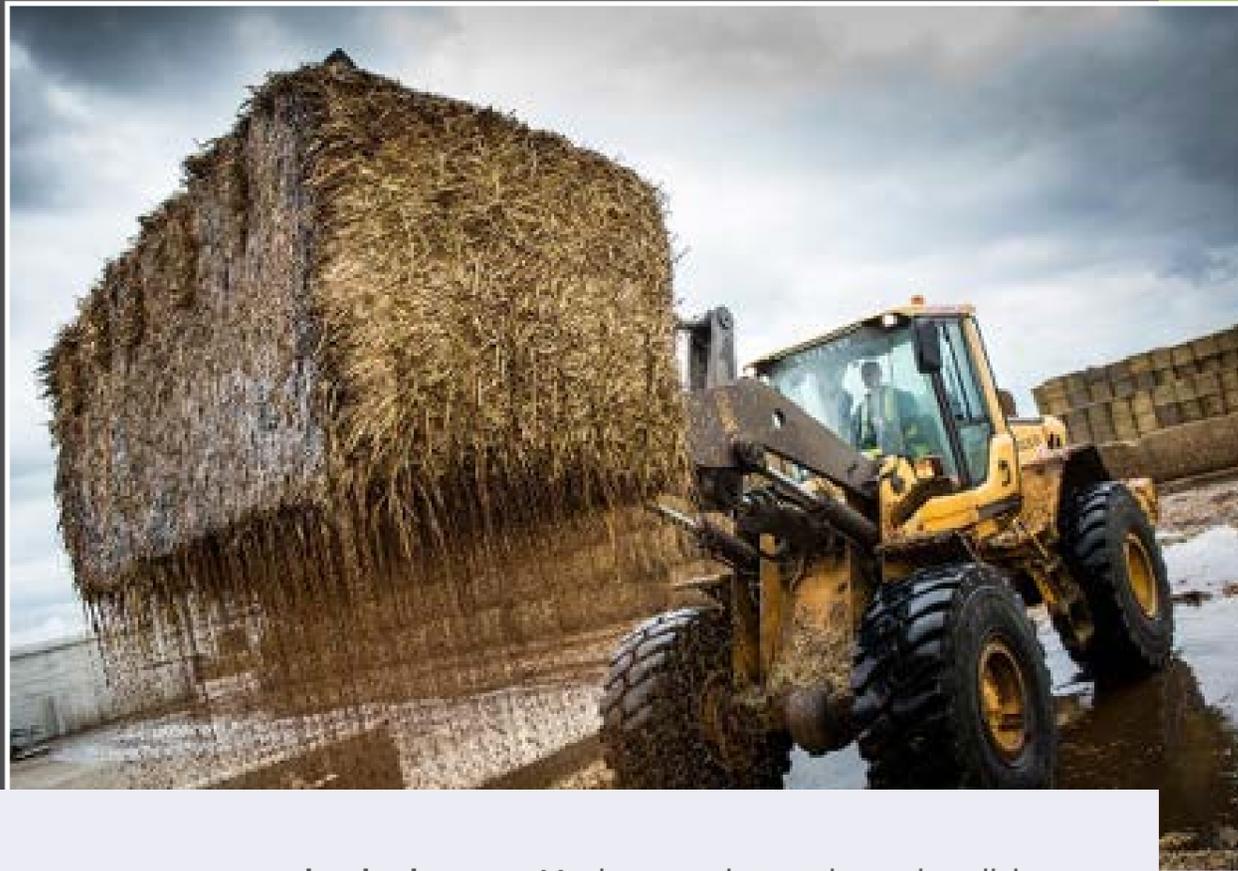


# Phase 1-2-3 for making of Mushroom Compost

<http://www.monaghan-mushrooms.com/what-we-do/composting/>



**There are many processes involved before our mushrooms arrive on the supermarket shelves. We believe that goodness in, equals goodness out, that the mushrooms we grow are only as good as the substrate they're grown from.**

Making mushroom compost is a complex process that we've been perfecting for 30 years.

Mushroom substrate is a unique living organism; it varies according to the environment it is produced in. We have composting sites across Europe, Ireland, the UK and Canada. Each of our compost sites are run by a team of specialists, taking raw materials from the local area. As well as making substrate for our own farms, we also make substrate for other mushrooms growers.

## There are 4 main phases for making compost:

### Phase 1

We source all the raw materials for substrate, locally. Bales of straw are mixed with poultry manure, horse manure, water and gypsum. When mixed, the material is filled into large aerated concrete vessels, called bunkers. During this phase the substrate reaches temperatures of 80 degrees Celsius.

After 11 - 13 days the Phase 1 process is complete, ready for the Phase 2 process to begin.

### Phase 2

The material is removed from the bunkers and filled into closed tunnels, where we monitor and control a series of temperature changes- the most important of which is pasteurisation. Pasteurisation helps remove any unwanted organisms from the substrate. Pasteurisation and conditioning of the substrate takes approximately 6 days. The climate controlled "tunnel" heats the substrate to 58 degrees Celsius for pasteurisation and then conditions it at 48 degrees Celsius.

### Phase 3

Once the phase 2 process is complete, the substrate is cooled and removed from the Phase 2 tunnels. Mushroom spawn is added, and the substrate is then re-filled into Phase 3 tunnels. Spawn is usually made with rye or millet grain that has been sterilized and inoculated with mushroom tissue (mycelium). This Phase 3 incubation process takes 15-17 days, and during this time mycelium grows throughout the substrate.

After the 15-17 day incubation period, the Phase 3 substrate is loaded into specially designed lorries for transport to the growing houses.

As well as using the substrate for our own farms, we sell phase 2 and 3 substrate to other growers.

### Phase 4

As the mushroom substrate is filled into the growing rooms a layer of peat is applied to the surface of the material. The layer is called the casing layer and is essential for the formation of the mushrooms. Over a 3-4 day period, the mushroom tissue grows throughout the substrate and up through the casing layer.

The environment is then altered to simulate an autumn day, which promotes the formation of mushrooms. As a result, tiny mushroom heads (pins) begin to appear. During the next two weeks the levels of moisture, temperature, humidity, carbon dioxide and air movement are carefully monitored.

The pins eventually grow into mushrooms. The mushrooms are picked by hand to maintain the highest possible quality. All our mushrooms are cooled quickly after harvesting and are transported in refrigerated trucks.

The above is 40 days. The mushrooms then need to pin and grow. There is only one Phase Three Compost yard in South Africa at Denny Shongweni. Medallion and all the other farms are Phase 2.

Medallion from touching straw to picking the first crop of mushrooms is 6 weeks being 42 days. Smaller farms are 8 weeks (56 days) to 9 weeks (63 days). Depends on the straw how it breaks down, also how many rooms you have and the cycle you are on. Smaller farms are 8 weeks (56 days) to 9 weeks (63 days). Depends on the straw how it breaks down, also how many rooms you have and the cycle you are on.