



How to handle growing media properly



June 2024

Preliminary note

RAL Quality Assurance defines specific quality specifications for growing media. Gütegemeinschaft Substrate für Pflanzen e.V. (GGS) independently monitors compliance with these requirements. By submitting to RAL Quality Assurance, growing media producers submit to a strict and neutral system to assure a high quality standard for their products.

However, this quality should also be guaranteed after delivery to the users. Users, too, can play a key role in maintaining substrate quality by ensuring proper storage and application of the substrates.

The present leaflet sets out the principles that need to be followed. The information is based on the state of knowledge as at April 2018; GGS reserves the right to revise this leaflet.

1 Storing growing media after delivery

1.1 Storage conditions / storage duration

When storing growing media, ensure that the temperature in the growing media does not rise to excessively high levels, as higher temperatures create excellent conditions for microorganisms and facilitate fungal and bacterial growth. It is helpful not to expose growing media to direct sunlight. As a matter of principle, you should use growing media as soon as possible after receiving them.

Excessively high growing media temperatures can result in fluctuations in pH value or also nutrient loss (immobilization). Direct exposure to sunlight may result in (in some cases substantial) differences in growing media temperature and cause additional problems.

Always subject growing media that have been stored for a lengthy period of time to a full chemical analysis and pot growth test. Consult the growing media producer before deciding if and how to use the growing media.

1.2 Changes in volume

As a matter of principle, the volume stated at the time of manufacture (DIN EN 12580) applies as stated. Pressure or microbial decomposition processes occurring during storage may lead to compaction and irreversible losses in volume.

1.3 Specific aspects of bulk growing media

Packaged growing media are protected against many (not all) environmental impacts. Bulk growing media require specific measures to ensure that they retain their original properties in storage.

The storage conditions must be impeccable in terms of phytosanitary considerations. Take adequate steps to prevent the occurrence of impurities in the form of foreign matter or weed seeds. Especially protect the growing media storage space against weather exposure (e.g. wind,

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rain, direct sunlight and therefore desiccation) and contamination.

Empty the growing media storage space completely before re-filling it, i.e. ensure it is free from any "old" material (first in - first out) or foreign matter of any kind whatsoever.

Label the growing media storage spaces with clear and unequivocal information to prevent mix-ups or misunderstandings when applying the growing media.

1.4 Specific aspects of growing media containing mineral or organic slow-release fertilizer

Never store growing media containing mineral or organic slow-release fertilizer (e.g. coated fertilizers and hoof and horn fertilizers), as the storage can have severe implications for the usability of the growing media.

Depending on the type of fertilizer, slow-release fertilizer passes its nutrients into the growing media over a defined period of time with the result that the growing media's salinity rises automatically. When these growing media are used after having been stored for too long, they may cause damage to the plants.

If you store growing media without following the recommendations, it is advisable to have a full chemical analysis carried out before using the growing media. Separate any coated slow-release fertilizer prior to the analysis (because the analysis will be meaningless if you don't).

For the reasons explained above, always check with the growing media producer before using the growing media.

2 Using growing media

2.1 Modifying growing media after receipt

We strongly recommend that users do not add any additives to the growing media as these could change the growing media's properties in unforeseeable ways.

2.2 Watering

Over-drying makes growing media re-wetting more difficult. Excessive watering may cause the growing media to become muddy.

2.3 Fertilizing

Depending on the amount of fertiliser contained in the growing media and the respective crops' nutrient requirements, provide adequate fertilizer applications during cultivation. If the amount of fertilizer applied is too low, the plants may suffer an irreversible nutrient deficiency. Plant damage can also ensue from excessively high concentrations of nutrients.

To ensure optimum nutrient supply it is necessary to take growing media samples at regular intervals during crop production and to have full growing media analyses made.