

Ask the Experts Panel Q&A

CSDS' March 2023 meeting featured an Ask the Experts panel consisting of three members who answered questions submitted by the membership. The panel members were Kevin Maloney, Laura Matz, and David Sales. An edited version of their response appears below.



GETTING STARTED

If I am not making cuttings but want to start my tubers early so I can put out plants, when should I bring my tubers out of storage?

David: Six weeks before planting

Laura: Between April 1 and 15 for Memorial Day planting

Kevin: I agree with starting around six weeks prior to planting.

What medium do you use when rooting cuttings? What medium do you use when moving your rooted cuttings into larger pots?

David: Oasis. It is important to cover with a dome to retain humidity.

Kevin: For making cuttings I use a plastic 9 oz. high ball glass that has holes drilled into the bottom. I plant the cutting directly into potting mix. As for the type of potting mix I use the Pesche's brand potting mix. I also use a dome over the cuttings to retain the moisture for at least a few days.

What/who are your favorite sources for buying tubers (besides CSDS of course)?

David: Consult Dahlia Addict website to see which growers are selling the variety that you are interested in.

Laura: If it is a flower that I really want and can't find from a reputable supplier, I'll buy it wherever I can find it. I will shop suppliers based on the size of the flower – ex: small size blooms I will try to buy from a supplier that specializes in small sizes such as Lobaugh's. For show quality AA – BB size blooms I like to buy from dahlia suppliers like Cowlitz, Creekside, BJs, JS Dahlias, Birch Bay, Ferncliff, and Clearview. I generally stay away from cut flower farms because they usually don't have the show quality varieties that I want.

Kevin: In no particular order, Birch Bay, Cowlitz, Crazy 4 Dahlias, Creekside Dahlias, Lobaugh's Dahlias, Stonehouse Dahlias, Clearview Dahlias, Hollyhill, JS dahlias. I have in the past purchased from: Dahlias from Julie, Delightful Dahlias, Honken Dahlias, BJ's, and Dan's Dahlias.

Do you / how do you isolate any new tubers that you've purchased to make sure they are clean stock?

Laura: Inspect the tuber and the plant as it grows before I transplant it outside. I will watch the leaves for virus symptoms and if in doubt, grow it in a pot in the ground to isolate it.

Kevin: It is impossible to gauge if a tuber or plant is virus free. I grow newly purchased tubers in separate pots to take cuttings from. I observe the cuttings for obvious signs of disease if the cuttings look clean, they go in the garden with the other dahlias. I try to purchase from growers/hybridizers who I think try to do their best in providing clean stock.

Do you separate your tubers or plant them in clumps?

Kevin: I separate my tubers in the fall. If I have a clump of tubers that is impossible to divide in the fall, I will divide it in the spring when I can see growth.

Laura: Divide in fall.

David: Same. Beginners might consider dividing clump in half and planting both sections.

How many seedlings do you grow?

Kevin: Typically, between 15 and 20 just to see what happens.

Laura: None

David: I saved 100 seeds. I'll "play" with the first 50 that sprout.

How many tubers have you potted up to make cuttings? How many cuttings do you anticipate making this spring (or how many cuttings did you make last spring)?

Kevin: I have a potential tuber count of 460, presently there are 374 tubers potted and eyed up. Number of cuttings?? 1000?? 300-350 for me and the rest for the club sale.

Laura: I have very little time and space. I might do a few if I really want the plant.

David: I'll do about 100 tubers and get about 400 plants.

Does rocking or cutting produce better propagation? Also, is either method better for not damaging the future cuttings from the original one?

Definition of "rocking" – removing a tuber's sprout by wiggling until it breaks off as opposed to severing with a blade

Kevin: Both produce cuttings of equal quality. Rocking may damage a portion of the new eyes around the original eye. Cutting into the crown also damages future eyes.

Laura: Always cut. I try to not hold a cutting by the stem, so I don't crush it. I like to hold plants/transplants by their leaves so cutting works best for me.

David: Cut with a blade.

How do you recommend starting dahlia seeds (e.g., paper towels, plant in what kind of medium, heat, cover?)

Kevin: I place my seeds in between two sheets of damp paper towel. After sprouting, plant in potting mix.

Laura: I don't grow from seed but if I did, I would utilize the water paper towel method – which is to lay the seeds on wet paper towels making contact with the paper. Keep the towels moist but not dripping to prevent the seeds from rotting. As the seeds sprout you may plant them in soilless mix. If the roots grow into the paper towel, cut around the sprouted seed and plant with the paper towel in the soilless mix.

David: After they sprout on paper towels, I use a seed starter grow tray.

Do any of you grow in grow bags or containers? What has been your experience with this method?

Laura: Use containers for smaller varieties (i.e., ADS 4000 and higher). Be sure pots are big and heavy to accommodate staking and so that they will not blow over in a storm. Use container soilless mix. A pot needs more care – frequent watering but not so much that any tubers rot, additional fertilizer because the watering will leach out nutrients. Pots have an advantage as they can be moved to chase the sun or shelter the plant as needed by putting the container on a platform with wheels.

David: I don't do this.

Kevin: I grow some in pots. Good experience, just cherry pick which plants you grow in the pots. There are some dahlias that normally grow shorter they make good candidates for a pot.

What varieties do you have that produce the best tubers (easy to divide, produce a lot of viable tubers, good in storage)?

Kevin: I have good success with 20th Ave. Ingrid, Alpen Diamond, Bloomquist sweet, Clearview Edie, Netherton Cindy, Colleen Mooney, Felida Ruffles, Formby Art, Hapet Champagne, Pride of Place

Laura: Parkland Rave, Gloriosa, Just Married, Woodland's Wildthing, Elsie Huston, AC Ben, Nick Sr., Colorado Classic, and Kelsey Annie Joy are usually good tuber producers me.

What varieties do you have that produce the most troublesome tubers?

Laura: On the other hand, I've had less success with Pam Howden, Kidd's Climax, Midnight Star, AC Youge, and, of course, "anything that you really want to keep. Consider pot tubers where the emphasis is to grow with the prime objective of creating a tuber for the next season and not flowers for this. Allow a couple of blooms to verify the variety and then prevent blooming to make the plant put its energy into the tuber development.

Kevin: Sir Richard, 20th Ave. & Baker Rd., Tiny Treasure

How many varieties do you grow? How many dahlias did you plant last year and how many do you plan to plant this year? What is the mix of dahlias you will plant as tubers vs potted up plant vs cutting? Why do you grow the mix that you?

Kevin: Between 50-60 varieties. I plan on around 200 plants for my garden. I will try to plant all cuttings, the only time I'd plant a tuber is when I receive my purchased tubers late and do not get enough cuttings of them. I grow for show primarily so I want a good mix of all the forms, sizes, and colors.

David: 40 – 50 varieties. About 30 varieties in the ADS categories AA-BB. Only cuttings. There is no rotting.

Laura: I plant mostly from tubers – probably around 20% cuttings and 80% tubers. To avoid rotting, I plant them up a bit. At the shows, I exhibit in the 60 – 120 sections (number of AA – BB plants allowed). I like variety and typically, I plant 1-2 of a variety. Last year I had around 170 plants with 70+-

varieties in the AA-BB sizes and another 50+ in the 4000 and up sizes. This year, depending on how my tubers come out of storage, I may have fewer varieties but around the same number of plants.

Do you / how do you clean your pots and trays to reuse from prior years? I try to clean my trays, but they still have dirt especially my heavy-duty trays that have lots of smaller ridges. Is that okay?

Kevin: I soak my pots and trays in a large trough that has bleach water in it. If I have time, I let the pots sit in there for a day or so then spray it down with a hose and air dry.

Laura: I lay a towel in the bottom of one of my laundry tubs to catch the dirt, fill it with water and bleach and clean my pots in that. I hose off trays outside to get them clean.

David: Hose pots outside, rinse in bleach solution, dry in the sun

AFTER PLANTING

What do we know about Hygrozyme hyshield? Have you ever used the foliar spray? It is supposed to boost a plant's immune system. Have you used it?

Kevin: No

Laura: I have not used it. From reading, Hygrozyme is an enzyme solution that is used to rid a plant's root system of any dead material. It seems suited to growing in hydroponic systems for micro green production as the plant's roots systems need to be free of debris in order to take up as much nutrients from the surrounding water. In the ground, I would think that it would break down organic materials such as my mulch and other amendments faster than I would desire. I'm not sure of the effect it would have on the beneficial microbial life in my soil. Hygrozyme Hyshield is a product that seems to "trick" the plant to think it is under attack by pests. The plant responds in ways such as growing thicker stems.

When do you top your plants?

Kevin: I stagger my topping so that first blooms coincide with the different shows that I go to. My first plants get topped end of June/beginning of July. Each size AA, A, etc. have different growing times so each variety is topped at different times. The easiest way for a beginner or anyone who does not show topping can start when the plant reaches 12-18 inches. Like Laura I count back the number of days from a show to my topping date.

Laura: I take a calendar and count the days backward from the show date. Topping is generally AA/A 70 days and B/BB 60 days before a show. By this time the plants should have 4-6 pairs of leaves

depending on bloom size. Multiple plants of the same variety allows for the topping to be staggered to accommodate multiple shows. Topping triggers the plant to begin to produce laterals (where the flowers develop) so if you want lots of flowers and aren't show bound this is a great reason, besides the plant getting too tall, to top your plants. If your plant still gets too tall, you can always top the laterals.

David: After four leaf pairs. Idea is to create laterals and more flowers.

Do you remove the bottom leaves from your plants?

All: Yes. Allows for more air circulation to lessen disease such as powdery mildew. Hinders insects coming up from the ground. Removing bottom foliage results in less plant to spray if you are treating for disease or insects such as mites. While foliage is where photosynthesis occurs, that extra greenery does need to be fed which takes energy away from the flower production so eliminating the bottom foliage helps to direct that energy back into the bloom.

How many verticals (laterals) do you grow per plant?

David: Depends on size of variety. AA and A, four; B, six; BB, eight

Laura: Same as Kevin but I do not limit the laterals on small sizes (ADS 4000 and up). Limiting laterals on the large bloom sizes produces a bigger flower because the plant puts its energy into the flower, not the foliage. The "Other" sizes do not need to have huge blooms – I'm after more blooms with the small sizes. Small size blooms need more grooming because they are continuously producing flowers on all the laterals.

Kevin: Lateral numbers are determined by size of flower. Growing for show will be a little bit different than growing for flowers.

How many plants do you grow to a rebar (support post)?

David: One plant per post

Laura: I prefer one plant per post but last year I did mainly 2 per post.

Kevin: AA and A, two plants per post as there are fewer laterals and I can selectively remove the laterals so there are no laterals crossing.

How do you stake and tie up your plants? Where do you buy your stakes?

Kevin: My first tie off is at around 12" to 18", then about a foot higher. Surround with twine to control laterals.

Laura: Currently I use the 8' green stakes from Home Depot. I am trying to source 7' rebar which would be sturdier for the large plants. If I can get coated rebar, I would consider leaving my stakes out during the winter. I tend to tie too much. If I am pressed for time especially when a storm is approaching, I will just take a long stretch of twine and tie it around the circumference of the plant to secure the laterals.

What spacing do you use when planting?

David: Ideally 36" apart. Experimenting with a staggered pattern this year; more like 18" apart with 3 feet between pairs of rows.

Laura: My dahlias are grown like a farm – in rows. My rows are 4' apart to allow me to walk down the row. In the row, I try to space each plant 24" on center which is doable when planting 1 per post. If I double post, the plants are closer, but I prefer more space in between plants whenever possible.

Kevin: I grow a little bit tighter than most. 16-20" smaller varieties and 20-22" larger sized flowers. On my AA and A sizes I plant two cuttings per pole. For two to a post, posts are 22" on center. Looking for show quality, you need more room.

How do you tell the difference between virus in a dahlia plant vs nutrient deficiency?

Laura: It's a good idea to get a soil test if you think you have any nutrient deficiency. Take a look at all the plants growing in the vicinity, if the surrounding plants have similar nutrient requirements and they all seem to have similar symptoms, you may have a nutrient problem. Don't forget to understand soil pH. Your soil may not be nutrient deficient but if your soil pH is wrong for the plant, some of the necessary nutrients may not be able to be accessed by the plant. If single plants are symptomatic, then it may be by a virus. Learn the symptoms of dahlia viruses. Different viruses have different patterns such as a mosaic pattern, ring spots, distorted leaves, and vein chlorosis. In a nutritional deficiency, a plant with vein chlorosis will have green veins and yellow leaf sinuses (the leaf parts between the veins). In a plant with virus there will be yellow veins with green leaf sinuses. Rip out and trash if in doubt.

I discovered gall on one of my dahlias when I dug them up last fall. What do you recommend be done with the soil / when can I grow again in that area? I threw the dahlia into the trash (not compost) and also dug out 1 cubic foot of soil that I threw away. Assuming I can't plant dahlias there this year, can I plant zinnias or another plant? Could I put a grow bag in the hole and plant a dahlia in the grow bag this year?

Kevin: Remove tuber and trash it. Do not compost.

Laura: Dahlia gall is a very contagious bacteria, can take a few years to show itself, and will live in the soil for multiple years. There are 2 types of dahlia gall – leafy gall and crown gall. Leafy gall looks like a mass of eyes that produce distorted leafy structures. Crown gall looks like a tumor mass on any part of the tuber. It can be spread through insect vectoring, abiotic methods (dirty garden tools and open plant wounds) and through water. This is why it is so important to make sure to remove any plant material from the soil such as broken tubers when digging. It is best not plant in the same area for at least 2 years when a plant with gall was known to reside in that spot. Destroy any tuber and the soil in which it was growing by disposing of it in the trash – not any compost pile. There is no known cure for gall. You may try to plant in pots if you must plant in the same area or try to solarize the soil with clear plastic during times of high heat keeping the soil moist. The University of Oregon has a good website that lists plants that are gall hosts.

How do you fertilize / amend the soil before and when you plant your tubers / dahlia plants outside? How do you fertilize throughout the growing season?

Kevin: Get a soil test to see which nutrients your soil is low in. Our area is pretty high in phosphorus, so a balanced fertilizer is not really needed. I use compost and alfalfa pellets and potash in the hole, if needed, at time of planting. During the growing season, I use fish fertilizer and/or urea. I will foliar fertilize during the season.

Laura: I like to use an extended-release fertilizer when planting. I may change up my fertilizing this year to not be so phosphorus heavy (phosphorus promotes blooms) since our soils are not deficient in it. I have been applying 2 applications of Urea 10 days apart starting in July. Urea is pure nitrogen which is for green growth. Just be careful to not get any on the plant or it will burn it. I tried chicken manure last year but I probably did not have enough for the area that I needed to fertilize so I don't think it made a huge difference. This year I have Warren Vigor's fertilizer which is fish based and I hope it will serve me well. Other than that, I will use compost from my compost bin to amend and I like to mulch with leaf mulch if possible or at least a double grind hard wood – nothing bigger since large wood chips require nitrogen to decompose thereby robbing nitrogen from the soil and the surrounding plants. The other change I am going to try is a no dig method. Digging (especially tilling) kills the beneficial microbes in the soil so I am going to only dig enough to get the plants in the ground.

David: Get a soil test (I use A&L Great Lakes labs) and amend per their recommendations. I add 2 tbsp of Bayer 3-in-1 to each plant when I plant and mulch with 3" of shredded leaf compost. I do not till- agree with Laura.

What is your most indispensable garden tool?

Kevin: Diamond hoe and scuffle hoe. David- Agree!

Laura: My hands – to dig and weed. Then probably my by-pass pruner and trowel.

Do you add / encourage any beneficial insects in your garden? How?

Kevin: Flowers around the garden and minimal use of pesticides.

Laura: I do not introduce any – they usually don't stick around. I learn what beneficial insect larvae look like so that I don't kill them accidentally, limit spraying/stay organic as possible, and use host plants to provide for the larvae and adults to grow and feed. I used only organic sprays last year on my dahlias and I never use any chemicals in the vegetable garden.

During what growing tasks do you make sure you are sterilizing your tools between each plant? For example, do you sterilize between each plant when you are cutting blooms from multiple plants for a bouquet? If you cut a bud off when pinching do you sterilize? And if yes why does that need sterilizing but if you pinch it off with your fingers, you aren't (I assume) sterilizing your hands or gloves between each plant. Same question with removing lower leaves?

Kevin: Cutting tools get sterilized after each plant. If done properly you can disbud with your hands without touching any fluid from the plant. Same thing with pulling off lower leaves.

Laura: Same as Kevin. I use a water and bleach solution to sanitize my tools with a separate dish water solution to clean my tools after sanitizing. I wear an apron to keep the bleach off my clothes and I use old wash clothes dipped in bleach to sanitize my hands between plants.

David: Same as Kevin. Using Virkon-S instead of bleach this year.

How rampant do you think virus and gall are with dahlia plants? What do you think the future of our beloved flower is? Are there any other steps you take besides what has already been discussed to maintain clean stock?

Kevin: It is here to stay we can only minimize its spread.

Laura: I agree with Kevin. We all must be responsible to mitigate the spread but it's like Covid – we have to learn to live with it and hope science finds a way to immunize the plants if that's possible?

David: Agree

DIGGING AND STORING

How did you store your tubers this winter (location in your home, storage container, storage medium, etc)? What temperature and humidity were your tubers generally kept at? What worked / what lessons did you learn as you are taking your tubers out of storage.

Kevin: I use 4 methods to store depending on the tuber clump. Pot tubers get stored in a Styrofoam box. The pot comes out of the ground then into the storage box. If I have a clump that looks impossible to divide the clump is put in a styro with cedar or pine shavings lasagna style (pine, clump, pine, clump, etc.) The majority I divide and either use the saran wrap method or place in vermiculite. My storage area is a temperature varies during the winter. Typically, it is in between 40 and 50 degrees.

Laura: I use the Saran Wrap method to roll each tuber and then I store in large Styrofoam boxes. Unfortunately I don't have a storage space that is cold enough for tuber storage. My garage is not heated and I'm not home most of the time to move the boxes should it begin to freeze. I've tried cedar shavings and vermiculite but the tubers tended to dry out due to my basement being too warm. The Saran Wrap has worked best to keep the tubers from drying. I have done pot tubers like Kevin, but I don't have a lot of room so tuber dividing, and storage is better for me.

David: I divide in the fall and store 2/3 of tubers in vermiculite and 1/3 in Saran Wrap. Pot tubers stay in their pots and go into a Styrofoam ice chest. I keep all in a heated garage above 40 degrees.

Do you remove your posts / stakes every year? Why or why not?

Kevin: Some I remove, some I let the stay in the ground.

Laura: At the present time, I remove at the end of the growing season, so they don't rust or get ruined.

David: Remove them all and restake in the spring.