MacroBoost
ENVIRONMENTAL PROBIOTICS

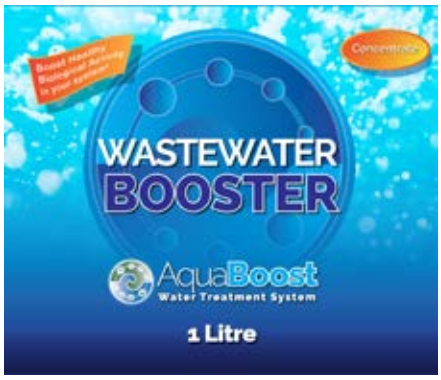
DOMESTIC TREATMENT PLANTS & SEPTIC TANKS

INFORMATION SHEET

WHAT WE DO

MacroBoost uses a pro-biotic approach i.e. the dosing with naturally occurring, beneficial microbe cultures to safely and effectively eliminate odours and help control the source of the odour.

MACROBOOST ENVIRONMENTAL PROBIOTICS WORKING WITH, NOT AGAINST NATURE



The idea of all bacteria being 'bad' is being rethought and the use of 'beneficial bacteria' in situations such as wastewater treatment is now well established.

Septic tanks and Treatment Plants rely on bacteria to break down the wastes. A cocktail of harmful chemicals coming down the drain is going to result in a dead and smelly septic tank or treatment plant. The old approach that attempts to stop the smell using a cup of bleach or disinfectant down the toilet, may kill the smell for a short time. But it also kills the good bacteria as well as the bad. What happens in these cases is that some bacteria don't die and often it is the 'bad' ones that are toughest and do survive. The end result is more bad bacteria, poorer conditions and more foul smells.

Any bacterial additive program may not work in every septic tank or treatment system. The type, age, use and history of a tank or system and in particular the cleaning and laundry products of the household have a very significant effect on the operation of any septic or wastewater treatment system. Conditions have to be appropriate and suitable for the beneficial bacteria to survive and thrive. You cannot continue to use bleach, disinfectants and concentrated anti-bacterial products in a septic tank or treatment system as these will kill off or severely effect all the bacteria, good and bad in the tank(s).

In aerated treatment plants, most beneficial 'aerobic' bacteria require good levels of oxygen to do their job well. Make sure ,or get your Service Technician to check that the aerator is operating correctly and efficiently and that the diffuser or air pipe is not blocked. Aeration problems will severely limit the operation and effectiveness of any aerated wastewater treatment system.

For both septic tanks and treatment systems when the use of antibacterial cleaning, shower and laundry products has stopped and in addition for aerated treatment systems, the aerator and aeration levels are satisfactory, then the addition of supplementary, beneficial, 'good' bacteria can be of real benefit.

ODOUR PROBLEMS

Depending on the severity of a problem a more concentrated inoculation or dosing program is recommended. This approach ensures a change in the bacterial ecosystem in the tank is achieved and the odour problem is resolved. This may take up to 3 months. Once a beneficial change has been established, the frequency of dosing may be reduced to once each night or to once a week, depending on the loading on the system.

It may be necessary to increase the dosing program again if a problem re-occurs. If a system has not been used for a long time there can be a die off in the beneficial bacteria because there is not enough food to keep them alive. A family gathering or a party can put added pressure on a system as it takes time to build up the microbe population to deal with the extra nutrient loading.

The use of antibiotics can affect the operation of a treatment plant in the same way as do anti-bacterial cleaners and disinfectants. If someone in the household is on a prolonged course of antibiotics (e.g. greater than 10 days) then once they have completed their treatment you can start a recovery program for the tank or system by following the Maintenance Wastewater Booster Dosing as detailed below.

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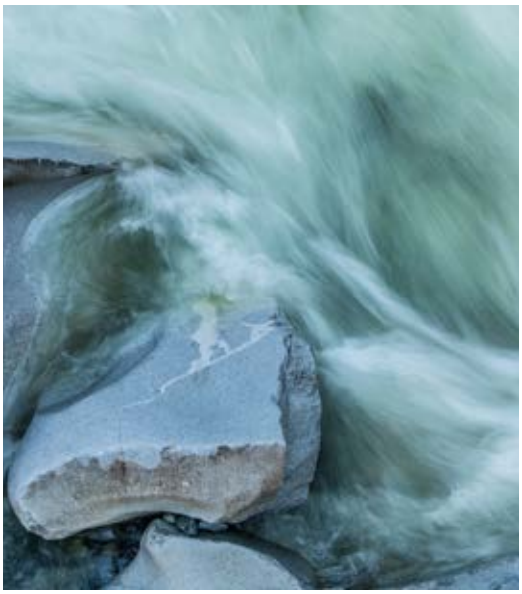
AQUABOOST WASTEWATER TREATMENT

Your septic tank is designed to be an active living eco-system that effectively breaks down wastes. Adding Wastewater Starter treatment to inoculate a new septic tank with 'good' bacteria will get the system up and running much quicker and without smells.



To maintain this activity you have to be careful of what goes down the drain. Remember, those bleaches, disinfectants and antibiotics, are designed to kill all bacteria, not just the 'bad' guys. Using a spray of Wastewater Booster at every flush will help to maintain good activity or gradually bring the treatment system back to life when a problem occurs.

In severe cases where an existing septic tank or aerated wastewater treatment system has major odour problems, a complete pump-out and restart using AquaBoost Starter and Booster may be necessary.

What is the Difference between Wastewater Starter & Wastewater Booster?
Both contain the same specially cultured microbes. However Wastewater Starter has added nutrients, basically a 'packed lunch' to give the microbes a head start in getting established in a new septic tank or treatment system or in a tank/system that is being restarted after a pump out. Both are a brownish liquid with a molasses type smell.

Store all AquaBoost based products somewhere cool, but not in the refrigerator. Anywhere too cold or too hot will affect the bacteria in the stock or made up solution.

DIRECTIONS FOR USE

Starting a new system or restarting with Waste Water Starter.

The capacity of a system will determine the initial volume of Starter Concentrate required. A one litre bottle will be sufficient to start an average 3-4 bedroom household system.

1. Mix 500ml Wastewater Starter and two tablespoons of sugar into two litres warm water. When the sugar is dissolved pour into a toilet bowl and flush.
2. Repeat this process after the first week of active use, and then use WasteWater Booster as detailed below.

Maintenance Dosing with Wastewater Booster

It is best to make up only small amounts of solution at a time, typically 300-500 ml in small spray bottles, that way you can make a fresh batch up every five to seven days or as required. (Have one for each toilet in the house),

Use fresh water that has been left to stand overnight to get rid of any chlorine present or that has been boiled and allowed to cool. Do not use hot water as this will kill the bacteria in the solution.

1. Mix 50ml / litre water, (25ml per 500ml bottle)
2. When first starting a program you can also add 1/2 teaspoon of sugar to each spray bottle, particularly if a system has had intermittent use, e.g. a holiday home, this gives the 'resting' bacteria something to eat as they 'awake' and the nutrient load builds in a system. This is not necessary for regular booster dosing.

3. Spray 3-4 squirts into the toilet bowl before every flush
4. Spray 6-8 squirts into the toilet bowl, last thing at night, then flush.

It is best if you can do both (3) and (4), but as a minimum, do (4). Just doing (4) will take longer to have an effect.

Make a fresh batch up every five to seven days or as required, the reason being that once diluted there is little food for the bacteria and they will start to die-off after a period of time. At the end of each 5 to 7 days, pour any remaining made up solution down the toilet, last thing at night and flush. Return to step 1

What this dosing program is doing is inoculating the entire wastewater treatment system with suitable beneficial bacteria, from the toilets all the way down into the treatment tanks. This also assists in the pre-treatment of the wastes and overall is a far more effective way of using a bacterial additive than just adding it to the treatment tank once a week or once a month.

REED BEDS and GREY-WATER SYSTEMS

Reed beds and Grey-Water systems can accumulate nutrients that can also “get out of balance” if they do not have an adequate number and variety of beneficial microorganisms to help in the breakdown of these nutrients.
Inoculating in a similar way to that of a domestic treatment plant or septic tank with Wastewater Booster will help to reduce problems of smells and generally improve water quality in a grey-water or reed bed system.
The same “activated” or diluted spray bottle that has been prepared for a treatment plant or septic tank can be used to treat grey-water and reed bed systems.

Maintenance Dosing with Wastewater Booster
It is best to make up only small amounts of solution at a time, typically 300-500 ml in small spray bottles, one for each point where the water is being directed into a grey-water or reed bed system. e.g. bathroom, laundry trough etc.
Make a fresh batch up every five to seven days or as required, the reason being that once diluted there is little food for the bacteria and they will start to die-off after a short period of time.

Directions for use

Use fresh water that has been left to stand overnight to get rid of any chlorine present or that has been boiled and allowed to cool. Do not use hot water as this will kill the bacteria in the solution.
1. Mix 30ml / litre water, (15ml per 500ml bottle)
2. Spray three or four squirts down the plug hole after the water has been drained. This will prevent smells and “grow” the good bugs in the water trap, colonising the surfaces of the pipes when next you pull the plug, “seeding” the whole system.

Regular low dosing in this manner is a more effective way of maintaining a good cross-sectional population of the “good bugs” in a system, rather than trying to “slug dose” when things go wrong.