

Information Sheet No. 7-2-1

General potting mix

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Definition

A general potting mix is a growing medium suitable for the establishment and development of a wide range of plants in containers.

General potting mixes can be of regular or premium grade. Regular grade general potting mixes require the addition of a balanced fertiliser at potting, whereas premium grade general potting mixes do not.

A general potting mix is an 'all-purpose' potting mix according to Australian Standard AS 3743 (2002). See Information Sheet No. 3-9, "Introduction to Australian Standard AS 3743-1996 for potting mixes" in the "Producing Quality Compost" package of Information Sheets for more details (Recycled Organics Unit, 2002a).

Uses

General potting mixes support the growth of a wide range of plants in containers. Such mixes can be used for indoor and outdoor plants in containers or tubs, and for

establishing and growing plants in a commercial plant nursery.

Benefits

Potting mixes are produced by blending a range of materials together to achieve the desired balance of drainage, moisture retention, aeration and nutrients.

Potting mixes that contain a proportion of recycled organics product (e.g. *composted soil conditioner* or *composted fine mulch*) in the mixture have a number of advantages over similar products that contain *raw* or un-composted organic materials (e.g. bark) or other inorganic or inert materials.

The organic matter in the composted recycled organics fraction can:

- Hold water and supply it to plants effectively between waterings;
- Release nitrogen, phosphorus, potassium and trace elements needed for plant growth;
- Temporarily bind nutrients when

Plate 1. Potting mixes manufactured from composted and inert (e.g. sand, vermiculite, pumice) materials.



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fertilisers are applied, thereby increasing the efficiency of fertiliser usage;

- Microorganisms present in the composted fraction can also suppress plant diseases and reduce the need for fungicide and bactericide applications. Such mixes may not require steam sterilisation before use (as do peats, for example, to remove potential plant pathogens), and
- Mature composted recycled organics products do not undergo significant decomposition in the pot, and therefore do not undergo significant settling or compaction with time.

Risks

Minimal. Mature composts used in potting mixes are stable and can stimulate plant growth. They are pasteurised, meaning that they are free from plant pathogens (disease organisms) or weeds and seeds.

Additives

Composts are usually combined with an inert support material to maintain air-filled porosity and to ensure that a suitable level of water holding capacity is obtained. Examples include: sand, gravel, perlite, vermiculite, scoria and pumice. Composts can comprise up to 50%

(by volume) of a mix; the remainder consisting mainly of the inert support material.

Regular grade general potting mixes require a balanced fertiliser at time of potting to provide adequate nutrients for plant growth. Premium grade general potting mixes contain enough soluble nutrients to maintain plant growth for one month, though, thereafter a balanced fertiliser needs to be used.

Wetting agents can be added to improve wettability, and zeolites may be added to improve fertiliser efficiency through retention of soluble nitrogen (NH_4^+ ions).

Application methods

Potting mixes are added to horticultural pots and planting can proceed directly into the mix. Very dry potting mixes may require some pre-wetting with water before use.

Definitions*

Composted soil conditioner

Any pasteurised product which has undergone composting for a period of not less than 6 weeks (excluding polymers which do not degrade such as plastics, rubber and coatings) that is suitable for adding (incorporating) to soils. Composted soil conditioner has not more than 20% by mass of particles with a maximum size above 16 mm.

Composted fine mulch

Any pasteurised product which has undergone composting for a period of not less than 6 weeks (excluding polymers which do not degrade such as plastics, rubber and coatings) that is suitable for placing on soil surfaces. Composted fine mulch has not more than 20% by mass of its particles with a maximum size above 16 mm.

Raw product

Any compostable organic material that is distributed as a recycled organic product without having been subjected to a pasteurisation or composting process, and may contain weed propagules and pathogenic microorganisms.

* Recycled Organics Unit (2002b).

Important references

- Recycled Organics Unit (2002a). Producing Quality Compost: Operation and management guide to support the consistent production of quality compost and products containing recycled organics. Third Edition. Recycled Organics Unit, internet publication: <http://www.recycledorganics.com>
- Recycled Organics Unit (2002b). Recycled Organics Industry Dictionary and Thesaurus: standard terminology for the recycled organics industry. Recycled Organics Unit, internet publication: <http://www.rolibrary.com>
- Standards Australia (2002). AS 3743—Potting Mixes. Standards Australia, Homebush, NSW.

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