

Here are some of the highlights from some recent tests made with Sporekill in Kennett Square, USA.

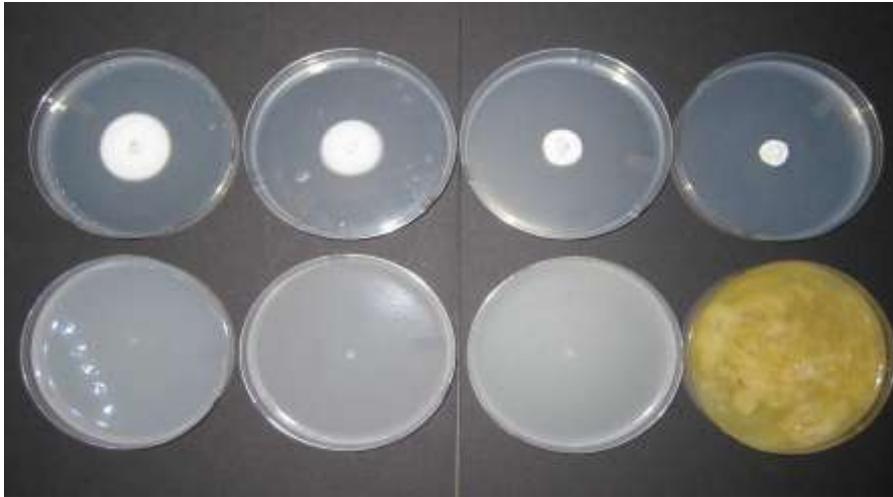


Figure 1. The effect of seven different Sporekill concentrations (0.01%, 0.05%, 0.1%, 0.75%, 1.0%, 1.5% and 20%) on growth of *Verticillium fungicola* on PDA media. The plate with 0% sporekill is the no-fungicide control.

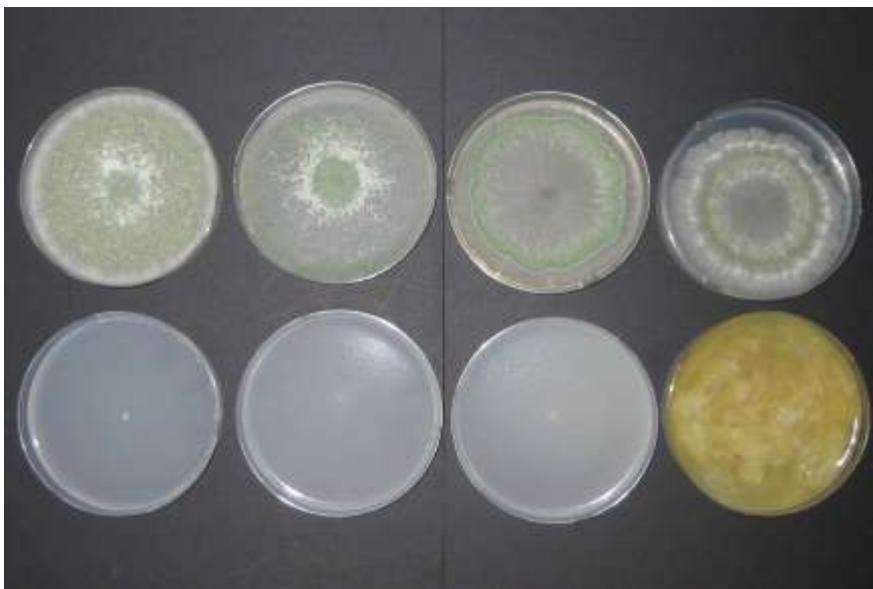


Figure 3. The effect of seven different Sporekill concentrations (0.01%, 0.05%, 0.1%, 0.75%, 1.0%, 1.5% and 20%) on growth of *Trichoderma aggressivum* on PDA media. The plate with 0% sporekill is the no-fungicide control

Conclusion:

Sporekill had significant effect on mushroom pathogens *Trichoderma aggressivum* and *Verticillium fungicola*. The growth of both molds can be effectively inhibited at concentration of 0.4% on PDA media. Full copies available on request.

We have been working closely on the issue of disinfectant contact with shelves on Organic farms and I am delighted to receive the committees confirmation below that Sporekill is now permitted to contact the growing surfaces ie shelves (as well as floors and walls of course) WITHOUT needed to be washed off. The only proviso is not to spray on the actual fruit bodies. This of course applies to regular production as well.

Monday 2 September 2013

Mr S Whitehall
Nutrigain Ltd
Unit 13
Bollington Lane
Nether Alderley
Cheshire
SK10 4TB



Soil Association
Certification Limited

South Plaza
Marlborough Street
Bristol BS1 3NX

www.soilassociation.org/certification

Reference number: AL21098

Dear Stuart

I am writing to confirm the status of your disinfectant product 'Sporekill' within organic systems.

Sporekill may be used without a water rinse to disinfect surfaces which come into contact with the organic mushroom substrate. The product may not be used on surfaces which come into contact with organic mushrooms themselves.

For any queries regarding the use of Sporekill in organic mushroom growing operations please contact me on 0117 314 5136 or at thartley@soilassociation.org.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Tom Hartley".

Tom Hartley
Certification Officer

For further information or to order please contact us on +44-1625-860945 or by email on sales@nutrigain.com.

How good is my disinfection routine?

There is some interesting information coming in on the subject of testing how good your disinfection routine is.

The use of hydrogen peroxide (H_2O_2) is well known as a powerful cleaner due to its oxidising properties. When it comes into contact with 'live' material it starts to react producing small bubbles of oxygen or severe fizzing in the presence of live organic matter and this includes spores and mycelia debris.



Using this product is a really useful and quick indicator to any farm to establish how 'clean' key areas are. It is a way of checking how good the clean down operation really is, without having to do lots of checks with agar plates.

Simply take a 1L plant spraying bottle, fill with 100ml of hydrogen peroxide (35%) and top up with water. Test surfaces by spraying and observing what happens over a 10-15 minute period. The more fizzing and bubbles means there is live organic matter present, so the area needs further investigation. No response means all is clean.

This can be a labour intensive process, but it is very worthwhile to know what is really going on and if there are issues, they can be pointed out to the people responsible for the cleaning operation.

Interestingly some clients of ours in USA are adding hydrogen peroxide directly to the Sporekill as they are doing their cleaning process. In this way, the person who is cleaning down can see how effectively the disinfection process is going as the process is done by looking back at the areas just cleaned. 2 jobs in one!



A note of caution, Sporekill is stable and compatible with hydrogen peroxide but if you consider using other products, you must check first with your supplier about this to ensure that mixing is safe to the user and equipment. Also PPE must be used when handling hydrogen peroxide as it can 'burn', so read safety data sheets first

before handling. Sporekill and hydrogen peroxide will leave no residues that can affect the mushroom and crop itself; a big plus!

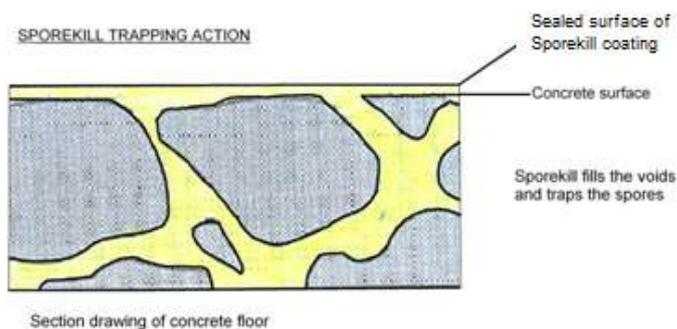
On the subject of cleaning down, we wanted to point out how Sporekill is particularly effective on concrete surfaces.....WHY.....

If you look at concrete surface you will see many small cracks and holes depending on the age of the concrete and the finish.

These areas are perfect locations to trap spores and mycelial debris and these are not killed easily. For example, when you cook out houses, the floors will rarely reach the same temperature as the rest of the house, so things are not killed off as you would imagine. Air movement or activities like brushing and washing can bring these into the air and act as infection sources. This is especially important for *Verticillium*. So floor hygiene is just as important as the cooling cycle is for the compost.



We at Nutrigain have always been aware of this and it is why we add components into Sporekill which are extremely ‘sticky’ to spores and debris, trapping them in the soapy matrix as it dries on a surface. In the case of concrete, the barrier formed is an “insoluble” sealed surface which means it cannot be washed away and will in fact build layer on layer with repeated use. A TRAPPED SPORE is a SAFE SPORE.



We would like to acknowledge Mr Nikodem Sakson who is the author of this method of testing.