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Can You Live With Anthracnose?

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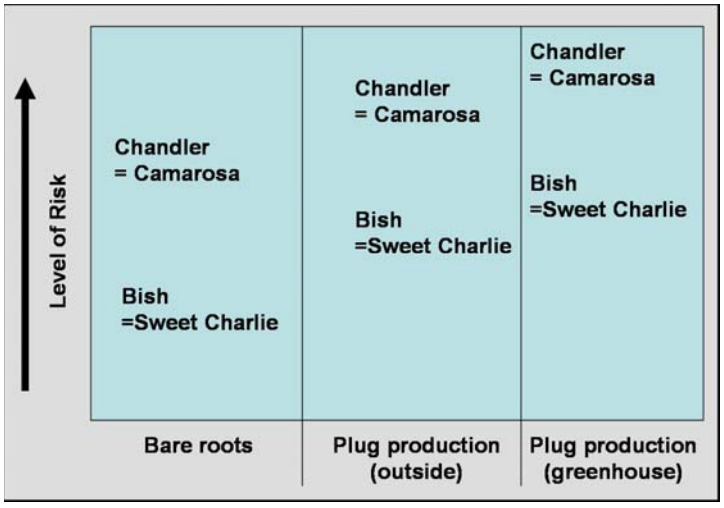
Several nurseries in the North Carolina Certification program have encountered anthracnose. Many growers have indicated that the plant supply is tight and they would prefer to use these potentially infected plants despite the risk. This article attempts to provide ideas and recommendations to manage tips or bare root plants that have been exposed to the anthracnose pathogen (in this case *Colletotrichum gloeosporioides* (Cg)).

First, plants that were grown in a nursery with diagnosed problems of anthracnose will present a risk to fruit producers. The best way to decrease the risk of disease is to use plants from a source that has not had reports of anthracnose. For many growers an alternative supply is not available.

Second, the variety and plant source (plug or bare root plant) can be an important thing to think about (see figure). Bish and Sweet Charlie will have a lower risk of problems than Chandler and Camarosa. The risk of problems will be lowest if infested bare root plants are used. Infested tips will lead to higher anthracnose problems due to the dependence on misting to get rooted plants. Finally plug plants grown outside will have a lower level of disease than those grown in the greenhouse (it appears there is less constant humidity and more sun drying; this observation appears to hold even after heavy rain events).



What to do if infested tips are the only option a grower has?

A series of steps are presented that seek to provide ideas and some recommendations that can be done to keep the anthracnose problem to a minimum. Even so, there is no guarantee that problems will not be encountered.

1) Dip tips in Abound™. Directions (see label): Abound (a.k.a. Quadris) – Mix 5-8 fl. oz/100 gal of water. Dip plants for 2-5 minutes. Plant treated tips as quickly as possible. (This treatment has been developed for bare root transplants with a known problem of anthracnose). Ensure all worker and environmental protection measures are followed.
2) After plugging, space trays as far apart as practical. If the pathogen is present, it can spread from tray to tray and a space will slow this spread. (CAUTION to consider – plants at the edges of trays tend to dry out faster. Spaced trays will result in more dry cells and hand watering may be necessary).
3) Scout trays daily. Trays with hotspots of lesions on the leaf petioles, with a wilted leaf (usually the youngest leaf in the whorl), or stunted and dead plants should be culled immediately.
4) Do not over water (small droplet size is better than large droplet sizes).
5) Initiate captan + Topsin-M cover sprays after week 2 and repeat every 5-7 days. Spray to leaf run-off; do not drench trays with fungicide solution since captan can cause plant stunting. (Cg is usually sensitive to Topsin-M).
6) (Additioanl ideas include use of chlorox at 20-50% to treat the alleys between trays at night and workers must use extreme sanitation, and this includes fresh clothing each day).
7) Plant plugs as soon as they are ready for field setting and never handle plants when wet.
8) Monitor plants in the field. Infected plants will first appear stunted and/or yellow; sometimes the inner leaves will wilt and ultimately the whole plant may collapse. Cull all such infected plants.
9) Captan cover sprays could be applied during the establishment phase (allow 1-2 hrs for fungicide to dry on leaves) and 2-3 more times on a 7-10 day schedule. (The strobilurin fungicides like Abound, Cabrio and Pristine are best saved for the spring as only 5 applications are allowed).
10) Minimize hand activities (especially when conditions are warm and wet) e.g. do not hand prune leaves.
11) Initiate fungicide applications in the spring as previously published.

In the case of bare root plants, start at step 8. Hopefully, these steps will help reduce anthracnose problems for growers who have no alternative source of plants. Anthracnose can be managed but the levels of risk must be considered – as outlined here.