

Spent mushroom compost generated by mushroom production

Keywords: spent mushroom compost • soil improver • organic matter • not acidifying

Key facts:

- **Product Category:** soil improver
- **Input material:** (wheat) straw, horse manure, gypsum, chicken manure, peat, lime and water
- **General appearance:** solid
- **Nutrient Content (N-P-K %):** 0.6-0.4-0.9
- **Product market status:** available on the market during the entire year. Also available under organic certification. Type 1 = fresh ; type 2 = composted spent mushroom compost.
- **Limitation of application:** Due to its alkaline features (contains CaCO₃ and CaSO₄), it has deacidifying features. It contains salts (EC value = 6,4 mS/cm). Type 2 (composted) contains 60% less salts.
- **MS Authority permit availability:** no restrictions
- **Geographical area:** no restrictions
- **Product price:** varies between 10€/m³ and 25€/m³, mainly dependent of the amount and transport costs. Type 2 has an



Summary:

Champost or "spent mushroom compost" is a by-product of mushroom cultivation. It is a mixture of mushroom substrate and casing soil. The mushroom substrate consists of horse manure, straw, chicken manure, gypsum and water. The casing soil is composed of peat and lime and lies on top of the substrate. The peat in the casing soil is an excellent water reservoir for the mushroom. After the cultivation of mushrooms, the mushroom substrate and casing is directly loaded on truck and ready for disposal. From then on, the mixture is called "spent mushroom compost (SMC)". SMC has several benefits for end-users, such as high organic matter content, free of pathogens, free of odour, homogenous, acidity neutraliser, year round available, ... It can be used in several sub sectors: horticulture, arable farming, arboriculture, ...

One ton of spent mushroom compost contains on average 340 kg DM, 214 kg OM, 6.3 kg N, 4.0 kg P₂O₅, 8.7 kg K₂O, 2.4 kg MgO, 0.9 kg Na₂O, 2.3 kg Cl and 45 kg CaO.

How to use:

- **Type of farming:** horticulture, arable farming, arboriculture,
- **Cultivation methods:** open field, greenhouses
- **Recommended crops:** all types of crops for example potatoes, wheat, sugar beet, cabbages, zucchini, celery root, leek, tomato,...
- **Application doses :** 10 - 25t/ha, but depends on local legislations concerning applications of fertilisers and manure. For start-up of lawn, a layer of 3 – 4 cm is recommended (3-4m³/100m²). For planting, a layer of 1 cm (1m³/100m²) is recommended. Good homogenisation is crucial.

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Key product features:

- Per ton product: 340 kg DM, 214 kg OM, 6.3 kg N, 4.0 kg P₂O₅, 8.7 kg K₂O, 2.4 kg MgO, 0.9 kg Na₂O, 2.3 kg Cl, 45 kg CaO.
- It does not induce acidification
- Homogenous
- 100% free from weed seeds.
- Spent mushroom compost help holding the water for a longer time in the soil during dry summers

Key product benefits:

- High organic matter content: one tonne of spent mushroom compost contains about 210 kg high quality organic matter, of which 60% is still available in the soil after one year.
- Free of pathogens and weeds. There are no impurities such as stones, plastic or glass.
- Spent mushroom compost can be used in soils with a low pH as soil acidity neutraliser.
- The product is easy to apply using standard manure spreaders.
- It is free of odour and ammonia, so there is no problem for neighbours during application.

Competitive position and advantages:

Spent mushroom compost is an excellent source of humus which is readily available all-year-round. Although much of its nitrogen content has been used up by the composting and growing mushrooms, it remains, however, a good source of general nutrients (NPK plus a full range of trace elements), as well as a useful organic soil conditioner.

