



Worms For Worm Farms & Education

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IMO1 - Korean Natural Farming Microbial Solution

A Quick Overview: IMO1 / BIM / BAM

(Indigenous Microorganisms # 1 / Beneficial Indigenous Microbes / Beneficial Active Microbes)

IMO 1 (Indigenous Micro Organism 1) is another microbial application, founded in Korean Natural Farming (like LABS.)

Although Lactic Acid Bacterium were discovered by Joseph Lister in 1873, it was not until **around 1966 that Master Cho, of Korean Natural Farming** fame, made inputs like LABS popular among local Korean farmers. His system replaces conventional fertilisers.

Around 1965-6, Master Cho is credited to have invented and started teaching about IMO.

Since then, his son, **Cho Youngsang** has taken up his legacy with **JADAM Natural Farming**.

While all microbial applications contain LAB; but this one will have different strains of bacteria due to the collection method and placement (so it's essentially different bacteria strains, not better, just MORE strains if you do both if that makes sense.)

By placing a microbe "trap" in our garden, we can gather many sorts of microbes, not only lactic acid bacteria. And we will collect different ones to those we may collect in our kitchen with our ricewash solution in LABS (see separate info sheet.)

Everyone's blend of microbes will be different.

Some Common Uses For IMO1

- **Gardens:** Use on leaves or the soil. Small fertiliser benefit / makes plants more efficient - helps increase nutrient uptake. Forms a community of beneficial microbes on and around the plant and in the soil. Increases plant health & defence against pests & diseases.
- **Suppresses plant pathogens/diseases;** prevents damping off disease; improves seed germination.
- **Adds beneficial microbes;** helps treat fungal problems.
- **Hydroponics / Aquaponics** use - helps break down nutrients into plant available forms.

- ❑ **Hot & Cold Composts or Precomposting** - breaks down organic matter more quickly, increasing microbial populations. Aids in the faster breakdown of materials and release of nutrients, eg in composts (allowing worms to consume it faster); also may be added to compost/castings teas.
- ❑ **Pets & Farm Animals:** Used as a probiotic supplement in the diet of pets and farm animals - aids in digestion, building healthy gut bacteria, and building up the immune systems.
- ❑ **Treats odours**, eg in composting or livestock; in horse, chicken or pig pens.
- ❑ **In Ponds & Aquariums Fro Fish** - the microbes will help keep the water clean as they will digest the fish waste. Improves digestion in fish. Rate 1ml per 750 litres tank capacity.
- ❑ **Expanding up to 4 more liquids from the first (IMO1-IMO5)**
- ❑ **And about 1000 other uses** - Google anyone ?

Other Similar Liquids / For Further Reading For IMO1

- ❑ **Master Chos's (KNF) son invented JADAM**
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Needed:

- ❑ **The trap box:** a small bamboo or wooden box with holes cut into it, or made from woven strips is ideal. We need airflow and ways for bacteria to come in. I got a bamboo steamer from a flea market for \$5.
- ❑ **A glass jar** with a lid.
- ❑ **Food Source (I will call rice from hereon):** carbohydrates, or carbs, like rice, oats or barley. Either cooked, or soaked for 24 hours, then drained. Enough to loosely cover the bottom of your microbe trap about 1 inch, or 3 cm deep. See instructions below.
- ❑ **Molasses or sugar.**
- ❑ **Clean, dechlorinated water** - rain water, spring water, filtered water.



Process:

Before starting, find a good ecosystem in an area near to you.

Choose areas with plants that look very healthy, or where deep leaf litter and leaf mold has formed, like under big shrubs or in bamboo thickets.

Prepare Your Microbe Bait - The Rice etc.

- 1) Prepare your rice by cooking it, or soaking it in cold dechlorinated for 24 hours. You can boil the water from the tap for a minute, it will offgas some of the chlorine.
- 2) Place the rice loosely in the bottom of the trap box. Do not pack it tightly. We need plenty of air. The bacteria will colonise the surface of the grains that are surrounded by air. So we need those air pockets.
- 3) Cover the top of the box with fine cloth that will allow air to pass, but will keep any bugs out of our bacterial bait. Tie a string tightly around the top.
- 4) Write the date on the box or at home so you know the details.

Collecting Microbes:

- 1) Go to your collection area.
- 2) Find an undisturbed area. Clear the leaf matter etc to allow you to see the soil layer. Dig down about a centimetre into the soil, so the collection box will sit just into the soil.
- 3) Place the box in the indentation.
- 4) Cover the box LIGHTLY with some leaves a little soil.
- 5) Wait 5-10 days. It takes less time, the warmer it is where you are.
- 6) Collect the rice when the mold is white. First, colonies of white molds will form on the rice. Then they will gradually turn to yellow, green, then black. If you left it too long, put it in the compost and start again, noting the time you should check the next batch. It is a trial and error process.

Feeding The Microbes:

- 1) Put the moldy rice in a plastic or glass container.
- 2) Mix in an equal amount of black strap molasses or sugar.
- 3) Carefully mash the rice and the sugar/molasses together until it all looks runny, but thick. Do not over mix as this may harm the mycelium (fungal hyphae.)
- 4) Cover the container, using a cloth and rubber band .

- 5) Place it in a protected, dark spot.
- 6) Leave it sit undisturbed for 3 to 7 days (less time the hotter the weather where you are.)
- 7) When it has become mostly liquid add 3 parts dechlorinated water.
- 8) Cover with 3 layers of Chux or similar cloth, held on by rubber bands, so it can breathe.
- 9) Leave for 7 days in a protected, dark spot.

Finishing The Inoculant:

- 1) You should have a jar full of a juicy, muddy liquid.
- 2) Strain the liquid out and dispose of the mud into the compost.
- 3) Put the jar with the liquid in a protected dark spot and watch it.
- 4) When it stops forming bubbles, you can seal the jar with a lid - it is now finished microbial extract !

Blending A More Complex Inoculant:

You may continue collecting microbes from different locations and mixing the resulting IMO1, to create a more complex inoculant.

Then when you are ready to mix them together, mix equal parts of your inoculants together, then mix with the same amount of LABS if you have it. If you don't have LABS just ignore this. (LABS is another free process sheet on the students page.)

Using The Inoculant:

Dilute as per usage guidelines; generally 1-2 teaspoons per 4 litres water.