

Episode 124 show notes and advice

Episode description

From the intriguing science behind dahlia plants to specialist breeding programmes producing beautiful new varieties, in this episode, Sarah catches up with Josie Lewis, Head Gardener at Perch Hill, to share everything you need to know about this cutting garden classic.

In this episode, discover:

- ❖ How to use the Perch Hill's dahlia breeding programme to germinate your very own seeds
- ❖ A brief history of dahlia plants
- ❖ What to look for in an ideal dahlia plant, from height and form to colour and vase life

episode 124 advice sheet

Breeding programmes (2:25)

Taking place across The Netherlands, the UK, the USA, and New Zealand, many countries have started experimenting with advanced breeding programmes to cultivate brand-new types of dahlias.

Josie has been experimenting with her own crossbreeding programme, and the seeds she selected last summer have germinated. She explains that successfully crossbreeding seeds is a total game of chance, which can sometimes produce terrific results.

The first dahlias were discovered in Central America, and were single varieties and very open, which gave pollinators access and allowed them to prolifically reproduce. At the beginning of the early 19th century, breeders started to breed dahlias selectively, and some of the dahlias with recessive traits (such as double petals) were bred with the classic, single varieties, producing terrific results.

Humans have two sets of chromosomes, but dahlias are octoploids, with eight sets of chromosomes, which means there is scope to breed almost infinite forms and colours.

Dahlias also don't have a blue gene which means that you'll never get a true blue dahlia. In America, they are currently trying to map the dahlias genome, so they have full genetic clarity. Although Josie explains that this is an incredibly tricky process and will take many years to complete.

Dahlias also have transposon, which means they can almost cut and paste a key genetic element onto a new place in its genetic sequence. So, even though you might think you have a stable plant, it can move this bit of DNA and produce different mutations and variable qualities. Sarah explains that she's seen this with a few different varieties at Perch Hill and is truly fascinating.

Dahlias also can produce 'sports' (lusus) which means that a red dahlia might grow an orange branch, which in turn, you can take cuttings from and grow on, although this can take up to three years to do.

Sarah says she has seen this with many different varieties – most notably, Dahlia 'Autumn Orange' which she says can change from a red and yellow stippled effect on the petals to a more vivid orange.

The crossbreeding process (7:46)

- ❖ Choose two seed parents that you think might cross well.
- ❖ Next, place an organza bag (that you would normally keep jewellery in) over the bud and draw the strings tight. This will stop the bees getting in and pollinating and will let enough light through for the flower to bloom.
- ❖ The next step is about tapping the pollen from another variety onto your chosen dahlia. You can do this with a paintbrush for accuracy. It's been suggested that three days in a row produces good results.
- ❖ It's important to identify the stigma, which Josie says can be found through removing some of the petals if it's not quite as obvious.
- ❖ Once the pollination process is complete, place the organza bag back over the flower to prevent additional bees visiting, and let it mature. It's important to try this method in dry weather to give the dahlia the best chance possible. You don't want the seed head to become soggy either.
- ❖ Six weeks later and the seedhead will mature. The flower might look a little bit brown and crispy, which should give you a clear indication that the seeds are ready.

- ❖ Look for thick black seeds, the internet will be able to help you to identify viable and nonviable seeds. This can be done by hand – you won't need tweezers to remove the seeds. Store the seeds back in the organza bag over winter.
- ❖ Sow the seeds in mid-March and wait to see the results!

Josie recommends Kristine Albrecht 'DAHLIAS: Seed to Bloom: The Dahlia Grower's Companion' which she says is packed full of useful information and top tips. Available at all good bookstores.

Sarah and Josie are visiting Holland in August and will be selecting new and interesting varieties for breeding, which they will trial at Perch Hill. In particular, keep a look out for the new Collarette varieties.

Key attributes of the perfect dahlia (14:54)

- ❖ Sarah says she loves the copper/mahogany tones which are super rich and varied. Burnt orange, toffee, and crème brulee colours are also firm favourites.
- ❖ Josie favours leaf colour and says she isn't as keen on varieties with darker leaves. Leaf form is also important, as some varieties have particularly beautiful foliage.
- ❖ The form of the dahlia is important too – singles are always a good choice along with the pom pom varieties, which always look fantastic.
- ❖ Height – if you're growing for cutting, varieties with long, strong stems are the best choice.
- ❖ Finally, flowering time is also something to consider. Dahlia 'Totally Tangerine' is always the first to bloom, and 'Blackjack' is often the last. Will you be looking to fill a colour gap or kickstart your perfect summer/autumn garden?
- ❖ Sarah chooses extended vase life as a priority, as she believes cut flowers should last and last. Working with breeders over years, Sarah and the Perch Hill team have developed dahlia varieties which she says have a much-improved vase life, such as Dahlia 'Molly Raven and 'Perch Hill.'
- ❖ Josie is currently trialling combinations in the polytunnel at Perch Hill using Dahlias 'Schippers Bronze,' 'Hermione' and 'Lou Farman' too. Look out for vigorous plants and good seed setters for the best dahlia possible.

To book onto an open day at Perch Hill, visit the web page here:

<https://www.sarahraven.com/courses-events/garden-open-days>