



Dahlia Alert

It is All About Dahlias



Background Information

The Dahlia industry, especially for Cut flower production, has increased rapidly the past few years.

The strong surge in demand and the request to ship the product earlier meant the process had to start earlier than in the past.

Unfortunately, Mother Nature was not very helpful last fall and the air and soil temperatures did not drop early enough. Plants were very much "alive" yet when harvested and were not ready to start the much needed rest period this past fall. In order to satisfy "early" orders for customers in the west, the process of washing, curing etc. had to start earlier (perhaps too early). COVID-19 restrictions with fewer people working did not help the situation.

All tubers exported to North America must be thoroughly washed. Most likely the skins did not harden enough to withstand the pressure of the water thereby removing some of the outer layer of the skin which caused the dark layer to show up. These patches "appear" bad but are perfectly fine.

The good thing is that although some look ugly, they are still very viable tubers and are guaranteed to grow and produce as normal.

Perhaps because of the warmer temperatures this past year, there has been a visible increase in 2 types of bacteria which have been around for years but were not as visible.



The 2 bacteria are LEAFY GALL and CROWN GALL

LEAFY GALL

RHODOCCUS 'fascan' is the causal agent of Leafy Gall which could be described as a parasitic plant. It affects a wide host of plants such as herbaceous perennials, Leucanthemum, Viola, Veronica, Hosta, Phlox, Sweet Pea, Euphorbia, Forsythia etc.

LEAFY GALL has been around a long time and was first recognized as a potential threat in 1901. So it is NOT something new.

In the case of Dahlias, the potential threat is minimal since the tubers are a one-year crop from cutting to tuber. Tubers being planted at this time were started last year in early Spring.

For the people who use tubers as Cut Flowers and discard the tubers at the end of the season, there is nothing to worry about.



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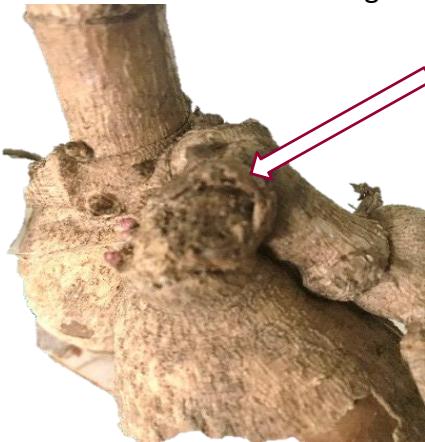


For the growers who hold tubers over or the collectors, certain precautions can be taken such as such as cleaning the tubers well upon harvesting to avoid possibly spreading the bacteria.

LEAFY GALL:

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Next season, prior to planting, tubers can be soaked in Zero-Tol or a Hydrogen Peroxide solution which will benefit the new crop as the rooting process will go faster. If it makes the growers feel better, they can do the same for this season. For the "less-green" people a 10-minute dip in bleach (chlorine) water will do fine as well.



CROWN GALL

AGROBACTERIUM 'tumefaciens' is the causal agent of Crown Gall which could be described as a "tumor disease". It also affects a wide variety of plants, such as walnuts, grape vines, stone fruits, nut trees, sugar beets, horseradish, rhubarb and certain perennials. It is active at warmer temperatures (which Dahlias do not necessarily like).

Remember, both Gall bacteria will be more active on plants under stress. Stress is never good for anyone, even for plants....

Questions and Answers

Question: **Will the disease spread to an existing crop?**

Answer: *The chances are theoretically possible, but practically there is only a very slim chance.*

Question: **If there are more tubers in the package, will the bad one infect the good ones?**

Answer: *These bacteria spread mostly through water or plant sap, but it will take years so infection from this is about one in a million to happen.*

Question: **If I plant an infected plant with either bacteria, what could possibly happen?**

Answer: *The tuber with possible Leafy Gall, will produce foliage but no flowers, so the plant can easily be discarded later without any harmful effects; however some may show "wild" foliage on one side and a perfectly good stem with flowers on the opposite side of the tuber.*



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The plant with possible Crown Gall infection will produce a weaker stem with flowers but no further damage. If the plant produces a weaker stem it could be discarded at the end of the season.



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Question: **What could happen to my flower bed? Can next year's Dahlias be affected?**

Answer:

For all cut flower crops which are being re-planted every year, crop rotation is a good habit for all items, not just Dahlias. For instance, Tulips should never be planted in the same bed the following year. What can be done, which is excellent for the soil, is to plant a crop of Tagetes which will "clean" the ground bed of more than one problem, such as nematodes. Sterilize all tools, especially knives and clippers, but this should always be done. Cleanliness is next to Godliness!

Question: **If I see blackish-colored fingers on the tuber (see picture), is it safe to plant them?**

Answer:

These tubers are perfectly fine to plant. If you need to be convinced, cut one of the fingers open and you will see the solid insides.



Question: **If the tuber seems dried up, are they still good to plant?**

Answer:

Dehydration occurs with many bulbs in storage, especially when trying to keep moisture low, as too much moisture causes molds to grow on the bulbs. Tubers may be hydrated by soaking for 10 to 30 minutes in plain water. When a disinfectant like Zero-Tol or Hydrogen Peroxide or RootShield is added, the rooting process will speed up and you are off to a faster start.

Always remember that there are other factors leading to wounds in plants including cultural practices, grafting, freezing injuries (should not pertain to Dahlias), soil insects, other animals in the environment. (Prime example is tumors on trees after a harsh winter).



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Recap

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- Please discard any badly affected tuber and request credit.
- Please discard all tubers you are uncomfortable with to plant and request credit.
- Tubers which have been in same package with an infected tuber are perfectly fine to plant.
- For faster response, dip all tubers in water with above mentioned biologically safe materials.
- If it is later in the season and some varieties did not grow, or produced poorly, contact us please.

A Special Thank you

We are grateful for the support and help we received from
University of Wageningen,
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Without their assistance, we would not have been
able to put these recommendations together
in such a short time.

For further questions,
please do not hesitate
to contact us at
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