Quality of growing media matters

FACTSHEET

WEEDS IN THE CULTURE ON SUBSTRATE

Weeds in the culture are undesirable. They can enter a crop unnoticed via various infection sources and disrupt the culture. Although it is not impossible for the delivered substrate to be the cause of a weed contamination, in the vast majority of cases, other sources are to blame. How can problems be prevented?

Weeds in the culture

Weeds are plants that grow where they are not wanted. In greenhouses, they are always undesirable, and it is important to identify the cause. Possible infection sources include weed seeds around the greenhouse or container field, purchased plant material (e.g. rooted cuttings), irrigation water, cultivation materials (reused pots, coir poles, etc.), and covering materials such as not sanitised wood chips. The way unused substrate is stored (insufficiently covered) can also be a cause. Additionally, remains of used substrate or sweepings that end up with unused substrate or in the potting machine are known sources of weed contamination.

In specific cases, the delivered substrate itself may be the cause of the weeds. In such cases, prompt and thorough research is necessary to be certain. To determine the cause of a contamination, knowledge of weed groups is important. A distinction is made between five groups of wild plants: peat plants, peat weeds, field weeds, ferns, and tropical weeds. This classification helps to establish where and when a contamination may have occurred. Extensive information about this can be found in the RHP Peat Bog Flora.

Weeds in substrates?

Products such as mineral wool, perlite and expanded clay granules are free of weed seeds. Other raw materials could potentially contain weed seeds, although risks are minimised through the use of RHP-certified products thanks to strict process control and monitoring throughout the chain.

To establish whether the delivered substrate is the infection source of weeds in the crop, it is important to quickly start thorough research. The weed test can be used for this purpose. The following samples can be used:

- ✔ an available counter sample from the respective delivery/deliveries
- ✔ the relevant substrate, still unused and responsibly stored at the greenhouse

In special cases, core sampling may be carried out if technically possible. RHP then splits the pots in a specific manner.

What are the guidelines of the RHP quality mark?

The RHP quality mark sets strict requirements for raw materials and growing media, including with regard to weeds. The sources, production processes, and transport of substrate raw materials are monitored based on process requirements. These are checked during inspection visits. As a result, RHP-certified products carry a reduced risk of weeds.

A zero tolerance applies to factory-produced mineral products such as perlite and expanded clay granules. The same zero tolerance applies to all composted and sanatised organic raw materials, such as compost, wood fibre, bark, and rice hulls. For all other substrate raw materials, while there is no zero tolerance, very strict standards apply. For RHP-certified raw materials such as peat and coir, the risk of weed seeds is minimised through strict process control and monitoring throughout the chain, starting from the sources where these raw materials originate.

For the RHP quality mark, raw materials are regularly sampled and analysed for the presence of viable weed seeds using a weed test. This test must demonstrate that process control is functioning effectively. The results of the weed test are assessed against the standards set by RHP.

In addition to raw materials, the locations where the substrates are produced are also assessed against process requirements. In other words, these sites must also be clean to prevent contamination of clean raw materials.

Transport is likewise part of this control — up to and including delivery to the grower, in the case of unpackaged substrate.

Advice for the user

To minimise weed problems in the culture, good operational hygiene in and around the greenhouse is essential. This prevents weed seeds from spreading into the crop. Key points of attention:

- ✔ regularly remove weeds from the crop and mow them around the greenhouse
- ✔ clean or disinfect cultivation materials
- ✔ start with clean plant material in clean crates
- ✔ check and maintain filters (maximum 0.25 mm) in irrigation systems
- ✔ clean Danish trolleys before they enter the greenhouse
- ✔ regularly remove weeds around open water storage such as silos or basins to prevent windblown seeds

- ✔ **weeds can enter the culture in several ways**
- ✔ **keep the (immediate) culture environment free of weeds**
- ✔ **plant material, water, and cultivation materials can also cause weed problems**
- ✔ **occasionally, the substrate may play a role, which can be demonstrated with prompt, thorough research**
- ✔ **RHP-certified substrates minimise the risk of weeds in the culture**

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