foliar pathogen of herbaceous peonies through trials conducted in our lab. The fungus produces a brown lesion, often with alternating light and dark concentric circles, similar in appearance to a lesion caused by *Botrytis*, but without prolific gray sporulation in humid conditions. The distribution and severity of this pathogen on herbaceous peonies is not known at this time.

Phoma Some species of the fungus *Phoma* have been reported from Asia on both tree and herbaceous peonies. In tree peonies, it can be the cause of cankers on woody stems. *Phoma* was isolated from stem cankers from an herbaceous peony from Massachusetts, the first report of this pathogen on peonies in the United States. Pathogenicity trials confirmed this fungus was able to cause brown, elongate stem lesions during tests in the lab. Like *Botryosphaeria*, the distribution and the severity of this pathogen on peonies is unknown at this time.

Tobacco rattle virus Tobacco rattle virus was visually identified from samples from South Carolina and New York and, according to additional surveys, appears to be a relatively widespread virus infection of peonies. Tobacco rattle virus has variable expression of symptoms, but typically appears as ringspots of alternating yellow and green or yellow banding or mottling on the leaf. In certain conditions, red to purple mottling or banding has been observed in association with viral infection. We reported more in-depth information about tobacco rattle virus in the fall 2016 issue of *The Cut Flower Quarterly*.

Overall, we found a wide variety of diseases during our 2016 surveys, some of which have been reported before in the state in which they were found, while others were new reports in the state or country. All first reports have been confirmed for pathogenicity and will be officially published in an academic journal. With the exception of *Botryosphaeria*, we have identified all of these diseases in our surveys across the Pacific Northwest as well, therefore, growers in these states can utilize the information contained in this report. The survey results reported here represent a small sampling and it's likely that additional surveys would yield further insight into the distribution and variety of pathogens on peony.

While there is still more to learn about the distribution of these pathogens, it is clear that some of the pathogens found in this survey have the ability to cause significant economic damage. Out of the diseases identified as a result of this project, *Botrytis* gray mold, measles, anthracnose, and red spot have all been observed to cause severe yield losses in fields that we have surveyed or have been identified by growers as major disease issues. More comprehensive surveys could help elucidate an understanding of the impact of these diseases on a nation-wide scale.

Photographs of all the diseases found in 2016 and discussed in this article are included to aid growers and diagnosticians with identification. Accurate diagnosis is the most important step in an effective disease management program, as each disease may require unique control strategies. Although these results, descriptions, and images should help growers with a baseline of what to look for in their fields, this is not an exhaustive list of all diseases of peony, merely the results of our one-year survey. Furthermore, depending on infection time, cultivar, and environmental conditions, disease expressions may appear different than the photos shown here. It is always recommended to consult an expert, such as a plant disease diagnostician, in your area to help with initial diagnosis if you are unsure. We did not provide management recommendations in this article, however, are in the process of using the information collected during this and other studies to develop a more comprehensive growers' guide that describes both management and additional information on the epidemiology of peony diseases.

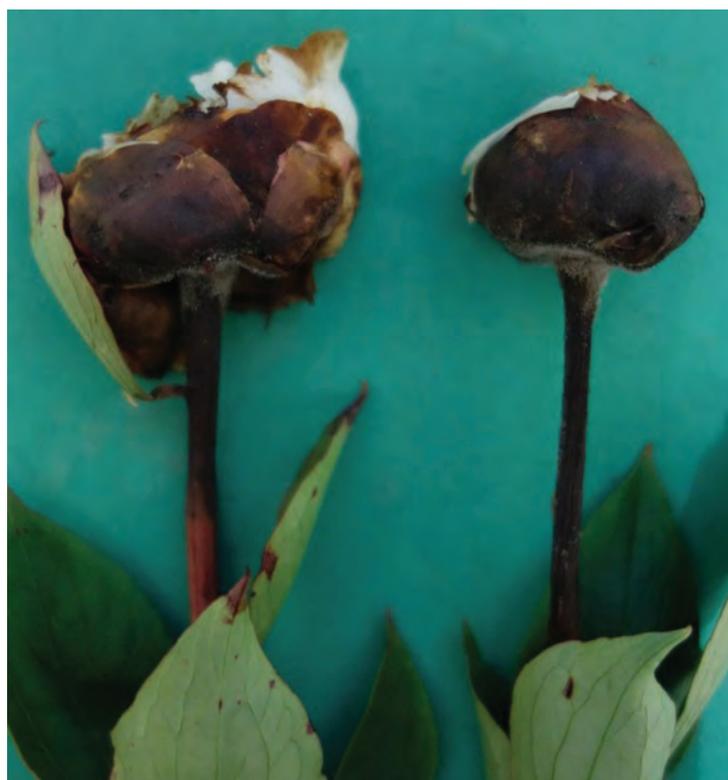
We would like to extend our thanks to the ASCFG Research Foundation for the money that supported our survey, and the growers and extension specialists that collected and sent us samples for analysis.



Anthracnose cankers from Maryland



Botryosphaeria lesion on a peony leaf tip from New York



Botrytis blighted flowers from Maryland



Anthraxnose on leaf from Connecticut



Pilidium concavum lesion with conidiomata from Virginia



Botrytis lesion on foliage from New York



Measles on stem and foliage from Maryland



Tobacco rattle virus from New York



Measles and powdery mildew on a leaf from Indiana



Phoma stem canker from Massachusetts



White rot from North Carolina



Measles and powdery mildew on a leaf from Virginia



AMERICAN TAKII'S

ANTIRRHINUM, LEGEND LIGHT YELLOW AND LIGHT PINK

By Allison Zeeb

There is a dragon that roams free in the green fields. Wander down the dirt road, and you will find the vivid colors of the dragon, snapping for your attention as you reach out your hand. But don't shy away; it is a friendly dragon, a beautiful dragon...the snapdragon. It can be difficult housing this dragon. For like any flower, the right temperatures are needed, the perfect amount of moisture, and all the love. Finding the right snapdragon for your field can be as hard as taming a live one.

For those who grow with crisp air in the fall and cool mornings in the spring, **New F1 Legend Light Pink and F1 Legend Light Yellow**, will be a savior for early season crops. Their dense flower spikes flourish with soft pinks and yellows. With sturdy stems and earlier flowering time, these snapdragons are known to stand up and command your field.

When weather comes calling and fickle spring brings erratic temperatures, these flowers create a denser spike, as opposed to losing their petals.

Even for growers without cold winters or crisp springs, the **Legend Series** stands true in its habit. It is easier to get longer, denser spikes compared to other snapdragon colors like white and yellow, with large flower spikes.

F1 Legend Light Yellow and Light Pink stand strong, depending on growing conditions they can reach 39 to 51 inches. With a pair of shears in hand, these snapdragons can be cut back, bringing forth an extra early second flush, arriving one week before other varieties. Proudly display them in floral arrangements, as the **F1 Legend Light Yellow and Light Pink** make impressive accents to any display. Also available in the Legend Series are Pink, White, and Yellow.

Bundle them up and stick them in your truck for your next farmers market. They will be the star of any show, towering over other flowers, breathing life back into your market stand. Their bright colors will stand out through cloudy skies and welcome early morning risers.

CULTURE INFORMATION

Light required for germination at 59 – 68 degrees Fahrenheit. Seed emergence within 10-12 days. Space 5 to 6 inches with support netting. Recommended to sow in Fall (August – October) for a finish in late Fall, Winter, early Spring.

ABOUT AMERICAN TAKII INC.

American Takii, Inc began operations in 1982, founded by its parent company, Takii & Company, Limited. Headquartered in Kyoto, Japan, Takii began its proud history in 1835 growing vegetables and distributing seeds to farmers. Many of Takii's vegetable and flower hybrids have won numerous awards, establishing its reputation for outstanding plant breeding.

At American Takii Inc. we work diligently to uphold the high-quality standards and innovative research started years ago by Takii & Company Limited. American Takii's wholesale dealers are located in the United States, Canada, Central America and Mexico. Please visit our website at www.takii.com, for information regarding our comprehensive cut flower products or to find a dealer near you.



ANTIRRHINUM F1 LEGEND SERIES

Extra-early for winter production

Sturdy stems hold densely packed flowers

Flowers have strong petals for successful transportation and long vase life

Excellent uniformity



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



TAKII SEED

Creating Tomorrow Today



A-ROO COMPANY
OHIO • FLORIDA • TEXAS • CALIFORNIA

www.a-roo.com



@a-roo-company

FRESH CUT FLOWER

Kraft Paper Sleeves



A-ROO Company's Kraft Paper Sleeves are a favorite of leading Farm to Market Growers and Florists like Erin Benzakein of Floret Flower Farm. As mentioned in Erin's 'Making Market Bouquets' blog post, A-ROO Company's Kraft Paper Sleeves add a natural look to any cut flower bouquet. Contact your nearest A-ROO Company Sales Representative for more information.

18 x 16 x 5"

16 x 16 x 5"

14 x 14 x 4"

12 x 12 x 4.5"

10 x 10 x 3"

OHIO 440 238 8850 | **FLORIDA** 305 463 7011 | **TEXAS** 830 372 4770 | **CALIFORNIA** 760 724 2766

NORTHEAST

Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont



Carolyn Snell

Carolyn Snell Designs
carolyn@snellfamilyfarm.com

Greetings from Maine!

Whew! We are off to a fast start here on the farm after successfully wintering anemones and ranunculus in a greenhouse without heat during the coldest months. We've never had such a lovely lead-in to our selling season, and I love how it feels having high-quality local flowers starting in April.

For those of you who didn't hear me talk about that experiment on Facebook Live back in May, we covered the anemone and ranunculus plants with ground cloth, just to shut out the weeds, starting at the end of June. We forced dormancy by discontinuing water and left them alone in that double poly greenhouse without heat until after the second blizzard of March. Then we heated to 40F and basically started our anemone season a month earlier on the prior year's corms. We did suffer some rodent damage, especially on the ranunculus, but overall it was a success! We also wintered some mums in the same greenhouse and are excited to reap those benefits come October. Stay tuned!

Another exciting development this year is that we are concentrating more of our attention on sales to designers, and I am doing a bit more delivering to design studios in the area. I have committed to a delivery route on Thursdays and keeping my availability lists up to date. The drive has given me a bit more reflective time during my week, and I like musing about the work we do as flower farmers, and how it evolves.

I have been thinking about how when I started taking flowers seriously here on the farm I was kind of a singer/songwriter of flowers (not an actual singer/songwriter, of course, I have no musical talent whatsoever). I loved the excitement of creating and expressing exactly what I wanted with the materials at my fingertips for a small and supportive audience. I had full creative control and some flexibility in timing. The stakes were fairly low and the rewards felt high. I named my business after myself because I was indeed the business, and the spotlight was always on me and my flowers.

As my business has grown and we produce a much larger volume of flowers, and work larger events, the stakes feel much higher. As I add employees, I see and feel the weight of responsi-

bility to produce enough stems and arrangements, to pay wages, and work to keep spirits and morale high. I see this phase of my work in the flower fields as a composer and/or a conductor. I must keep our flowers appealing to a wider and wider audience to support the farm. I am doing more unseen work, and my fingers are farther removed from the instruments, er, the plants and the stems. I surround myself with skilled folks who can do some jobs I don't excel at, and they can perform some of the jobs I do excel at, but they bring their own style and voice to the ensemble.

What appeals to me as a composer is the intellectual puzzle of planning our concert of crops and the satisfaction of seeing our lists and spreadsheets and scrawled notes actually translate to plants and buds and petals and deliveries and cash flow. The thing I didn't anticipate appreciating about this evolving business and my evolving role was how much I enjoy working with my crew. I love being surrounded with floral musicians, and I love the music we make. Sometimes it's noisy, and sometimes it's mellow, but we always create something more interesting than I could have imagined.

I hope plants are growing well for you all on your farms. Part of the purpose of this metaphor is also to recognize that flower farms work well on different scales, and bigger and more complex isn't always better or the goal. I hope to see you in Raleigh! I'll be there talking about textures to grow for dynamic design work.



MID-ATLANTIC

Delaware, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia



Lisa Ziegler

The Gardener's Workshop
lisa@shoptgw.com



One of many untold catastrophes. All hands on deck to process some of the 3,000 sunflowers laid down by a 10 minute microburst storm the night before. We were able to save half by quick search and rescue.

Nostalgia and memories have crept in as I look back over the peaks and valleys of what flower farming has looked like since I started in 1998. The ASCFG's 30th Anniversary, along with my 20th year of farming have given me reason to look over my shoulder to celebrate the peaks, and have more respect for those deep valleys I made it through.

Is all the work, blood, sweat, and tears worth it on this flower farming thing that brings us all together? I can say it has been for me and I know many others in our boots feel the same. Though, sometimes I just need to be reminded that I didn't always see it this way. It was a job of work to get here—but oh so worth it.

We have so many flower farmers joining our organization, as of this month, more than 1500 members! I thought I would write a word of encouragement because, folks, this journey isn't always about beautiful blooms and handfuls of twenty-dollar bills!

Boy, does this brings back memories. I can remember being a one-girl show and blowing my elbows out in the middle of the season. It was a great year: those huge lilies and tons of sunflowers I was growing were selling like hot cakes—but they were so heavy. Constantly hauling heavy buckets, I was forced to make a difficult decision—cut back or hire help. Both choices came with a huge price tag and a major change, and I thought I would never get through it. I cried from fear and exhaustion just about every day that year. But I made it through.

On the other side of those heavy buckets? A peak: that's the year I discovered florists place standing orders with wholesalers. I learned this on a delivery listening to the shop talk. I innocently asked, "What is a standing order?" Their answer turned my little business on its ear—I instantly wanted to be the standing order for my customers, and went to work on doing it from that day forward. Today, those standing orders are a big part of the success of my farming business. I got those standing orders because of my blood, sweat, and tears.

While most of our social media posts highlight our successes, you can count on for each success a big ol' blunder (or twenty) that isn't mentioned. Whether it's unsold flowers being dumped in the compost bin, a giant pile of dirty laundry, or an infestation of thrips in every flower you have, it's happening.

Looking beyond one farmer and her little urban farm, the ASCFG has virtually taken off into warp speed in recent years. I can only imagine how hard it was earlier on trying to build this organization with few bodies and little money. Looking back, I realize I was in one of the first Growers' School—I think the class had maybe 50 new growers? One of the instructors was the legendary legend Janet Foss, and it changed my flower farming outlook and future. Today, ASCFG Growers' Schools with much larger attendances sell out months ahead of the event, have several speakers and are packed to full capacity. This, like my heavy bucket problem is a good thing—but takes a lot of unseen work to guide and grow it into the future.

There are surely ups and downs, ebbs and flows—or whatever you call the flow of the flower farming life—but I want to assure you that this gang, your gang, will applaud your fists of twenties and we won't tell a soul about the pile of dirty laundry. It's this joining together from many different walks of the floral trade that will move each one of us and our mothership into the future.

Some sweet memories have been brought to the surface as we have lost two of our own recently. Gay Smith and Josie Crowson were both powerhouse supporters of flower farming and chose to do something about it! I'm so grateful to have had friendships and to have learned from these gals. Flower farming is stronger and more fit because of their contributions. They will be missed but the work they did will go into the next 30 years.



Josie and Lisa speaking to Representative Rob Wittman about the local cut flower industry.

SOUTHEAST

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee



Val Schirmer

Three Toads Farm
vschirmer3@gmail.com

All Things Dahlias: News, Advice, and a Bit of Inspiration

With dahlias being such a hot flower—and getting bigger by the moment—I thought an article with tips, tricks, and pesky hang-ups might be a worthwhile article for our summer issue. After all, it's just not an easy thing to grow dahlias in the heat and humidity of the Southeast, but we have some awesome growers who seem to have this finicky flower figured out. Their experience and knowledge could be valuable for growers everywhere.

I sent a note out to the Region, asking for best advice on a variety of “All things dahlias” topics, but thinking everyone's so crazy busy in late spring, I'd be darn lucky to get even a handful for replies. Lo and behold, was I ever wrong! Replies came from far and wide, from newbies and yet-to-be-farmers to experienced growers and farmer florists. Not only that, but I even got some hot-off-the-press postharvest research from North Carolina State University. More on that at the end of the article.

So, please sit down with a cup or glass of your beverage of choice and I hope you enjoy this feedback.

What's your favorite way to grow dahlias?

In the Southeast, we grow dahlias just about every way possible: in the field, in high tunnels and in greenhouses, which seem to protect the flowers from pests and the elements. I've had people ask about whether it's just too hot to grow them in tunnels, but lots of growers do.

One piece of advice came in loud and clear: be sure to pinch! Some growers pinch really hard—taking the main stems almost to the ground—to get maximum branching. A few growers say they don't pinch at all because they want that first bloom, but if you're one of them, close your eyes and cut off those first stems.

Tom Seibert, southeast field representative for Gloeckner, has not grown dahlias yet, but he says he's noticed the one main thing that newbies learn quickly is that dahlias must have a well-drained soil bed. Several growers, like Mary Royal of The Royal Gardens in Georgia, and Melissa Smith of Fraylick farm in South Carolina, prefer to grow in raised beds, which also improves drainage.



Photo courtesy Linda Doan, Aunt Willie's Wildflowers

If you're not yet growing, what's holding you back?

Tanis Clifton, of Happy Trails Flower Farm in Mississippi (who's one heck of a fabulous flower farmer), says she wishes she could grow dahlias but she can't compete with cucumber beetles and Japanese beetles in her area, plus she feels they just have a too-short vase life. I feel your pain, Tanis!

Ann Langley, in Georgia, says she “keeps getting ready” but has yet to start. After watching Floret's videos, she knows she wants to grow dahlias and might be feeling a bit overwhelmed about all the details of growing, harvesting, dealing with pests, selling, using in arrangements, and what varieties are best for her zone. Ann, if you're reading this, I hope you know you're not alone! Also hope you'll get some worthwhile advice here to get you started.

To dig or not to dig?

“Best advice for Southerners is to overwinter in the field.” says Linda Doan of Aunt Willie's Wildflowers in Tennessee. She covers her tubers with about 4” of compost, then a few inches of straw, and says she gets very little loss over the winter. In fact, she says she actually loses fewer this way than digging and storing them over the winter. Here's a GREAT tip: Linda even dug and divided tubers in the fall and replanted the divisions then. She says they seem to be doing just fine. (Note to self: try it!)

While no one mentioned this, we overwinter our dahlias under low tunnels in the field. We're in zone 6b, where dahlias don't reliably overwinter without this protection. I learned it from Bob Wollam. If you're not aware of this method, check out the video files from past ASCFG conferences where Bob explains all about it. We find have to dig only every three years, when the tubers get too large.

Best way to control pests?

This is a hot issue, with not a lot of tips being offered.

Camille Cody of Wild Carrot Creative in Tennessee is growing dahlias for the first time this year, but already grows lots of veggies on the farm and practices proactive pest control. Since she knows cucumber beetles can be a big problem with dahlias, she's keeping her cucurbit crops in sections of the field farthest away from her dahlias and will keep later successions of those crops under row cover until they flower. She uses a torch to flame the spent successions—and all the bugs with them.

Last year Katy Thelen of Happy as a Coneflower Farm in North Carolina tried growing dinner plates in her hoophouse under 30% shade, which she says was a disaster because they all got terrible spider mites, which are her biggest problem. She grew others under shade cloth alone, which did better. She also grew some on a slope that's shaded until about noon and those were the best.

Loretta Ball of The Never Ending Flower Farm in North Carolina sprays every Monday morning, alternating with spinosad and neem. She says this is the trick to gorgeous, flawless blooms.

And then there are growers, like Tammie Stanley of Mockingbird Hill Flower Farm in Kentucky, who put an organza bag over every developing bud. Totally organic and once you get into the routine, she says it doesn't take a huge amount of time to do this. I'm trying it this year!



The author overwinters her dahlias under low tunnels in zone 6b to get early blooms. These were harvested June 7.

Favorite varieties?

Linda Doan says ball dahlias are most versatile and have the best vase life. Several growers mentioned they are wanting to try dinner plate varieties.

Paula Fisher of Garden Bee Flower Farm in North Carolina loves 'Jowey Winnie' and is trying 'Hillcrest Suffusion', 'Linda's Baby', 'Diva', 'Snoho Doris', 'Robin Hood', and 'Ivanetti' this year, and can't wait to see her new 'Crichton Honey' tubers bloom.

Katy Thelen says the dahlias that grow best in the heat for her are 'Boom Boom White', 'Sterling Silver', and 'Diva', but her all-time favorite is 'Elma Elizabeth'. Her designers want lots of burgundy and she's struggled with 'Rip City' (lots of mites), but is testing two new ones this year. She says 'Penhill Dark Monarch', while not super productive, was very heat tolerant.

Mary Royal joined the Georgia Dahlia Society, which provides an extensive list of dahlias that do well in the South.

Melissa Smith likes 'Beaucon White', 'Linda's Baby' (that's two growers picking this one as a top fav) and 'Hollyhill Black Beauty'.

For Loretta Ball of The Never Ending Flower Farm in North Carolina, her top three favorites are 'Islander', 'Café au Lait' and 'Jowey Winnie' (second vote for her). On the other hand, her top sellers are whites, Cafes, and burgundy. She says designers don't really care about names on the whites and burgundies, just color. Her favorite whites are 'Boom Boom White', 'Karma Serenity', 'Lady Natalie', 'Karma Maarten Zwana', and 'Orsett Beauty'. For burgundy, she likes 'Karma Chocolate', 'Jowey Mirella', 'Rip City', and she's adding a few 'Hollyhill Black Beauty'.

Favorite tuber sources?

Sources mentioned (in no particular order) are Ednie, Floret, FiveForks, Gloeckner, the Dahlia Addict web site, Arrowhead Dahlias, and Swan Island Dahlias.

Selling tips?

Dahlia workshops came up a lot!

Linda Doan entices customers to "Come and cut a bucket, see the farm, and learn a bit." Her photos look marvelous!

Loretta Ball had some great advice. She said the West North Carolina Flower Farmer group is selling dahlias directly to Mayesh in Charlotte. There are around five growers involved to fill their large order. This might be a future story opportunity to find out more! I promise to follow up.



While not super productive, 'Penhill Dark Monarch' is very heat tolerant for Katy Thelen.



'Hollyhill Funhouse' is one of Mary Royal's favorites and grows well in her zone 8a raised beds.



In postharvest experiments at NC State University, pulsing cut stems for 24 hours in plant growth regulators increased both flower quality and vase life. This is 'Nathalie G', one of the dahlias used in the research.

Postharvest methods and advice?

A lot of growers seem to use just cool water alone, or with flower food. The postharvest research below should be an interesting piece of news for those of you who do that.

Some growers harvest almost daily. Loretta Ball cuts the stems 18-24" long (so do I). This gives you more long stems for cutting. She cuts and places stems directly into buckets with Chrysal CVBN tablets. She cuts the morning or evening before delivery.

And here's the latest postharvest research findings!

Ben Bergmann, PhD, who works in John Dole's research program in the department of Horticultural Science at NCSU, shared some exciting results of recent experiments on the influence of 24-hour pulses with plant growth regulators on dahlia flower quality and vase life.

Experiments were done with dahlias dry packed and shipped from a wholesale grower, as well as dahlias, grown by three local ASCFG members, which had never been out of water.

Ben said the team found that pulsing cut dahlias for 24 hours in a combination of plant growth regulators resulted in both increased vase life AND better flower quality, specifically:

- Vase life increased 2.0 days for wet-transported dahlias from the local growers, and 1.8 days for those that were dry-packed and shipped from the wholesale grower.
- Flower quality was improved for both after 4 days.

While this all sounds good—and enticing!—I wondered how the pulsing treatment compared with the advice in ASCFG's rock-solid reference book, *Postharvest Handling of Cut Flowers and Greens*, which says that using commercial holding preservatives increases vase life by up to 3 days.

I wondered if pulsing dahlias for 24 hours first and then moving them to holding solution might improve vase life and flower quality even more if the two treatments were combined?

I asked John and Ben if they'd recommend this and John replied superfast (thanks, John!) that yes, he would pulse first and then put the



On-the-farm workshops featuring dahlias are crazy popular. Here is the bouquet Janis Harris made at Linda Doan's workshop last fall. Add a photographer and model to your workshops and see what happens!



Loretta Ball with a dreamy harvest of 'Café au Lait's'.

Will dahlias continue to grow in popularity?

Ha! That's a great question.

Loretta Hill is in just her second year of growing dahlias and already has 2,700 this year, saying demand is great in Asheville, North Carolina.

Mary Royal, in Georgia's zone 8a, says, "Dahlias, dahlias, dahlias! Not many farmers grow dahlias in middle and southern Georgia." It's always a competitive advantage when you have something others don't, or your flowers last longer and look better.

But in the end, is it worth it to attempt to grow in our sizzling heat?

"Don't freak out," says Melissa Smith of Fraylick Farm in South Carolina. "When they look like crap in the middle of summer, they'll bloom beautifully in the fall."

And, finally, Tom Seibert says the sale of tubers in the Southeast continues to grow and increase, probably doubling in the last two years alone.

That's plenty of inspiration for me.

NORTH AND CENTRAL

Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, and Wyoming

stems in holding solution overnight. He also said the cooler is better for holding stems pulsed overnight but that room temperature is fine if stems are pulsed for only a few hours.

Wow. This could be very, very good news for just about all of us who are trying to provide beautiful cut dahlias with the very best vase life and quality, whether we have the benefit of a cooler or not.

The commercial plant growth regulator used in the experiments is Fresco® made by Fine Americas, Inc. It seemed to me that it could be complicated to make up solutions containing the right concentrations of the two components needed—benzyladenine (BA) and gibberellin acid (GA)—but Ben has that figured out for us, too. The label on the product has the conversion of ppm to other units given the concentration of BA and GA (1.8% for both) in the product, but here's his recommended concentration: 0.14 fluid ounce per gallon. That makes it super simple to understand, even for me.

I googled Fresco to see if it's easily available to folks like us, and a couple options popped up, including Walmart. So, yes, it's accessible to any size grower. The only downside is its price: \$149.89 for a quart. But when you consider how far that one quart goes (mixing at 0.14 fl oz/g of water) and what a difference it could make for the longevity and quality of your dahlias, it might easily justify itself.



Jamie Rohda

Harvest Home
harvesthomenjr@aol.com

Congratulations to you! You were able to take five minutes and stop to read this magazine! I know how crazy it is for most of you right now and I hope you're finding the *Quarterly* to be a breath of fresh air that inspires you to push on during this busy time.

The first part of our season has been super-crazy with a daughter getting married the middle of May. In past years we did quite a few full-service weddings but dropped that part of our business after the 2013 season. We've definitely filled up that time slot with other things, so throwing a wedding into spring planting season was a bit of a challenge but one that I thoroughly enjoyed.

It's one week post-wedding as I write this, and I'm still basking in the joy of it!

With the long winter we had we started our floral route a bit later than normal but we're fully into the swing of it now. Our florists and designers are always eager to get fresh, local products



If you've never tried selling to florist and designers and are looking for a way to market your flowers I'd encourage you to give it a try. If you're like us, you're coming into a time in the summer where you've got an abundance of beautiful blooms to cut. This is the perfect time to reach out to some designers in your area and show them what you've got. It's one thing to meet with them in the winter and talk flowers, but it's quite another thing when you show up on their doorstep with a beautiful, fresh, professional looking load! Who can resist?

Here in eastern Nebraska that eternal winter has definitely ended and summer has arrived in style. I think there was a tiny bit of spring in there but, as is common here, it was pretty brief. With the onset of hot weather our thoughts are quickly turning from those beautiful, but brief, spring blooms and we're now focusing on heat-loving annuals.

One heat lover that we can't do without is our tuberose. By the time you get this it will be towards the end of planting time for us but I hope this inspires you to plant some next year if you haven't tried them. Tuberose are one of the very first flowers that I grew when we first started selling flowers at our local farmers' market. My mom had been gifted some bulbs and she in turn gave six of them to me. Little did I know how those six bulbs would inspire me to plant such a wide array of specialty cut flowers. Those 6 turned into 12 and those 12 into 24 and before we knew it we were planting them by the bushel. I feel like a person has not lived until they've walked a garden at sunset with the scent of tuberose wafting through the air!

For you folks who live in warmer climates tuberose can be left in the ground, but for us here in zone 5 we treat them as a tender bulb, and dig them every fall after frost has killed the tops. While this adds a lot of labor to growing them it also allows us to stagger plant them and enjoy a much longer cutting

season. As soon as the ground is able to be worked in the spring we start planting them a bushel at a time. Our goal is to plant 7 bushels by July 4th. The first couple plantings are usually more than a week apart as the soil is still cool and they don't grow as quickly. By the final plantings we are planting a bushel per week.

We like to have a nicely prepared, raised bed so that the planting goes quickly and easily. Typically we can get 7 bushels in one 100' bed that is approximately 3 feet wide. Once the bed is prepped we dump the bulbs onto the bed and ideally have one person on each side of the bed to plant. We use trowels, and since the soil is so loose it's a matter of shoving the trowel into the soil, pulling it back, pushing the bulb into the opening, pulling the trowel out, and making the next stab. We space them pretty much as close together as we can without disturbing the previously planted one. It goes pretty quickly once you've done a few of them. If you're just starting out with a few bulbs you might want to give them more space so they have more room to multiply.



Once bulbs are in place, drip line is laid, and the part of the bed that has been planted gets mulched with straw. I think leaves would also work and we may start using them as we've had some issues with our straw supplier the past couple years. Depending on how much rain we get, sometimes the prepared bed can start to get weedy before all of the plantings are in. We



NEWS & IDEAS FOR LOCAL GROWERS

growing

FOR MARKET

SINCE 1992

If “farmer” and “florist”
is your job description,
get 20% off any
subscription to
Growing for Market
with the code
SUMMER

growingformarket.com

either run a hoe over each section before planting or sometimes we put black fabric on the bed to keep it free of weeds. When it’s time to plant the next succession we just push the drip lines into the walkway, plant, place them back on the bed and mulch. We find as long as we mulch as soon as the bulbs are planted there is very little to no weeding that needs to be done. Then we wait.

Tuberoses love heat so the hotter the better! Our first harvest is usually around the middle of August and runs through the first part of October or a little later depending on when our first frost hits. Once the tops have been taken out by a freeze we run a mower over the bed and start digging them. We hope for dry weather which makes the whole process a lot easier. Digging tuberose out of the mud is no fun but we’ve done it a time or two. We put them in bulb crates after digging and get them to the greenhouse. If the weather looks warm enough we may leave them in the garden to dry a bit but watch the weather closely as a light freeze can ruin the exposed bulbs. After they’ve dried out some, and as we have time, we then go through the crates and separate large clumps, clean off the majority of the dirt, and pile them back into bulb crates. We store them in our basement over the winter which stays around 60 degrees.

I think tuberose are about the easiest bulb to store. They don’t seem to be very fussy as long as you don’t let them freeze. Some people cut all the roots off before storing which makes them look nice but is really unnecessary. Our farmers’ market customers waited with eager anticipation each year until we had these and our florists and designers are loving them too. Tuberose just smell like summer to me! I hope you will consider growing them.

On another note, have you all registered for the Raleigh Conference by now? If not, do it quickly! It’s going to be an amazing learning and networking experience. Joining the AS-CFG and attending workshops like this are the best things you can do for your business. I hope to see you there!

SOUTH AND CENTRAL

Arizona, Arkansas, Colorado, Louisiana, New Mexico, Oklahoma, Texas, and Utah



Shanti Rade
Whipstone Farm
info@whipstone.com

It's midsummer, and the temperatures are creeping into the triple digits here in northern Arizona. We are in a major drought, and even though we are accustomed to irrigating all of our crops, the land, the plants, and people are still feeling quite parched.

This is the time of year when the farm workload can feel overwhelming. All the theories of winter planning have must be put into action. Planting, weeding, watering, harvesting, marketing, selling, and, to top it off, wedding orders, are all colliding with what seems like the speed of a freight train. No matter the scale that any of us are working on, we all know the seasonal spikes inherent in farm work and what it feels like to be overwhelmed—or as we like to say “in the weeds”. Some of us are flower farming as a side gig. Some are doing it full time, solo or with a partner. Others of us have a full team to get the work done. We farm 18 acres (mixed vegetables and flowers) so

it takes quite a crew on our scale. It may sound nice to have a huge group to accomplish the work (and it is!) but learning how to manage the flow and personalities is a whole other beast.

How to build your dream team of employees has been on my mind a lot lately for two reasons. First, because we are already deep into planning the ASCFG's business-focused meeting where we will be touching on lots of employment and team management issues (Denver, February 18-19, 2018—mark your calendars!). But second, because we have been having major employee transitions at our own farm.



The farm crew comes to visit us at the farmers' market - it is so valuable to have the fieldworkers see the final results of their labor - how great the vegetables and flowers look on display and how appreciative the customers are who come to purchase the final product.

Recently, two of our longest-term employees, a husband and wife team who have worked for us for almost ten years, decided to move on to other work, in the middle of our busiest time. At first I was panicked, and maybe a little hurt. We run a crew of about 12 people in the summer, and they were the head of the veggie crew, in charge of all the other people who help with planting/weeding/harvesting of those crops. These two people are the hardest working folks I have ever known and we have been very close with their whole family, including seven kids—four of whom have worked at the farm at some time or another.

It was a bit of a shock when they gave their notice, but a blessing in disguise. Being a super hard worker doesn't make you a good leader. We had known for a long time that they weren't well suited for the management roles we had given them, but it felt too weird to rescind those roles, and all of our efforts to teach better management skills were not effective. They weren't teaching new people how to do their job well, instead they were adding a lot of friction to the interpersonal dynamics of our entire staff. But we felt trapped. They knew how to do the work, and we felt responsible for their livelihood.

Let me back up a little and say that I have absolutely zero formal education in management. I have a degree in Agroecology, so I learned a lot about theories of how to feed the world without destroying the environment. But when it came to learning to manage a farm, that all came through trial and error, a LOT of error. That includes taking on our first employee, then an internship program, then a few handfuls of employees. My



Our new portable swamp cooler - purchased to help keep the flower processing barn a manageable temperature for the flowers - is helping keep the workers happy too.

husband's entire family is self-employed and self-educated, so at least he knows how to be scrappy. It has been a fun and wild rollercoaster as we have reveled in watching the farm grow and thrive. I love people (yeah, I think I would even say I am a people person) but managing them is not my favorite thing nor my strong suit. I would love to be able to just do everything myself. I know I could really use a course on the subject, but where does a farmer find the time? Maybe a good couple of books this winter will help me do better.

Luckily, my step-daughter, who grew up on the farm, then went out into the world, came back to work with us about a year and a half ago. She is still learning (or re-learning) all the specifics of how we do things around here. But she got some management training and experience while she was working in other fields and she came back with some tools to help us take our knowledge and deliver it to our team in a usable format.

We also contracted with a farm and food-based consulting service about a year ago. Our consultant has taught us so much about managing different aspects of the farm, from production to finances to people. It is amazing not to reinvent the wheel for everything we do. And sometimes it is just helpful to have an outside voice of reason confirm that yes, the rest of the business world does things like job interviews, performance reviews, time tracking, implementing codes of conduct and—occasionally—firing when all of the other things aren't going well.

While it's easy to get caught up in your day-to-day operations, you must to keep the big picture in mind. It felt impossible, initially, to get new people hired and trained to lead our veggie team. But with some reorganization and current employees stepping up to the plate, so far the last few weeks have been pretty darn smooth. My husband, step-daughter, and I have had to spend a lot more time helping out on the veggie crew but in the process we are ironing out kinks that had been set in place a long time ago. My stellar flower crew has had a lot more autonomy in daily work flow and design, as I have been needed in other areas, and they have



Sarah, one of our new flower crew members, reveling in the sweet pea tunnel harvest.

proven how capable and competent they are. I am often scared of change, and this whole transition has been a great reminder not to be afraid. Sometimes what seems like a roadblock can actually be the path you forge to greater success and happiness.

My current goals for creating my dream team have to do with being a good teacher, setting clear goal and expectations, and (the hardest one for me) delegating. We are working diligently to create SOPs (standard operating procedures) for everything that we do, complete with videos and photos, where appropriate. We are creating more management roles where team members take responsibility and initiative towards the end goal. And last, but not least, making sure everyone is having fun and feeling appreciated. In some cases this means a raise, in some cases some fun team-building exercises. Often times it just takes having your lunch break in the barn with the new swamp cooler running (which as the box states, is like a cool lake

breeze) and popsicles all around at the end of the work day.

Right now we have a team that I feel great about. Some have been with us for many years, some are new this season, and some have yet to be hired. But the processes we have set up, and the general feeling among the current crew are so much better than in our past, that I feel confident we can sail smoothly into the end of the busy season.

In the Winter issue I mentioned a film that was done about our farm and the flood we had last year. A few nights ago that film played at a local film festival. Our whole crew showed up, wearing their farm shirts, to show their support. We even got photos on the red carpet. Then we all went out for beer and pizza (and those of us who didn't have a market in the morning went out dancing, too). It felt like our crew was closer than we have ever been and that was a very good feeling. [link to the film <https://vimeo.com/232169720>]

Hoping you all are surviving the summer and ironing out your own kinks. I can't wait to see many of you in Raleigh this fall, and hopefully next year in Denver, too!



Promo photo for the short film about our farm by Sean Openshaw.

WEST AND NORTHWEST

Alaska, California, Hawaii, Idaho, Nevada, Oregon, and Washington



Lennie Larkin

B-Side Farm
lenniellarkin@gmail.com

Announcing Denver Business Conference!

Grab your pocket protectors and ditch the Carhartts, my farming friends. I'm here to let you know about our upcoming grower meeting in beautiful Denver, Colorado this coming February, where we'll dive into the nitty gritty of everything it takes to run a successful flower farm, except for growing the flowers themselves. That's right folks, The Business Behind the Flower Farm (patent pending) will be the ASCFG's first ever business topics-only conference. If you're looking for production information, you won't find it here.

Most of us got into farming because we love growing stuff. Love being outside and working hard. Wanted a certain kind of lifestyle. But we all know that running a farm means running a business, and that there's much to nurture other than the plants themselves. For some of us, this was a rude awakening, and sitting at a computer surrounded by piles of receipts and invoices feels distinctly like something you didn't sign up for. For others, we've taken to the bookkeeping and business plans and financial projections side of things. But we feel like we're sort of making it up as we go along, borrowing tips from one discipline or another, reading books written by vegetable farmers, and getting financial advice from that one brother who went to business school. The information available out there doesn't always feel like it relates very closely to flower farming.

Enter Denver: 2019. With a speaker lineup of brainy farmers including the likes of Laura Beth Resnick of Butterbee Farm, Grace Lam of Five Forks Farm, Diane Szukovathy of Jello Mold Farm, and Gretel and Steve of Sunny Meadows, to name just a few, and legal and finance whizzes like Poppy Davis, not to mention a number of ASCFG board members, we're out to present a brand new kind of meeting.

I set out with a list of questions to be answered through the sessions in this conference. If you've ever wondered...

- How can I better use Quickbooks to tell me about the health of my farm?
- How do I find balance between retail and wholesale customers?
- What does it take to truly make and use enterprise budgets for my crops?
- How can I hire employees and learn to delegate tasks efficiently?
- What do I need to be thinking about if I want to build long-term equity in my farm?
- How can I secure some funding to help start or grow my farm?
- Am I doing my taxes right?
- Can I make money with on-farm events and value added products?
- How do I form partnerships with florists as key customers?
- How do I set aside feelings and use financial projections to make decisions?

... then I hope you'll join me in Denver. We'll have some breakout sessions for those of you who self-identify as beginners or advanced, and will have a pretty packed agenda in this day-and-a-half event.

I'll see you there! Until then, I'll be out here on Quickbooks in sunny California. Wish me luck!

CANADA

Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan



Janis Harris

Harris Flower Farm
 janisandmarkharris@hotmail.com

Canadians are following in the successful footsteps of British Flower Week and American Flowers Week. September 13-19, 2018 is the date for the celebration. Canadian Flowers Week is an annual advocacy, education, and awareness campaign that celebrates all flowers grown in Canada (field and greenhouse). With the help of industry—growers, wholesalers, designers, and florists—we aim to build local communities across our country to promote the local message together.

During Canadian Flowers week the participants will:

- Raise public awareness of the Canadian growing climate and what flowers are in season.
- Showcase Canadian flowers through the talent of Canadian floral designers.
- Create public experiences with local product.
- Inform the public how and where they can find Canadian-grown flowers.

The committee and participating industry people believe in four core values: Community & Culture, Freshness & Abundance, Ecological & Environmental and Beauty & Creativity.

Community & Culture: Gardening, farming, and connection to nature can anchor positive cultural change. When a community roots itself in the natural world, individuals are transformed through more mindful awareness of self and others. This strengthens community bonds, increases gratitude, and often reduces anxiety. People have space to become more conscious of their everyday practices and in turn their purchasing power. Flowers grown and sold locally bring our communities closer together and our farms, florists and consumers in relationship to one another. We are not just a small, anonymous piece in a global market, but a friend, patron, advocate, ally, and neighbour. Flowers grown and sold locally have a huge social impact because over time they contribute more to local economies.

Freshness & Abundance: When you buy locally you are able to display the bounty of the season in your shops, studios or homes. Flowers picked only days before you receive them retain their natural aromas as they haven't spent weeks in transport to get to you. You can get an entire bucket of a single variety in

season for the same price as two bunches of that same imported flower so it isn't that local flowers are more costly, it's actually the opposite, but with buying local you must accept seasonality. This is what makes them so special—they are with us for a short time every year!

Ecological & Environmental: Your flower isn't going on a journey by itself, there are so many other characters involved (the bees, butterflies, birds, people, soil). There is increasing awareness amongst Canadian growers about the benefits of ecological and sustainable farming practices that consider the whole ecosystem health. Some imported flowers are grown in countries with questionable workers' right and environmental laws. Local blooms travel direct from farm to table and require less disposable packaging.

Beauty & Creativity: When you invest in locally-grown flowers you have the opportunity to give capital to your "neighbour" growers. By investing locally, growers feel supported and are then able to explore growing more interesting and unique



varieties. Unusual or old-fashioned flowers have been pushed out of our current system in order to make room for mono-cropped sturdy blooms that last long in transit, often taking over as trendy florals. If we keep going this way, we may lose diversity. Imagine a world with only 10 flowers available. The joy that flowers bring to our lives is evident by the look on the face of someone receiving a fresh bouquet. The beauty is often not due to its vase life but rather that we know it's fleeting, and so we savour them.

How can you participate as a Grower, Designer or Florist?

- Use the #CanadianFlowersWeek hashtag and join the public conversation.
- Start or join a local team that hosts or creates one of the 6 flower installations planned across Canada.
- Wrap your local product in Canada Flowers Week branded kraft paper or stickers for the week.
- Become a Canada Flowers Week Spokesperson.
- Get your farm or shop listed on the Canada Flowers Week Website—a listing resource for Canadians to know where to find local blooms.
- Host an open house during the Petal Path day (September 16).
- Growers and florists can team up to offer a special local bouquet during the week.
- Download and share the Canada Flowers Week branding.
- Growers can sponsor or donate flowers for an installation or event.
- Dress your retail windows to impress with local flowers.

Rosanne 1 Green

Rosanne

Lisianthus

Elegant Impressions

Our beautiful Rosanne 1 and Rosanne 2 are bred for more buds and branching, thick flower petals, strong stems and excellent shelf life. Their sturdy stems, durable flower petals and top flowering hold up well during shipping and at retail. With attention-commanding colors, rarely seen in other series, Rosanne 1 and Rosanne 2 are sure to amaze even the most selective customer. To order, contact your preferred provider.

SAKATA[®]
sakataornamentals.com

Rosanne 2 Deep Brown

©2018 Sakata Seed America, Inc.

Thank you to the committee organizing Canadian Flowers Week for giving me this information to share with the ASCFG membership. I hope the Canadian membership will find a way to be included and I can't wait to attend some events! Be sure to follow the #CanadianFlowersWeek hashtag to see the exciting things happening north of the border.

Meet the ASCFG's Newest Members

- Beth Anderson**, No Name Farm, Waunakee, WI
Hayley Andrews, 10 Acres Farm, North Saanich, BC
Cindy Bauer, Greenstone Fields, Brunswick, MD
Kimberley Beard, Bear Pen Flowers, Coldwater, ON
Julie Beeler, Bloom and Dye, Trout Lake, WA
Mattie Berbee, Leo Berbee Bulb Co., Marysville, OH
Nicola Birch, Deo Gloria Farm, Spring Grove, IL
Kim Bomberger, Hedge Post Farm, Dwight, KS
Shannon Bray, b. Creek Farms, Macomb, MO
Leah Brown, Ridgeland, MS
Rhonda Bunn, Midwest Cut Flowers, Delano, MN
Carolyn and Steven Bupp, Cross Creek Farm, Glen Rock, PA
Rachael Carnes, Humble Roots Flower Farm, Santa Rosa, CA
Julianna Casey, Tilly's Flower Farm, New Richmond, WI
Beth Cashen, Cashen Creek, Plymouth, IN
Allen Coleman, Union Valley Farms, Nixon, TX
James Cooper, Country Road Retreat, Emporia, KS
Mary Damm, Timberview Flower Farm, Evansville, IN
Susan de Jong, Fall River, MA
Kathryn Denman, Orlaya Flora, Hillsborough, NC
Stacey Denton, Flora, Williams, OR
Jose Diaz, Rusty Spade Gardens, Las Cruces, NM
Melinda Dorn, GeoSeed, Greenwood, SC
Faye Doyle, Faith in Flora, Three Rivers, MI
Cailinn Drouin, Lawrence, KS
Rocio Michelle Duran, Rutgers University, Somerset, NJ
Laura Emmert, Fainting Goat Flowers, Blountville, TN
Joshua Fine, Fine Family Flower Farm, Tollhouse, CA
Sheila Fitzgerald, A New Leaf Omaha, Omaha, NE
Kory Garvis, Greenstone Fields, Winchester, VA
Katharine Gilman, Petal by Pedal, Inc., New York, NY
Carolyn Gilmore, Fainting Goat Flowers, Johnson City, TN
Beth Ginther, Fred C. Gloeckner & Co., Inc., Clackamas, OR
Heather Gregory, Bloom NTX, Gainesville, TX
Alyson Gregory Richter, Bloom NTX, Dallas, TX
Yumei Han, Wisteria Clusters Farm, Honesdale, PA
Jeanne Haraldson, New Dawn Flowers, Marshfield, MO
Kathy Hardy, Markham, ON
Abra Hawley, Emily, MN
Clay Hendon, Fred C. Gloeckner & Co., Inc., Compton, AR
Jen Henry, Field Day Creative, Richmond, VA
Linda and Randy Heverly, Centre Hall, PA
Charity Hix, Charleston, WV
Katherine Hoke, Orlaya Flora, Hillsborough, NC
Candice Howard, Duchess Florals, North Brunswick, NJ
Laura Hurst, Amber Waves Farm, Amgansett, NY
Lowell Ioerger, Ioerger Family Farms, Minonk, IL
Perry Johnston, Perrywinkle Garden, Greenwich, CT
Andrea Jones, Riverton, NJ
Florence Jones, Flo's Blossoms & Herbs, Warrenton, VA
Ina Jones, Alaska Beauty Peony Cooperative, Homer, AK
Marla Jones, Crossville, TN
Veronica Jones, Purely Wild Florals, Rockdale, TX
Lisa Joyner, Fireside Farm, Efland, NC
Teresa Kaylor, Shelby, OH
Sheila Kennelly, Northfield, MN
Maya Kosok, Hillen Homestead, Baltimore, MD
Amy Kurtenbach, Pleasant Hills Farm, Germantown, MD
Jill Lada, Green Things Farm, Ann Arbor, MI
Joanna Lambert, Baton Rouge, LA
Heather LaRocca, Ball ColorLink, West Chicago, IL
Grace Lefever, Carolina Flowers, Weaverville, NC
Tina Lewis, Franksville, WI
Karin Luck, Columbia, VA
Julie Mann, Blue Bee Flower Farm, Evans, GA
Hilary Maynard, Morey Hill Farm, Putney, VT
Mary McCarthy, Cozy Hollow Farm, Marshfield, VT
Susan McCraine, ifarm, Boxford, MA
Nina McDaniel, Cedar Valley Farm, Milltown, IN
Mary McDermott, Mary's Flower Farm, Cresson, PA
Shannon McNally, White Church Farm, Ancaster, ON
Carrie Miannan, A Blossom in Time, Indianapolis, IN
Tim Miannan, A Blossom in Time, Indianapolis, IN
Georgia and Jordan Monroe, Basecamp Farms, College Station, TX
Adene Nieuwoudt, Adene's Farm Flowers, Wolseley, South Africa
Bethany Oran, Little Dug Gardens, Louisville, TN
Angela Graves and Patty Broughton, Two Sisters Gardens, Kerrville, TX
Sonya Perrotti, Coyote Family Farm, Penngrove, CA
Julia Poplawsky, Texas Specialty Cut Flowers, Johnson City, TX
Tamara Proctor, Alcott Acres, Sacramento, CA
Niesa Putigna, Farm 9, Oakland, FL
Lisbeth Rasmussen, Split Acre Farm, Rougemont, NC
Stacey Reding, Springboard Farm, Tacoma, WA
Rosemarie Robson, Robsons Farm, Wrightstown, NJ
Pamela Scheidt, Hungry Toad Farm, Dayton, OH
Gina Schley, Shegrows, Arvada, CO
Katherine Sherba, Mighty Fine Farm, Missoula, MT
Lela Claffin Sisk, From the Fields, Hope, ME
Becky Siskowski, Little Seed Flower Farm, Johnstown, CO
Rebecca Sorensen, Blawesome, Chapel Hill, NC
Lauren Spencer, Brownings, Cynthiana, KY
Cynthia Stafford, Bluebird Flowers Farm, Frankfort, NY
Michael Sterly, Sterly Gardens, Charlevoix, MI
Anh Ly Stevens, Hamburg, NY

Growers Supporting Growers



From sowing to harvest, let our experience help you grow!

FIND OUT HOW

HARRIS
EST SEEDS 1879

www.harrisseed.com · 800.544.7938

SEEDS · PLUGS · PLANTS · BULBS · SUPPLIES

local flowers

The ASCFG is pleased to announce its newest marketing tool and complimentary member service. localflowers.org was created to promote you and your flowers, and to encourage the public to purchase locally-produced material. This site offers a searchable map to help buyers easily find ASCFG members, and informs consumers of the importance of local flowers, cut flower care, and more.



Meet the ASCFG members who have stepped forward to run for positions open on the ASCFG Board of Directors. Please review their information, and take just a few minutes to cast your vote when you receive an electronic ballot later this summer. Your participation is vital!

President

Leah Cook
Wild Hare Farm, Cedar Grove, North Carolina

I joined the ASCFG in 1998. I was so excited, and I knew I would learn a lot about cut flower production. Twenty years later I can attribute much of our farm’s success to the knowledge I have gained from the Association. In that time our farm has changed: we started as a split vegetable and cut flower farm, but are now 100% flowers with an emphasis on early-season crops and peonies.



My past service to the Board includes that of the Southeast Regional Director, 2005 through 2007. John Dole and I co-chaired the 2008 National Conference in Raleigh, and I was elected Vice President in 2010.

In 2016, I was thrilled to be chosen as a Mentor for the first cycle of the ASCFG Mentor Program, paired with a fantastic young farmer named Pressly Williams. I learned a lot from her, and it was rewarding to see her business and confidence blossom.

It is important to me to give back to the organization, and I am committed to helping the ASCFG continue its mission to grow and educate flower farmers! It would be my honor to serve as President of the ASCFG.

Jennie Love
Love ‘n Fresh Flowers, Philadelphia, Pennsylvania

I started my fledgling flower growing operation in 2008 with a 280 square foot garden plot. Today my farm consists of just under six beautiful acres inside the city limits of Philadelphia. I owe a lot of that growth and success to the ASCFG. I first became an ASCFG member in 2009, soaking



up both the rich source of information and the dynamic community within our ranks, making invaluable connections and friendships with growers much more seasoned than myself who generously shared all they knew.

I originally took a seat on the ASCFG Board in 2014 as the Mid-Atlantic Regional Director with the intent of giving back to that knowledge base. Since 2016, I’ve been serving as Vice President, working hard on particular projects like the Mentor Program, the inaugural Seasoned Growers School, and the “Local Flowers, Local Farmers” video. Being part of such an energetic and dedicated national Board has been an incredible experience. So much is moving and changing internally to make the ASCFG even more useful for members and to help promote local flowers to consumers. I’d love the opportunity to see some of these “big picture” projects through to completion by serving as your President starting in 2019. Dave is leaving very big shoes to fill, and I’m up for the challenge!

Vice President

Tanis Clifton, Happy Trails Flower Farm, Dennis, Mississippi

I am a first generation farmer in a long line of gardeners. It seems that I was surrounded by those who loved the natural world my entire life. I can remember my great-grandmother’s beautifully painted botanicals in oil pastels and her intricate carvings of herbs and flowers on linoleum blocks which filled our home. And then there were the trips to Grandma’s house where I could not wait to go into her secret garden. I loved walking through her greenhouse which was filled with beautiful violets and lush plants. This led to her basement which was filled with loads of dried flowers hanging neatly in rows. It was a magical place. I suppose the love of nature and flowers continued to run through the blood as both of my parents loved to work in the garden and tend their flowers. I am forever grateful for all of their inspiration. This love for flowers has finally evolved in the ultimate garden which we have the joy of tending at Happy Trails Flower Farm in Northern Mississippi.



I manage the day-to-day operations on the farm, which includes everything from starting seeds to transplanting as well as harvesting, designing, and delivering flowers. We have a diversified market which includes local retail grocery, florist as well as farmers' markets. A growing part of our farm business is designing for weddings. It is a labor of love and I cannot imagine doing anything more satisfying.

I joined the ASCFG at the beginning of our flower journey eight years ago and am ever so grateful. It was a privilege to serve as the Regional Director for the Southeast several years ago. Serving on the Board was so fulfilling and I loved corresponding and helping growers in this part of the United States. I am so pleased that I was on the committee that developed the much-needed Mentor Program that was implemented several years ago and is such a valuable opportunity for our membership. While Director I was also able to help organize and develop programming for the incredible and successful Grower Intensive Conference in Athens, Georgia.

I would be honored to serve on the Board of the ASCFG again. I have a sincere desire to encourage members and implement even more great programs to help its members.

Mimo Davis-Duschack, Urban Buds, St. Louis, Missouri

My introduction to the ASCFG was at the Growers' School at my first ASCFG National Conference, in 1999. The Growers' School was run by John Dole, surely the authority on cut flowers, with solid data to back up his knowledge. From the opening welcome, it was like love at first sight! I knew from



the very beginning of that class that this would be the start of something big in my life. I was no longer out standing "alone" in my field with as many unanswered questions as I had weeds. Matter of fact, here was a group of people with the same quest for knowledge who freely shared their time, skills, and talents, and wanted to help me excel. At the time, the Growers' Schools were limited to 50 attendees. My, how things have changed!

Over the years, I have served twice as Regional Director, and hosted one Regional Meeting on my farm in Ashland, Missouri. The ASCFG has given me countless opportunities to mentor other new growers, to continue the cycle of knowledge that I so benefited from. I have traversed the country for speaking

engagements, and am always shouting from the mountaintops that one of the best-kept secrets is what an amazing organization the ASCFG continues to be.

I would be honored to serve in the capacity of Vice President of the ASCFG, and for the opportunity to work with the incredibly talented Board in the continued growth of the membership and programming. Some of the programs I am particularly interested in are the Mentor Program, and grower meetings. These two services, I believe, are essential to the organization's mission of growing better growers. In doing so, we increase the local and national competitiveness of locally-grown specialty cut flowers. I'm excited for the future of our organization and being an active participant on the Board.

Paula Rice, Beehaven Farm, Bonners Ferry, Idaho

I am super excited to have been nominated to serve the ASCFG members as Vice President. I loved being the West and Northwest Regional Director three years ago and doing the work it involved. I can talk about growing and selling flowers all day long as well as dream up a hundred ideas to be a



better, more profitable grower. It isn't easy work but it sure is satisfying. Absolutely every facet of being a flower farmer gets my blood pumping and inspires me to try harder and be better.

In the past 12 years I have witnessed the flower world do a complete 360. This niche of being a local grower is exploding. Marketing and innovation are key to selling what you grow. And doing nerdy things like managerial accounting are especially key for personal and business improvement and sustainability.

I wish I had known in the beginning what I know now. Farming in a rural area has required me to be very diversified in my marketing strategy, from farmers markets to a grocery store route to a florist route to being a farmer-florist and more. I have learned so much about the nitty-gritty of selling the flowers I grow. No part of it is easy, but all of it is exciting.

I would love to be part of the ASCFG team that supports and connects its members in a way that helps them be long-time, successful flower growers. Your confidence in me and vote would be greatly appreciated. If you want to get a "feel" for who I am and what I do, contact me through www.beehavenfarm.com

West and Northwest Regional Director
 Alaska, California, Hawaii, Idaho, Nevada, Oregon,
 and Washington

Erin McMullen, Rain Drop Farms, Philomath, Oregon

After studying horticulture and botany at Oregon State University, I fell into farming as a way to escape the monotony of greenhouse work and nursery sales. In 1999 I started working at an organic produce farm and doing the Portland Farmers' Markets on Saturdays. It was hard, long hours, hot sun, back-breaking work, and I loved it. Somehow I convinced my soon-to-be husband that we should start our own farm, for fun.



We spent the next three years growing vegetables, and a few flowers, on an acre of rented land and looking for a farm of our own to buy. After an exhausting search we stumbled on a foreclosed property that had been clear cut, stripped, and abandoned. It was perfect, and Rain Drop Farms was born. We started with a 30 x 50 garden space that was too small to grow much in the way of veggies, so we tried some flowers, and from that humble patch we've grown our farm into almost 6 acres of beautiful blooms. It's been a beautiful place to work and raise our two boys.

Our flowers are sold through our two wholesale markets in Portland and Seattle (the Oregon Flower Growers Association and the Seattle Wholesale Growers Cooperative), grocery stores in Portland, Seattle, and Corvallis, as well as through the local Corvallis Farmers' Market (this is our 19th season!). We pride ourselves on unique varieties, grown to high standards and shipped fresh to our customers.

In addition to farming, I am passionate about education and collaboration. I strongly believe that together we can be the change that we want to see, in the flower industry and in the world. To this end, I have worked for the last 5 years with a wonderful group of people, growers, designers, and flower lovers alike, to organize and grow the Pacific Northwest Cut Flower Growers. The aim of the group is to provide interaction, collaboration and education among the flower growers in our region. I am excited to get the opportunity to help behind the scenes on a national level, with the ASCFG, and would be honored to serve as the West and Northwest Regional Director on the Board of Directors.

2018 Cut Flowers of the Year Nominees

Fresh Cut of the Year

- Daucus carota* 'Dara'
- Eustoma* 'Rosanne Deep Brown 2'
- Rudbeckia hirta* 'Sahara'

Foliage Cut of the Year

- Dusty miller 'New Look'
- Eucalyptus 'Silver Drop'
- Pycnanthemum muticum*

Woody Cut of the Year

- Hydrangea paniculata* 'Quick Fire'
- Mockorange
- Spirea* 'Bridal Veil'

Bulb Cut of the Year

- Anemone* 'Galilee White'
- Fritillaria persica*
- Tulipa* 'Menton'



Our Facebook Live events continue!
 Log on to learn from these Experts:

- July 9 - Janis Harris
- August 13 - Mimi Davis-Duschack
- September 10 - Shanti Rade
- October 8 - Linda Doan
- November 12 - Val Schirmer
- December 10 - Dave Dowling

Previous Expert sessions are archived in the
 ASCFG Members Facebook page, in Videos.

These Members Have Been with the ASCFG for Ten Years!



Maria Cockrell



Julie and Calvin Cook



Patricia DiVello



Michelle Elston



Joyce Fisher
(photo unavailable)



Ann Franzenburg



Arjen Huese



Ben Kneppers



Mary Ellen Muth



Debra Prinzing



Emily Watson

Beginning Growers' School

Monday, September 24

Sassafras Fork Farm, Rougemont, North Carolina

Limited to 125 attendees

IPM for New Growers

Stanton Gill, University of Maryland
Ecologically-based Weed Management
Brenda Smith

Irrigation, Coolers, and More
Hot Crops for the Cool Season

Mim Davis, Urban Buds City Grown Flowers and Lisa Ziegler, The Gardener's Workshop
Happy Customers Enjoy Long-lasting Flowers - Plan Your Postharvest Program

John Dole, North Carolina State University

The \$64,000 Question: What Price?

Jennie Love, Love 'n Fresh Flowers

SOLD OUT



Dinner and Barn Dance for Growers' School attendees



ASCFG Conference

Tuesday, September 25 North Raleigh Hilton

New Varieties Festival and Cut Flowers of the Year Announcement

John Dole, North Carolina State University

Show Us Your Farm Hacks!

Afternoon Concurrent Sessions

Cracking the Cascading Bouquet Conundrum

Jennie Love, Love 'n Fresh Flowers

Make Weddings Work for YOU

Lennie Larkin, B-Side Farm

Extra Texture: Crops to Add

Sparkle to Your Design Work

Carolyn Snell, Carolyn Snell Designs

SEO: The Secret Weapon to
Maximizing Your Online Presence
Jesse Perry, Philosophy Flowers
It's a Beautiful Day for a Farmers' Market
Shanti Rade, Whipstone Farm
Jamie Rohda, Harvest Home
Valerie Schirmer, Three Toads Farm
Cooperative Marketing
Kelly Morrison, Piedmont Flower Market

High Tunnels for Cut Flowers
Leah Cook, Wild Hare Farm
A Passion for Peonies
Foxye Morgan, Pharsalia Events
It's All About Soil
Alex Hitt, Peregrine Farm

Trade Show and Reception

Wednesday, September 26

Morning Farm Tours

Limited to 200 attendees

Spring Forth Farm and Open Door Farm

Afternoon Concurrent Sessions

Cut Flower Insects
Raymond Cloyd, Kansas State
Lisianthus
Linda Doan, Aunt Willie's Wildflowers
Grow More on Less: Go Organic!
Lisa Ziegler, The Gardener's Workshop

Floral Design Trends
Debra Prinzing, Slow Flowers
Maintaining Work-Life Balance
Mark Cain, Dripping Springs Garden
Postharvest Research Results You Can Use
John Dole, North Carolina State University

Understanding the Legal and
Financial Structure of Your Business
Poppy Davis
Taxes, Taxes, Taxes
Poppy Davis

Reception and 30th Anniversary Banquet

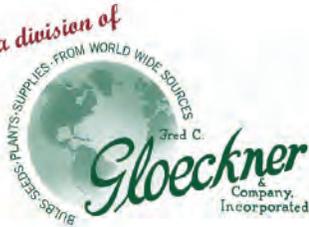


Registration, program, and hotel information at www.ascfg.org

Please Support Our Sponsors and Exhibitors



is now a division of



FARMER BAILEY
PLUGS FOR FLOWER FARMERS



The Common Facts of Today Are the Products of Yesterday's Research

Judy M. Laushman



We usually assume that all ASCFG members know the origin of the organization 30 long years ago, but given the fairly astonishing increase in our numbers recently, that's an expectation we probably shouldn't hold. For the slightly humorous—yet completely factual—story, click on “General Information” under the About Us tab at ascfg.org and read “History of the ASCFG”. It's too long to reprint here, but it was great fun to originally write in 1998, and update in 2008.

The takeaway from that article is that this organization grew directly out of an ambitious horticulture research project—Allan Armitage's New Crop Program at the University of Georgia. Allan was conducting a wide range of studies on a diversity of plants: performing growth regulator tests on potted *Pentas*, *Trachelium*, and *Torenia*; determining optimum photoperiod for *Salvia leucantha*; evaluating hundreds of annual and perennial ornamental varieties in the Trials Gardens he established in 1982; and in 1984, creating plots of cut flower trials at a satellite campus in Athens. At the time, virtually the only cut flower research performed in the United States was on the postharvest life of greenhouse roses. These outdoor field trials seemed to be a breakthrough, and the data we collected, though comparatively minimal, were important, as they led directly to the creation of the ASCFG in 1988.

Six years after the ASCFG was founded, its then-President, wise beyond his height, but only middling for his girth, encour-

aged the ASCFG Board of Directors and the membership to create a Research Fund.

“It is well documented that growth of any industry is tied to research.” wrote Will Fulton in the spring 1994 issue of *The Cut Flower Quarterly*. “Progressive growers, retailers or wholesalers pay attention to research results, and use them to further their businesses. The specialty cut flower industry is surely no different.

“Finding new cultivars and new species for production of fresh or dried products is an important aspect of keeping specialty flowers special. Learning the best way to grow high-value crops in the greenhouse or in the field is an important future consideration for our

members. Is photoperiod or cold necessary or useful for efficient greenhouse production? The enhancement of postproduction of flowers will always be important, and postproduction information is sadly lack-

ing for well over half the flowers we grow. These are but a few of the projects that your research dollar could support.”

The Fund steadily gained footing, and in 2003, under the watchful eye of the accomplished Betsy Hitt, became the ASCFG Research Foundation, raising greater sums of money each year, chiefly through donations from members. Live and silent auctions held during national conferences brought in substantial sums of money, especially for such high-ticket items as handmade quilts, personal on-farm consulting gigs from experts, and curiously, a black velvet painting bought for about three U.S. dollars during a spontaneous trip to Tijuana.



The Josie Crowson Conference Scholarship Fund



Requests for Competitive Research Grants continued to be submitted by horticulturists, entomologists, and others, as Chris Wien, recently retired from Cornell University, came aboard to help with administration. A sprinkling of projects funded include:

- Developing Hydrangea with Yellow Blooms by Chemical Manipulation
- The Potential of *Dicentra spectabilis* as a Cut Flower
- Low-risk Pesticides for Control of Powdery Mildew and Leafspot on Zinnia
- The Effect of Crowding in the Seed-box on Cut Flower Performance: A Comparison of Species
- Forcing Woody Cut Stems
- Postharvest of Specialty Cut Flowers

That last one is likely familiar, as the years of data that John Dole and his team compiled from those projects made possible last year's publication of the ASCFG's first textbook, *Postharvest Handling of Cut Flowers and Greens*. You'll see reports from some of the most recent projects to be funded starting on page 20.

As important as Allan Armitage's early work was, and that of John, Chris, Stanton, and others continues to be, grower support of the ASCFG Research Foundation is vital to further investigation of new cut flowers species and cultivars, updated postharvest handling methods, and contemporary methods of pest and disease control.

Help ensure that the ASCFG Research Foundation maintains its financial support to academics, extension personnel, and others, while at the same time memorializing another person vital to the recent success of the ASCFG.

To honor the memory of Josie Crowson, a longtime friend and passionate supporter of the ASCFG, the ASCFG Research Foundation is establishing a fund for educational scholarships awarded to first-time ASCFG meeting registrants, beginning in 2019. Josie was one of the ASCFG's most generous members, known for freely sharing her experiences with other growers, and contributing greatly to the organization's recent growth and success. Providing financial assistance to new growers to enable them to attend ASCFG events is a testament to her selflessness.

Josie joined the ASCFG in 2002 when she started Josie's Fresh Flowers in Nacogdoches, Texas, where she grew a wide variety of crops for the east Texas floral market, farmers' markets, special events, and subscriptions. She was elected South and Central Regional Director in 2009, and later ASCFG Treasurer. During these terms, she hosted several meetings, and revamped the organization's finances (using her Ph.D in economics).

By 2016, when Josie had moved to Fredericksburg, Virginia and had served the ASCFG in as many facilities as possible, the Board, knowing that her expertise and generosity were still essential to the organization, created an Emeritus Board of Directors position especially for her. This is when she not only completely updated and streamlined the bylaws, but conceived and brought to reality our documentary "Local Flowers—Local Farmers".

She found the award-winning filmmaker Bayley Silleck in Fredericksburg, and talked him into traveling to and filming growers and florists in Virginia, Maryland, Pennsylvania, and Texas, and even to North Carolina State University to interview John Dole.

Josie contacted the growers and made all the arrangements for the visits, was on site for most of the filming, wrote the script for the narration, and tirelessly promoted it after its completion.

The film is not only a beautiful work of art, it's an important promotional and consumer educational piece which has been viewed almost 220,000 times on YouTube.

In her non-ASCFG life, she chaired the Nacogdoches Farmers' Market Advisory Board, and volunteered countless hours with Master Gardeners' groups in Nacogdoches and Fredericksburg.

Along the way, Josie and her partner George built a life of adventure and exploration, traveling to national and state parks in Alaska, Canada, Wyoming, and the Northeast; dancing together in social clubs in Virginia and Texas; developing and tending to their farm; and visiting with family and friends at home and around the country. Josie loved any new challenge, and she shared this passion for life in any number of ways—parasailing in the Caribbean with her daughters, taking her granddaughters on special trips to new parts of the country, jumping with both feet into a new flower growing business with no background in the industry, becoming a community organizer in Nacogdoches, and raising cattle for the first time at 55.

Josie's boundless energy and generosity, whether directed to her family, her farms, her community, or the ASCFG, was remarkable, and will be missed by many.

Please contribute to the legacy Josie Crowson has left and donate to the ASCFG Research Foundation today.





SunflowerSelections.com™
QUALITY SEEDS FOR PERFECT FLOWERS

**ORDER ONLINE NOW
NEW VARIETIES FOR 2018**

SunflowerSelections.com continues to innovate by introducing ProCut®White Nite, ProCut®White Lite, ProCut®Orange Excel, and our new green cut SunFill™series.

We offer more than 55 different sunflowers at SunflowerSelections.com.

We promise to bring you the best sunflowers as our breeders develop them.



Wild Garden Seed

Organic Flower Seeds from
Shoulder to Shoulder Farm
Ecological Crop Improvement For and By Farmers



www.WildGardenSeed.com/flowers

Slow Flowers

the conscious choice for buying and sending flowers

Join the
SLOW FLOWERS
Movement



A free, nationwide, online directory to 700+ florists, shops, studios and farms that supply American Grown Flowers. We attract 4k unique users and 21k unique page views per month.

www.slowflowers.com



CRÈME FRAÎCHE®
Deutzia

Variegated foliage. White flowers.
Deer-resistant



WINECRAFT BLACK®
Cotinus

Saturated purple-black foliage with
showy, red smoke-like blooms



TANDOORI® Orange
Viburnum

Showy white spring flowers and
bright orange fall berries



SHINY DANCER®
Viburnum

Dark green, heavily textured,
semi-evergreen foliage



PEARL GLAM®
Callicarpa

Purple foliage, white spring flowers,
purple berries in fall



SISTER REDHEAD™
Cytisus

Showy broom, dramatic red color



KODIAK® Black
Diervilla

Tough, easy-growing, burgundy-
black foliage



KODIAK® Orange
Diervilla

Glowing orange foliage, yellow
early-summer flowers



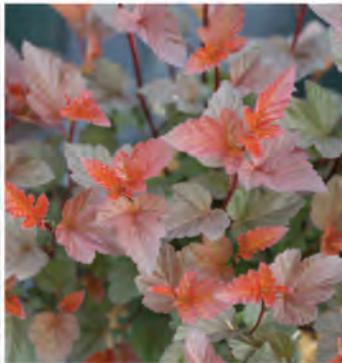
'Picturata'
Japanese aucuba

Thick, glossy leaves with a showy
yellow center



SUMMER WINE® Black
Physocarpus

Striking, dark purple-black foliage



GINGER WINE™
Physocarpus

Spring foliage emerges a sunny
orange and matures to
sparkling burgundy



GOLDEN TICKET®
Ligustrum

Non-invasive privet; glossy foliage
that emerges bright yellow, ages
to chartreuse

Focus on Foliage

Our lusciously colorful, beautifully clean foliage will fill your buckets and bouquets with style. These varieties provide the reliable supply of filler stems you need but require minimal space and labor. Go ahead, cut all you want: they'll grow right back.

Call us at 1-800-633-8859 to talk to an account manager and request a copy of our catalog. Ask about our large Quick Turn™ liners for a faster crop, at a cost of just pennies per stem.



Gloeckner



Ednie Flower Bulb

DISTRIBUTORS OF SEED, BULBS, PLANTS, PLUGS AND GREENHOUSE SUPPLIES FOR ALL OF YOUR CUT FLOWER NEEDS!



Zinnia Queen Lime Orange



Allium Summer Drummer



Ranunculus Orange



Narcissus Tashiti



Anemone Galilee Pastel Mix



Helianthus Pro Cut White Nite



Tulip Lue Ann Beck

FRED C. GLOECKNER & CO.
800.345.3787 | INFO@FREDGLOECKNER.COM

EDNIE FLOWER BULBS
A DIVISION OF FRED C. GLOECKNER
973.940.2700 | SUPPORT@EDNIEFLOWERBULB.COM