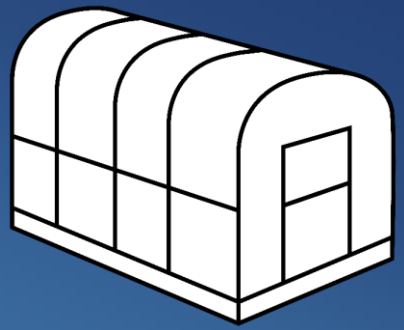
SANOSIL
DISINFECTANTS FOR LIFE



Application of Sanosil S100 in plant cultivation

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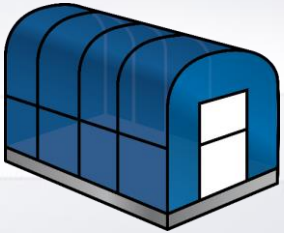
Modern plant cultivation methods and sophisticated irrigation systems promise high yields.

They are, however, relatively susceptible to plant pests, such as bacteria and various fungi, which may rapidly spread as biofilms in irrigation systems and/or greenhouses.

As a result, special attention must be paid to hygiene, because just like in all other areas, prevention is always better than cure.

Possible microbiological problem sources

Root rot caused by bacteria and fungi in the water and/or a contaminated substrate.



Spread of plant diseases caused by airborne germs (especially mould).

Blockages and clogging of the irrigation system caused by biofilms, bryozoans and or algae.

Why is Sanosil S100 the solution?

Suitable for disinfection of water and nutrient solutions:
Cleans water and irrigation system of germs, removes biofilms and keeps everything sanitised.

Suitable for air / aerosol disinfection:
Removes germs from the air and disinfects large surfaces quickly. Ideal for greenhouses.

Suitable for spray / surface disinfection:
Perfect for smaller, targeted disinfection tasks.

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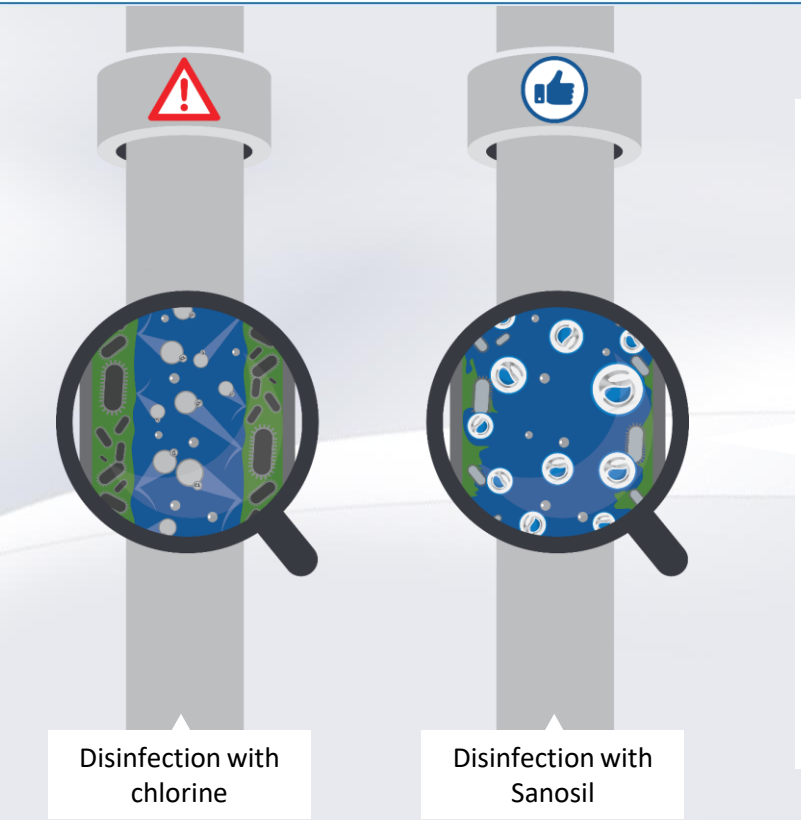
Biofilms and chlorine



Disinfection with chlorine

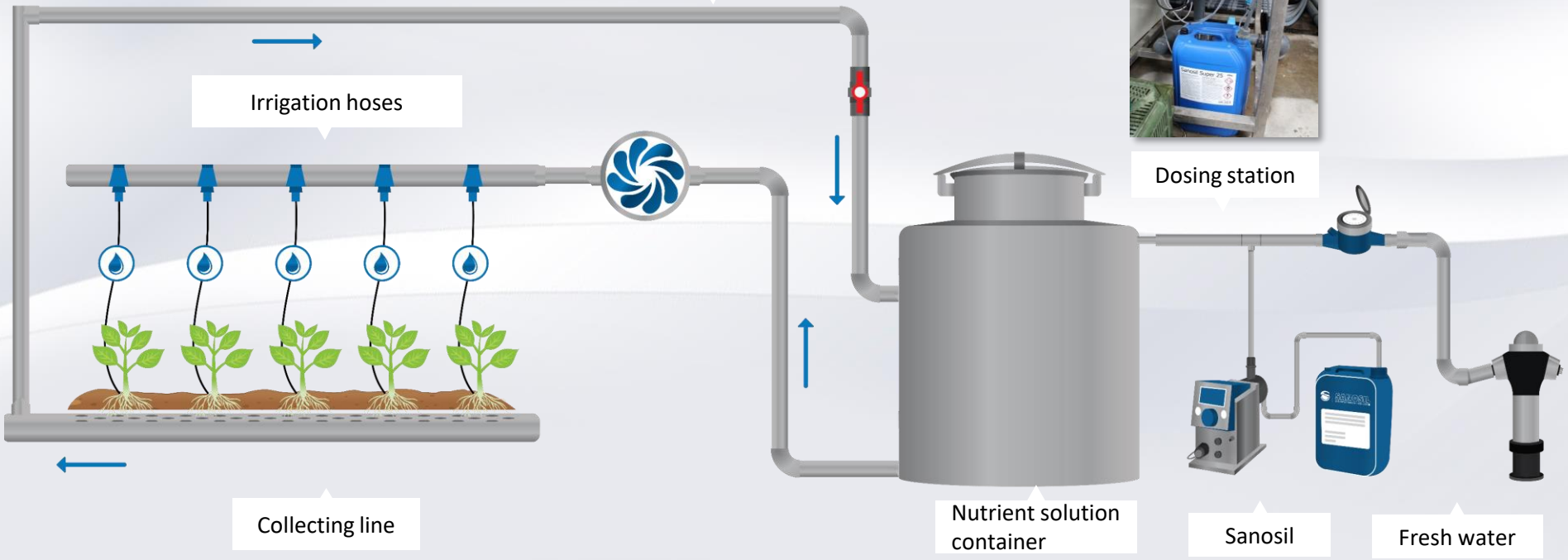
Disinfection with Sanosil

In case of extensive biofilm growth, disinfection with chlorine is practically useless, since the biofilms are not effectively removed.

In addition, the bacteria are often in a "VBNC" state. (**V**iable **B**ut **N**ot **C**ulturable). This skews performance controls and offers a false sense of security.

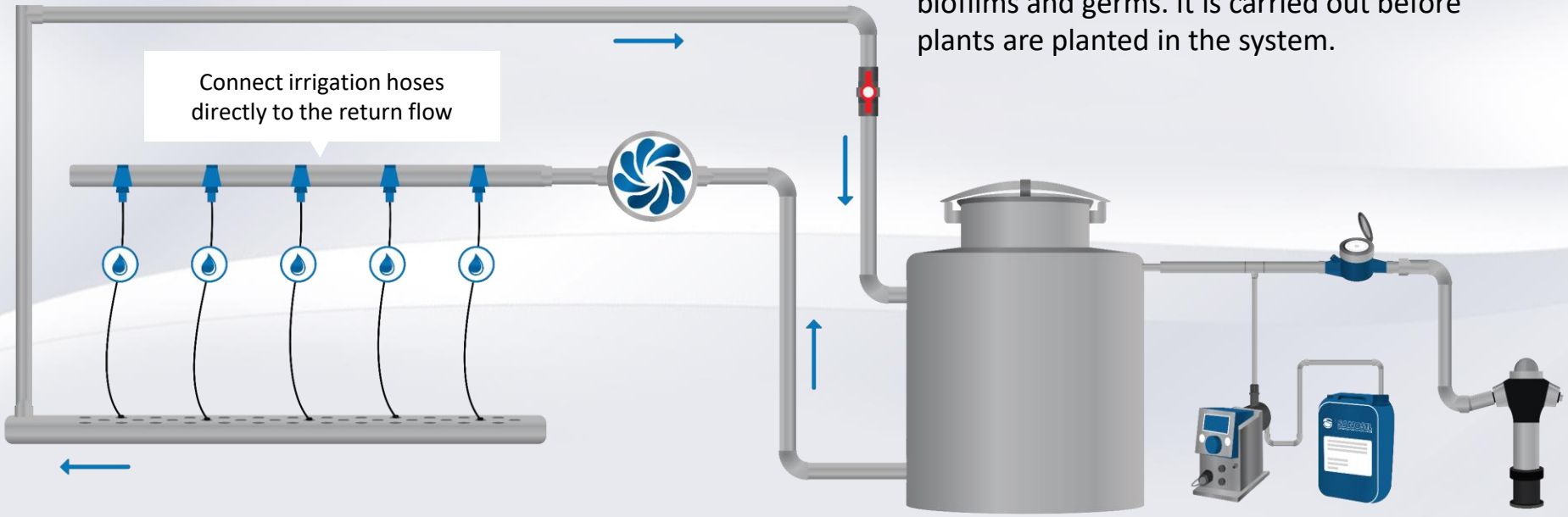
In contrast, Sanosil can effectively eliminate both biofilms and VBNC germs.

Diagram: Top feeder irrigation system with return flow



Shock disinfection: Preparation

Shock disinfection cleans the entire system of biofilms and germs. It is carried out before plants are planted in the system.



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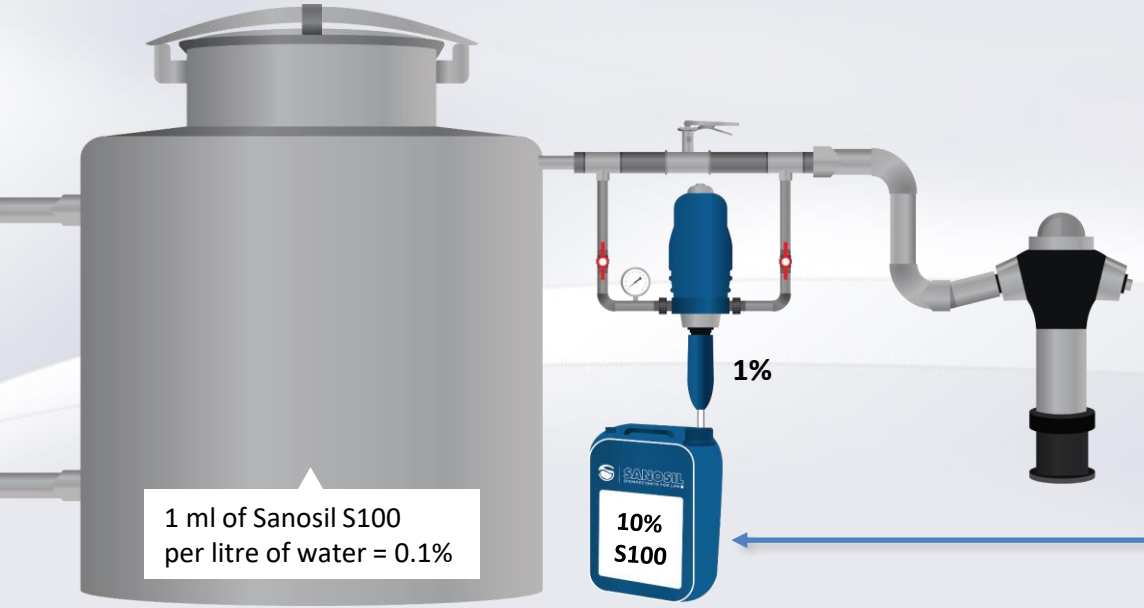
Shock disinfection: A - with dosing pump

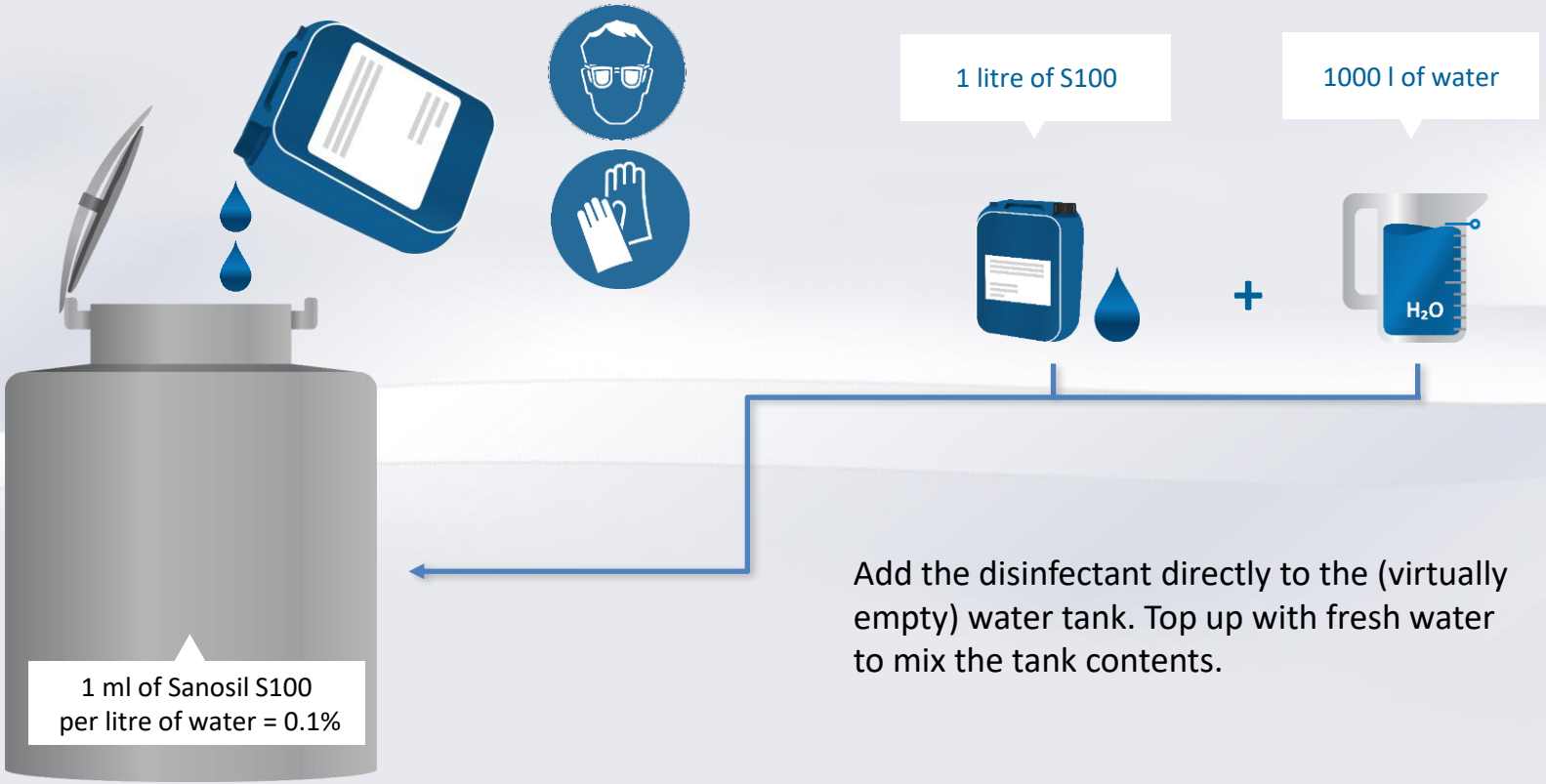
Shock disinfection : B – with Dosatron

For proportional dosing units with a dosing range of 0.2–2%:
Mix a <u>stock-solution</u> containing 10% Sanosil S100



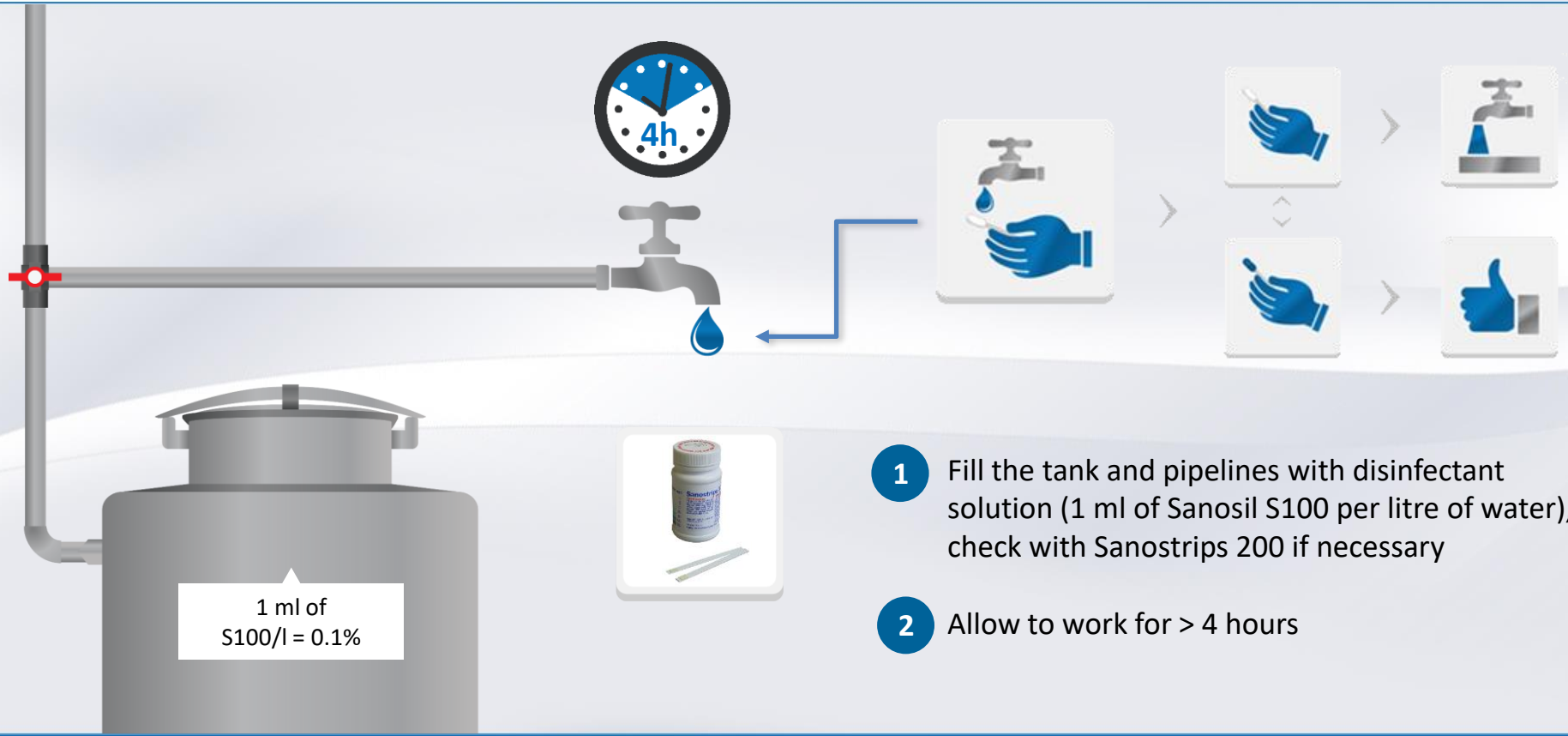
Mix a pre-solution containing 10% Sanosil S100
and set the Dosatron unit to 1%
(Stock-solution: shelf life max. 3 days)

Shock disinfection: C – direct method



Add the disinfectant directly to the (virtually empty) water tank. Top up with fresh water to mix the tank contents.

Shock disinfection: Fill the pipelines



1. Fill the tank and pipelines with disinfectant solution (1 ml of Sanosil S100 per litre of water), check with Sanostrips 200 if necessary
2. Allow to work for > 4 hours

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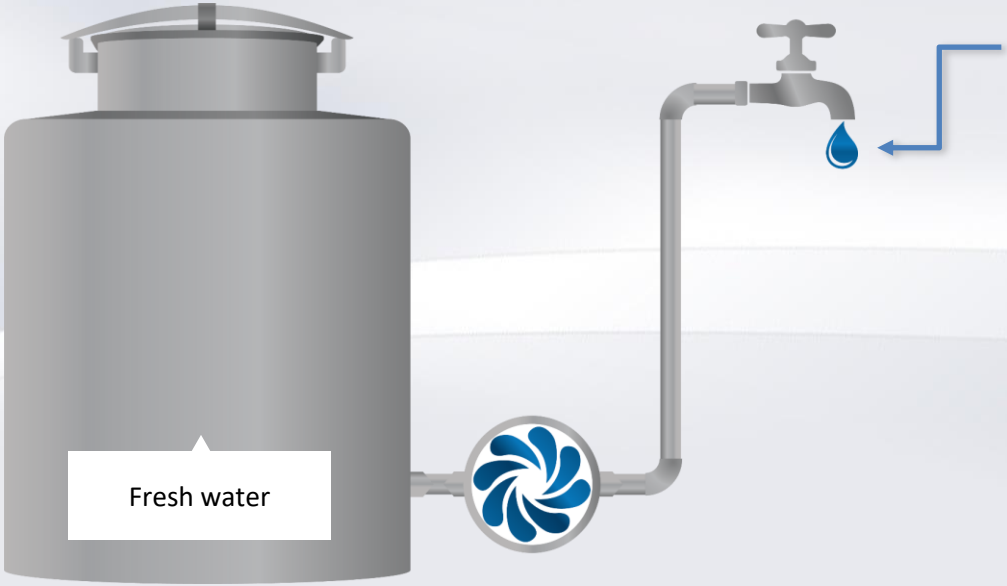
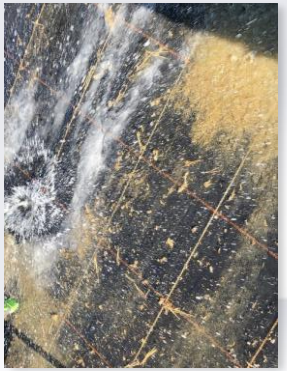
Shock disinfection: Flush the pipelines

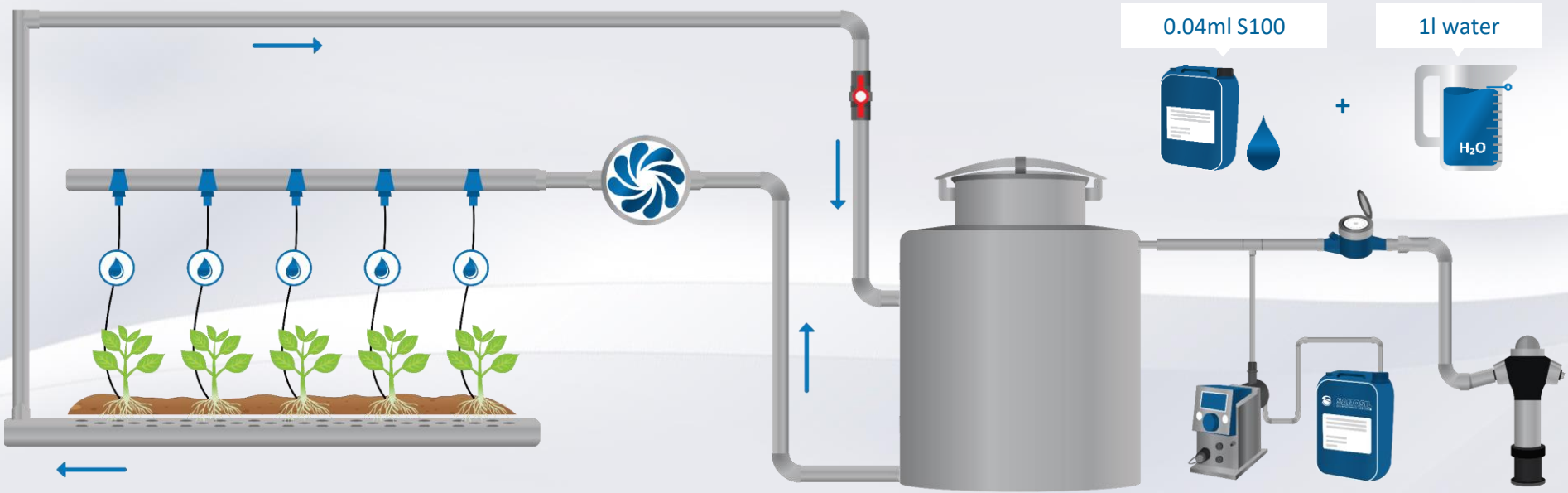




Drain tank contents, fill with fresh water, rinse lines thoroughly.

<u>The tank and lines are now safe and hygienic.</u>

Continuous treatment: A – with dosing pump

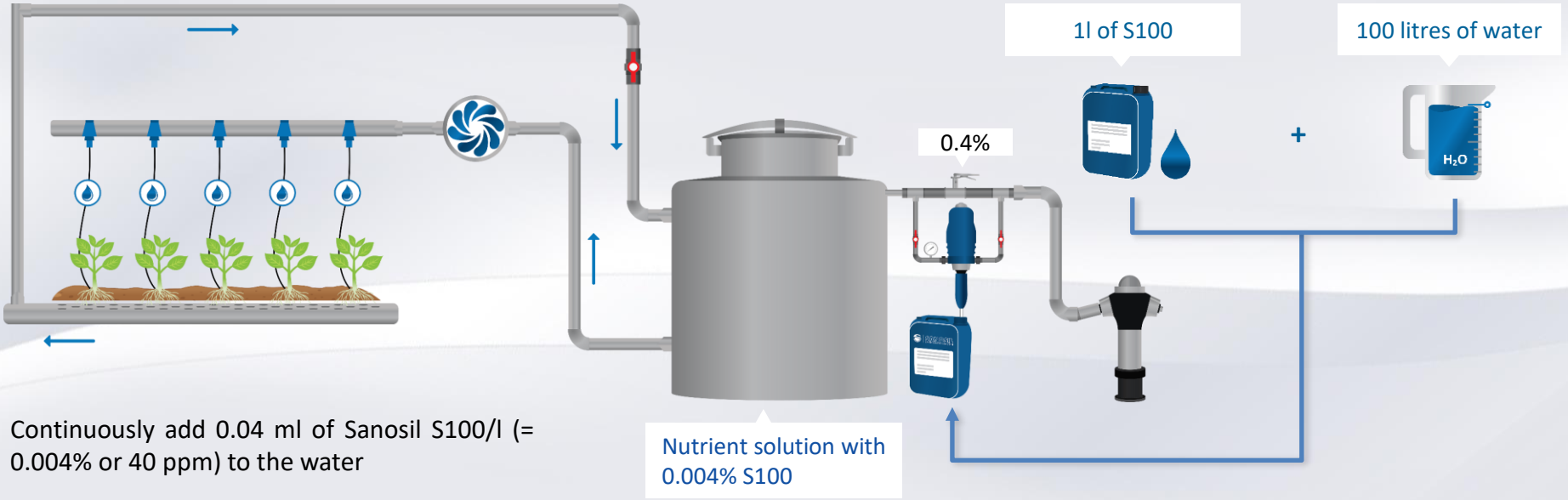


Continuously add 0.04 ml of Sanosil S100 / l
(= 0.004% or 40 ppm) to the water

Nutrient solution with
0.004% S100

Continuous treatment: B – with Dosatron

Stock solution 1% x 0.4 = 0.004%



Continuously add 0.04 ml of Sanosil S100/l (= 0.004% or 40 ppm) to the water

For proportional dosing units with a dosing range of 0.2–2%:
Mix a 1% pre-solution of S100 and set the unit to 0.4%.
(Use the stock solution within 3 days)

Aerosol disinfection with hot fogging machine

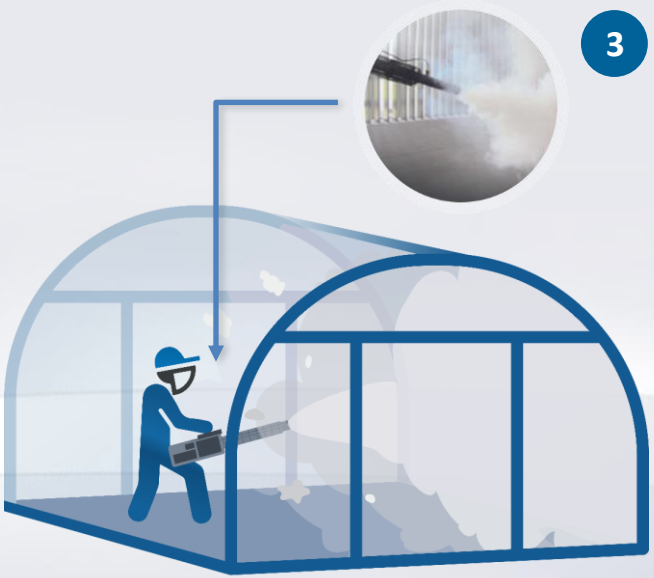
1

Wash walls, floors and if necessary, ceiling with a high-pressure cleaner

2

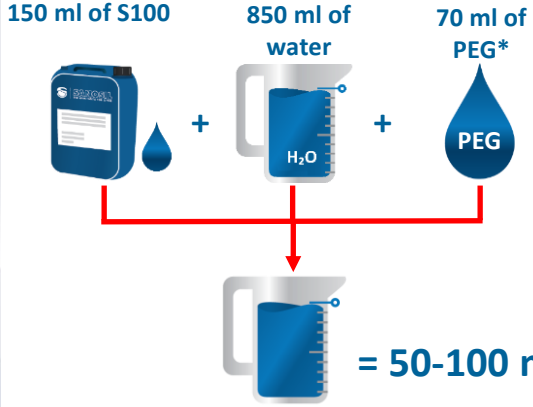
Allow to dry (the more thorough the cleaning, the more effective the disinfection)

3

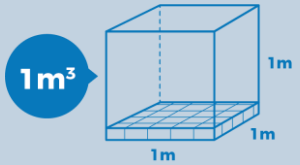


Close doors, windows and hatches. Mix fogging fluid, fill into a suitable hot fogging machine (e.g. Swingfog), spray rooms. Allow to take effect for at least 3 hours. Caution: wear protective mask for eyes and respiratory tract.

Mix fogging fluid:



* Polyethylene glycol (fogging agent)



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Spray disinfection with cold fogging machine

1

Wash walls, floors and, if necessary, ceiling with a high-pressure cleaner

2

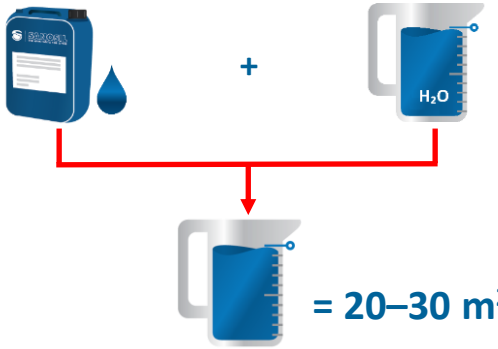
Allow to dry (the more thorough the cleaning, the more effective the disinfection)

3

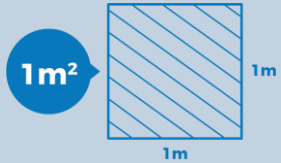
Set the nozzle of the cold fogging machine to "wet fog" and spray the surfaces directly.
Recommendation: 30 – 50 ml of liquid/m^2

Mix a 3% solution *

30 ml of S100 + 970 ml of water



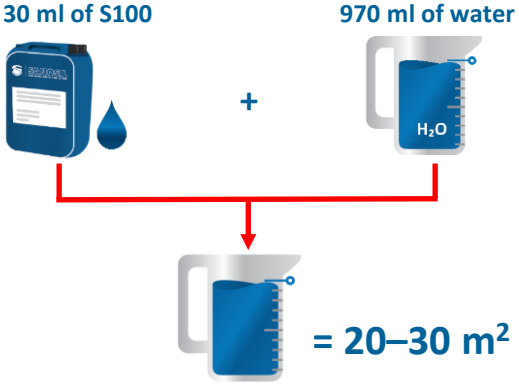
Maximum shelf life of the solution: 3 days



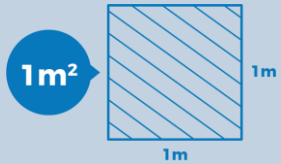
Spray disinfection plant equipment

Treat pots, substrate and tables, etc. before planting: directly apply 3% solution using a sprayer.
Recommendation: 30 – 50 ml of liquid/m^2

Mix a 3% solution *



Maximum shelf life of the solution: 3 days



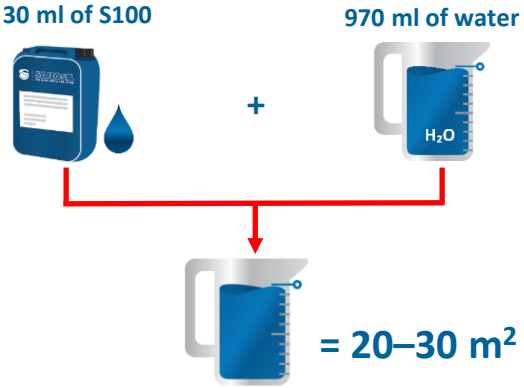
Treating plant diseases such as mildew

Unofficial application recommendation:

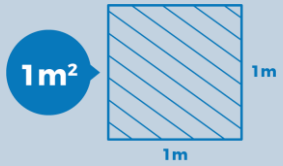
To combat **mildew** and other plant diseases: spray plant with max. 3% Sanosil S100. For 3 days, 1x/d each

Recommendation: 30 – 50 ml of liquid/m^2

Mix a 3% solution *



Maximum shelf life of the solution: 3 days



Prevention of biofilm formation in the pipes:

Add **continuously** 0.02 ml Sanosil S100 per litre (= 0.002% or 20 ppm) to the water. Ideal for systems without recirculation.

(For proportional dosing units with a dosing range of 0.2–2%:
Mix a 1% pre-solution of S100 and set the unit to 0.2%.
Use the stock solution within 3 days)