

MAJOR UPDATE MAY 2020

Organic MycroNutrient manual

This is an easy to use product which is watered onto the casing during the case run or pinning and between the flushes. This complement is called **Organic MycroNutrient** and comes in 20L drums or 1000L IBC. Suitable for White and Brown Mushrooms.

1. Storage

The drums should be stored in clean disinfected environment, out of the sun in a dust and frost free area. If stored incorrectly, you may experience some gassing (CO₂) in the container (more likely in the IBC) and in which case this should be released periodically if not being used.

Each drum has a batch number that can be used for traceability and we recommend recording this on your growing charts.

There is no expiration date with this product, but we recommend that it is used 6-8 months after day of production, because of settling.

2. Preparation

All concentrated product must be agitated before use as it separates during storage over a relatively short period. For 20L drums shake hard. For IBC's use a paddle mixer and/or circulation pump to ensure all contents are thoroughly mixed. The following link shows a simple way to do this <https://youtu.be/oVHFuksh2VU>. Please do this for a few minutes. We suggest first time using a mixing paddle to break up any settlement and then simply the circulation pump every time thereafter.



Mixing Paddle

Ensure dispensing tank and pipe work etc is clean and disinfected. Rate of use is between 200 and 250ml/m² **MycroNutrient** on each application.

For starting dose (200ml/m²) dilute to produce a 1 L/m² watering.

For example, if you are applying on say 300m² area:

This means for starting dose you need 300 x 200ml (0.2L) = 60 litres of **MycroNutrient** and adding 240L water to this in a tank would give 300 L total i.e 1L/ m² watering

The diluted mix should be continuously agitated during application onto the casing, use as quickly as possible. Do not store in an undiluted state.



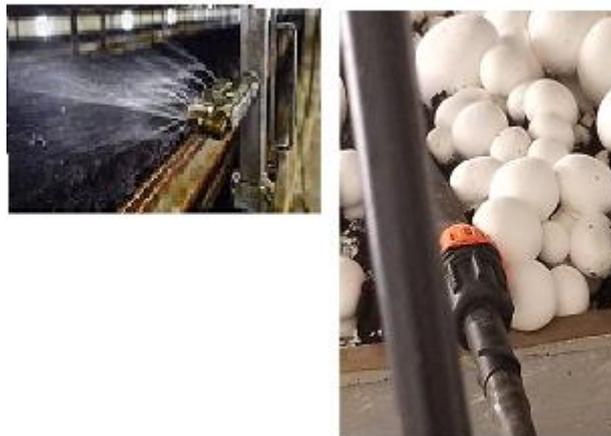
Diluted Tanks for Spraying

Remove fine filters in lines and use a watering tree, overhead or drip irrigation system for application to the casing surface. <https://youtu.be/sH-PMkt2u6M>

Be careful to avoid loss of product through leaching out of the casing or on the floor.



Application can be via overhead, drip irrigation or watering tree



3. Making 1st application in Case Run

Normally speaking you would apply water gradually increasing on days 1, 2 and 3. The complement (**MycroNutrient**) would be applied on the last water (probably day 4) and environment would be gentle to encourage correct temperature in the casing already mentioned to facilitate feeding.

For starting dose (200ml/m²) dilute to produce a 1 L/m² watering.

If you do a second ruffle during case run, you can apply just prior to that which is also effective. Only apply in a MAXIMUM OF 1L/m² application if last water of case run.

Any watering's around late case run, post ruffle are very sensitive to mycelium. We want mycelium to be strong so it consumes maximum amount of nutrition during this short feeding period.

From a practical point of view it is important that the casing surface structure can absorb the dose within 20 to 30 minutes which allows the pins to dry off properly and prevent the casing remaining at saturation. The casing surface should change from glistening with free water to a dull colour without being able to squeeze water from the surface after about 2 to 3 hours as the application is absorbed into the upper casing zone and normal gaseous exchange is not impeded before the second flush. If puddling does occur then the casing may be holding too much unabsorbed water already. Under such circumstances then the dose may need to be added before this state occurs. It may also be that the structure needs to be improved at casing or after ruffling to help maintain better granulation and prevent the surface becoming too smooth.

IMPORTANT NOTE

The key is that we want the **MycroNutrient** concentrated in the pinning zone, NOT washed out of the casing into compost!

We advise keeping these away from last watering of case run. Nematodes should go in earlier in case run the day before last watering's. Fungicides eg Sporgon, Vivando etc will knock back mycelium which is counter active against feeding mycelium if applied close together so bring this back a bit earlier in case run

4. Case Run Management

Record the temperatures in the casing as well as air and bed temperatures on crop cards. You need to monitor this carefully to ensure feeding temperature is reached and for how long. Casing temperature is not the same as compost and is influenced by cold air temperatures and watering.

The optimum temperature for feeding is 23C in the casing for a minimum of 2-3 days. This normally happens in last few days of case run and first few days after airing. THE LONGER FEEDING TIME THE BETTER. Avoid pushing compost temperatures too high (27C +) in order to bring up the interface or casing temperature.

5. Making 1st application at pinning

During initial pin setting (if case run does not permit) is also good feeding time as conditions are warm and a lot of metabolic activity is occurring in the mushroom.

For starting dose (200ml/m²) dilute to produce a 1 L/m² watering.

6. Post application hygiene

Flush out tank, pipe work and nozzles etc with clean water after use, disinfect with hypochlorite or **Sporekill** (2%). Leave to dry.

7. Making 2nd main application after 1st flush

For normal dose (250ml/m²) dilute to produce a 1.25 - 2L watering.

Some farms experience a significant response on 1st flush so you may need to adjust water in between 1st and 2nd flush to take account of this.

When making this second dose it is important to be well advanced with watering up the casing between the flushes. We normally aim to have around 70/80% of the water we plan to add in the casing before the dose. This dose can be the final or penultimate watering. It is advantageous to add a light wash off watering after the application to rinse the growing pin set/stragglers and ensure all the **MycroNutrient** complement is in the upper zone of the casing layer for feeding/ uptake. The size of pins should be in range 4-7mm for the second dose, make sure absorption is immediate and growing pins do not sit in water. This is an important feature for you to watch and adjust as you develop best practice for the farm and your picking profile.



2nd flush quality from Mycronutrient

8. Minimum Dosing rates

It is important to note that 200ml + 250ml/m² during crop is the minimum rate. Results depend on feeding uptake and therefore relate to growing conditions and techniques. If you see the improvement in 1st flush, but less obvious in 2nd flush and 3rd, it will most likely be due to not enough feeding uptake or washing away from the surface.

9. Extra applications

Some growers are reporting successes with repeated applications of 150-250ml/m² after 2nd flush and even 3rd flushes and this has been verified by recent independent trials from Ralph Noble (available on request).

When there are shortages/delays of nutrition coming from the compost, **MycroNutrient** is very good at overcoming such bottlenecks, It appears that higher dosing's with later flushes definitely helps when compost is running out of nutrition and in low fill weight situations (less than 85 kg/m²).

10. What should I be looking for?

The first thing you are most likely to observe is mushrooms staying harder on last days of pick to the end of the flushes. Less light veiled mushrooms in 2nd and 3rd flushes. These mean extended picking in flushes which will help picking management. You may not always see an increase on 1st flush and that is normal i.e. there is enough nutrition already there for that flush in most situations. It is the 2nd and 3rd flushes which are the challenge, hence the skewing of applications post 1st flush. The boost in production will be coming from heavier better quality mushrooms.

08 June 2020 Updated