

Natural Farming Essentials



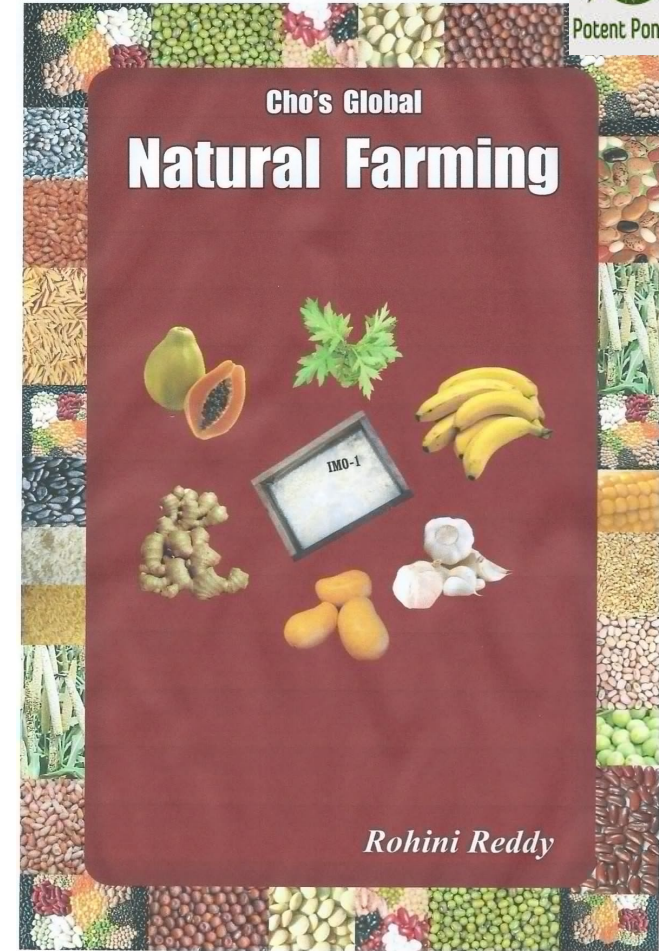
By Stephen Raisner

Natural Farming & Korean Natural Farming

- Traditional Korean Natural Farming Methods have been used in Korea and other parts of Asia for centuries. It was further refined by Cho Han Kyu based on work from Sekai Kyusei Kyu, Miyozo Yamagishi, Kinshi Shibata, Yasushi Oinoue and published in a book called Cho's Global Natural Farming.
- Various versions of these methods are used world wide.
- Nature Farming was first coined by Mokichi Okada in 1936 and promoted after his passing thru his foundation the Mokichi Okada Association and further spread throughout Asia.
- Masanobu Fukuoka founded Japanese Natural Farming in Japan around the same time as Mokichi Okada was doing his work in the 30s

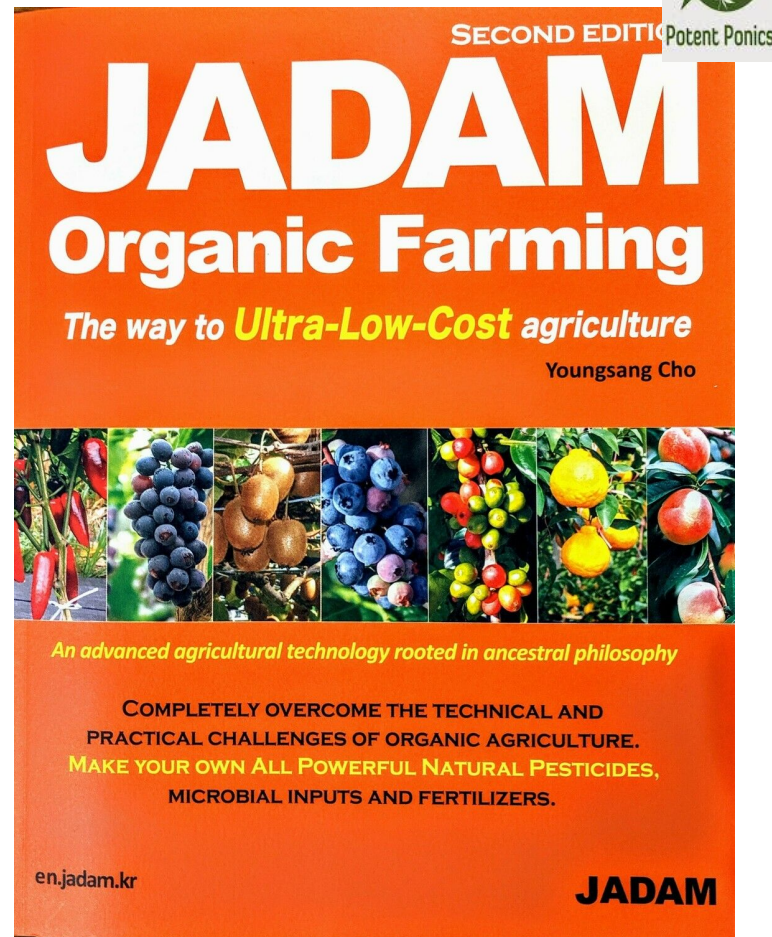
Korea Natural Farming

- Mainly a method of fermented mineralization and microbial propagation
- (IMO) Indigenous MicroOrganisms, IMO1, IMO2, IMO3, IMO4, IMO5,
- (LIMO) Liquid Indigenous MicroOrganisms
- (IPMO) Indigenous Predatory MicroOrganisms
- (LABs) Lactic Acid Bacteria
- (WCA) Water Soluble Calcium Extract
- (PWCA) Water Soluble Calcium Phosphorus Extract
- (WCK) Water Soluble Potassium
- (PSB) Phosphorus Solubilizing Bacteria



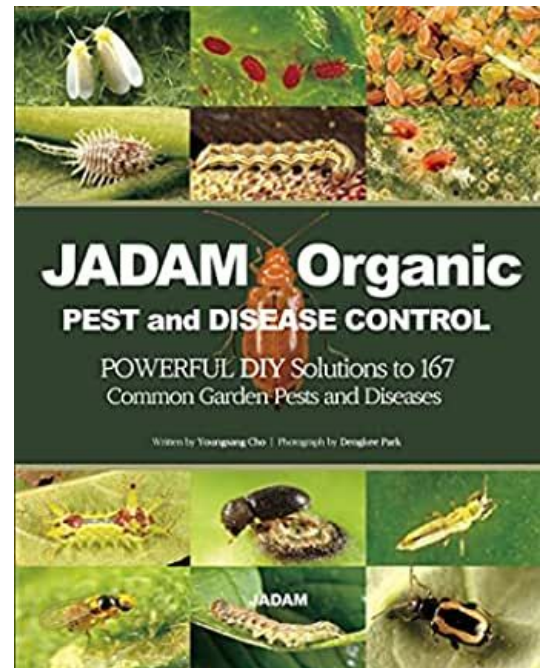
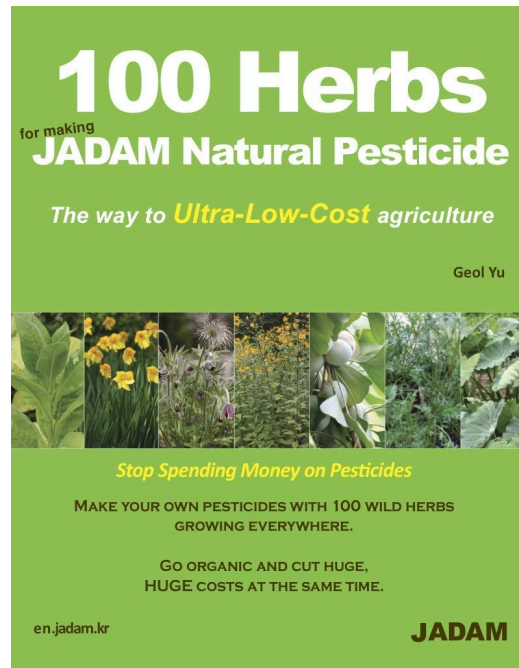
JADAM

- JLF - JADAM Liquid Fertilizer
- JMS - JADAM Microbial Solution
- JHS - JADAM Herbal Solution
- JMW - JADAM Mineral Water
- JNP - JADAM Natural Pesticide
- JS - JADAM Sulfur
- JWA - JADAM Wetting Agent
- JWS - JADAM Water Softener



JADAM Pest Control Books

- Tons of various species covered
- Great books to help with insect and mite ID
- Many useful control ideas



Common Microbial Myths

- Adding microbes causes nutrient imbalances
- Adding microbes can kill your plants
- Indigenous Microorganisms can introduce pathogens
- LABs lactobacillus Acid Bacteria comes from the stomachs of cows
- Microbes can replicate out of control
- You don't need to add microbes to ensure a fully optimized garden
- Inoculating with Microbes clogs your water lines
- Ferments kill plants



Why Use Natural Farming?

- Low cost solution to a variety of plant issues
- Can treat fungal issues on your plants
- Can treat a wide range of pathogens in the water / soil without killing the mineralizing microbes
- Increases mineralization in aquaponics & soil alike
- Increases flavor compounds in your plants like terpenes and flavonoids
- Offers a way to supplement nutrients normally only provided by the addition of mineral salts
- Increase plants base resistance to a wide range of plants and insects
- Adds mineralizing microbes normally missing from aquaponic systems

Microbial Application Foliar

- How you apply your microbes is very important
- Backpack sprayers allow for the fastest & easiest application of microbes
- Triple Headed sprayer is recommended for microbial application as it gets the best surface coverage
- Having an accurate scale is important for weighting inputs
- Dosing microbes into res for best effect in hydro or aquaponics
- **Do NOT USE FOGGERS or ATOMIZERS WITH MICROBES!!!!!!**



Lactic Acid Bacteria Serums



- Lactobacillus ferments greatly benefit aquaponic & soil systems and have been used in cannabis for years
- Increases plant growth 12 - 20% depending on strain
- Eliminates fish waste that makes it past the filter
- Increases plant growth
- **Consumes and eliminates pathogens like pythium, e coli, salmonella, and other human pathogens!**
- Increases beneficial microbial network growth
- Increases plant growth & increases fish growth by 15%
- Most LABs take 3-5 days to ferment
- Great all natural pH down

LABs

Sources

Milk

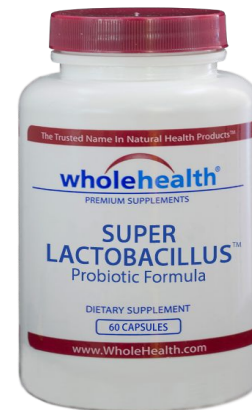
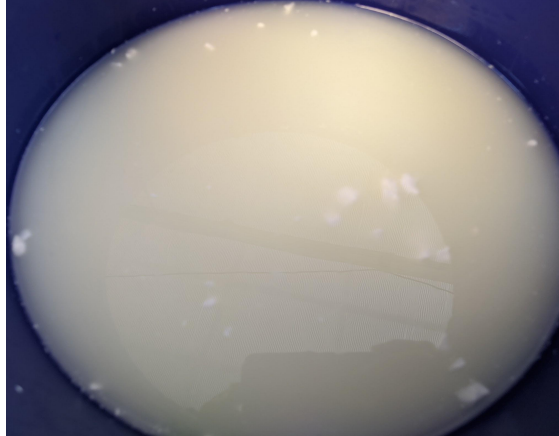
Yogurt

Kefir

Probiotic Pills

EM-1

LABs Cultures



Treats

Powdery Mildew

Botrytis

Fusarium

Pythium

Septoria



A large, clear plastic jug with a red cap. The jug is filled with a white, frothy substance (curd) that occupies the upper two-thirds of the volume. Below the curd is a yellowish, translucent liquid (LABs). The jug is sitting on a grey surface.

CURD

LABs

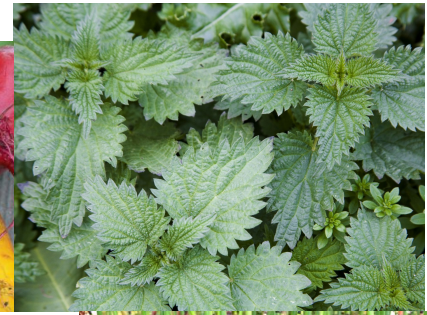


LABs Recipe

1. Pour 4 gallons of milk into your sealable container.
2. Pour $\frac{1}{4}$ gallons of rice wash into your milk.
3. Inoculate with seed lactobacillus by adding 1 to 6 containers of kefir grains or a cup of curd and whey from your previous batch. You can also additionally seed by adding traditional air and rice washed sourced Lactobacillus as well but kefir should always be used as it has a much more diverse spectrum of vitamin B compared to air collected alone.
4. Stir well for 2 - 3 minutes.
5. Put on your lid of fabric, secure with a rubber band and ferment for 48 to 72 hours until the curds separate to the top and a middle layer of whey forms. The whey (Clearer Liquid) is what you're after that is the LABs. (May take longer if stored in a cooler area)
6. Strain off the curd. This can be used to seed the next batch, feed to your fish or livestock, or used to top dress soil especially areas of bare dirt to jump start the soil.
7. The clearer liquid remaining is your LABs. This can be used directly (1:800 - 1:1000 dilution) or cut 50% with sugar to shelf stabilize it longer term.
8. This can be used foliarly, watered into soil, or poured directly into an aquaponic system.

Plant LABs

- Dynamic Accumulators can be used to target specific nutrients
- Enhances Terpenes & Flavonoids
- Unique compounds unavailable through other methods
- Organic solution to nutrient issues



Plant LABs Recipe



1. Pour 3.5 - 4 gallons of milk into your sealable container.
2. Pour $\frac{1}{4}$ gallons of rice wash into your milk.
3. Add $\frac{1}{2}$ lb - 1 lb of chose plant material.
4. Add $\frac{1}{2}$ cup of dried kelp extract. Powder is preferred.
5. Add 1 cup of raw sugar.
6. Inoculate with seed lactobacillus by adding 1 to 6 containers of kefir grains or a cup of curd and whey from your previous batch. You can also additionally seed by adding traditional air and rice washed sourced Lactobacillus as well but kefir should always be used as it has a much more diverse spectrum of vitamin B compared to air collected alone.
7. Ferment for 48 to 72 hours until the curds separate to the top and a middle layer of whey forms. The whey (Clearer Liquid) is what you're after that is the LABs.
8. Strain off the curd. This can be used to seed the next batch, feed to your fish, or used to top dress soil especially areas of bare dirt to jump start the soil.
9. The next layer below the curd will be your unique Plant LABs. This is your isolated plant LABs. This must be used right away and is not possible to stabilize.
10. This can be used foliarly, watered into soil, or poured directly into an aquaponic system.
11. The remaining thinner liquid is your LABs. This can be used directly or cut 50% with sugar to shelf stabilize it longer term.

Open Nutrient Project

- Open Nutrient Project is an Open Source project designed to aggregate the mountain of organic nutrient input data and streamline organic plant nutrient input production
- Aggregated database of plants, inputs, tests & testing methods for both water and solid inputs, and preparation methods
- KNF, JADAM, Compost Tea, Nutrient Ferments, Compost, Soil Preparations and More!
- Regular formatted releases of data in a formal report
- If you're working with ferments, teas, or other inputs for nutrients we'd love to have you on board!
- PotentPonics.com/onp/ for more information

Open Nutrient Project

- Enormous centralized database of all plant important nutrients and heavy metals
- Links to all source material
- Easily searchable database to help you better find the nutrient info you need to make the right ferment or composted input

				https://seaberry-hippopharmonides.blogspot.com/2015/01/the-				
Sourced from:	https://phy.https://seaberry-hippopharmonides.blogspot.com/2015/01/the-	PPM	PPM	English name	Botanical name	Nutrients	Potent Ponics	
Latin Name	Plant Part	Min	Max					
Brassica pekinensis	Leaf	74100	81900	Dandelion	Taraxacum officinale	Ca, K, P, Cu		
Anthriscus cerefolium	Leaf	47400	51200	Nettle	Urtica dioica	Ca, K, P, Cu		
Petasites japonicus	Plant	35000	42000	Dock, Sorrels	Rumex spp.	Ca, K, P, Fe, Mg		
Glechoma hederacea	Plant	32000	46000	Horsetails	Equisetum spp.	Ca, Co, Fe, Mg		
Artemisia vulgaris	Plant	31400	41000	Watercress	Nasturtium officinale	Ca, K, P, Fe, Na, S		
Artemisia dracunculus	Plant	30020	32719	Comfreys	Symphytum spp.	Ca, K, P, Fe, Mg, Si		
Annona cherimola	Seed	29500	38000	Watercress	Nasturtium officinale	K, P, Ca, S, Fe, Mg, Na		
epidium meyenii	Root	20000	20500	German Chamomile	Chamaemelus nobile	K, P, Ca		
Hordeum vulgare	Plant	19880	44000	Black walnut	Juglans nigra	K, P, Ca		
Fallopia japonica	Plant	18700	22000	Shagbark Hickory	Carya ovate	K, P, Ca		
Cuminum cyminum	Fruit	17880	20916	Basswood	Tilia spp.	P, Ca, Mg		
Cuminum cyminum	Seed	17880	20916	Vetches	Vicia spp.	K,P,N		
Valerianella radicata	Plant	16406	17496	Sugar Maple	Acer saccharum	K, Ca		
Origanum vulgare	Plant	16066	18647	Yarrow	Achillea millefolium	K, P, Cu		
Pueraria montana	Shoot	16000	36050	Chives	Allium schoenoprasum	K, Ca		
Peucedanum decursivum	Plant	16000	29600	Black Birch	Betula lenta	K, P, Ca		
Phaseolus acutifolius	Seed	15000	16530	Birches	Betula spp	P		
Foeniculum vulgare	Fruit	14800	19400	Shagbark Hickory	Carya ovate	K, P, Ca		
Origanum majorana	Plant	14500	17225	Hickory, Pecans	Carya spp	K, Ca		
Pimpinella anisum	Seed	14410	15923	Chicory	Cichorium intybus	K, Ca		
Trachyspermum ammi	Fruit	13900	15011	Flowering Dogwood	Cornus florida	K, P, Ca		
Gardenia jasminoides	Fruit	13800	15300	Beeches	Fagus spp	K		
Citrullus lanatus	Fruit	13514	18000	Strawberry	Fragria spp	Fe		
Carum carvi	Fruit	12902	15665	Wintergreen	Gaultheria procumbens	Mg		
Pisum sativum	Plant	12800	25200	Licorices	Glycyrrhiza spp	P, N		
Oenothera biennis	Herb	12700	35100	Black Walnut	Juglans nigra	K, P, Ca		
Vigna angularis	Seed	12540	14487	Walnuts	Juglans spp	K, P		
Vigna radiata	Seed	12038	14170	Lupines	Lupinus spp	P, N		
Oryza sativa	Plant	12000	12600	Apples	Malus spp	K		
Polystichum polyblepharum	Plant	12000	20000	Alfalfa	Medicago sativa	Fe, N		
Coriandrum sativum	Fruit	11866	14781	Lemon Balm	Melissa officinalis	P		
Elettaria cardamomum	Seed	11790	12857	Peppermint	Mentha piperita	K, Mg		
				Silverweed	Potentilla arserina	K, Ca, Cu		
				Black Locust	Robinia pseudoacacia	K, Ca, N		
				Sold Broom	Caryophyllus nigra	Fe		

Data

Multilntput Data

Resources & Lin

Aluminum

Iodine

Flouride

Arsenic

Open Nutrient Project



● PotentPonics.com/onp

- Huge list of nutrient test kits to make it easy for you to test your formulations or base inputs as much as is possible at the home scale
- Test kits listed for both soil and liquid solutions alike
- Includes kit, test range, nutrients, tests per box, price, manufacturer, and link to manufacturer

Test Kits	By Stephen Raisner	Version 1	Work in progress	Links			
Comments, Additions, Changes? Email:	OpenNutrientProject@gmail.com						
Nutrient	Kit	Range	tests per box	Price	Manufacturer	Manufacturer Link	
PH	Nutrafina pH High Range Test	7.4 - 8.6	125	\$14.39	Hagen	https://ca-en.hagen.com/Aquatic/Wate	
	pH Test Strips	4 - 9	50	\$11.75	Hach	http://www.hach.com/ph-test-strips-4-	
	pH Paper, 0 - 14 pH Range, 100/pk	0 - 14	100	\$23.85	Hach	http://www.hach.com/ph-paper-0-14-p-	
	Nutrafina pH Low Range	6 - 7.6	225	\$13.56	Hagen	https://ca-en.hagen.com/Aquatic/Wate	
	Nutrafina pH Wide Range Test	4.5 - 9	100	\$14.99	Hagen	https://ca-en.hagen.com/Aquatic/Wate	
	API pH	6 - 7.6	50+	\$4.49	API	http://www.apifishcare.com/product.ph	
	API pH highrange	7.4 - 8.8	50+	\$4.49	API	http://www.apifishcare.com/product.ph	
Alkalinity	Hanna Marine Alkalinity Checker	0 - 300ppm	25	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Hanna Freshwater Alkalinity Checker	0 - 500ppm	25	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Alkalinity Test Kit	385 - 8500ppm	100	\$46.25	Hach	http://www.hach.com/alkalinity-test-kit	
	Alkalinity Test Kit	1 - 20 gpg	100	\$46.25	Hach	http://www.hach.com/alkalinity-test-kit	
	Nutrafina Carbonate and General Hardness Test		50	\$20.37	Hagen	https://ca-en.hagen.com/Aquatic/Wate	
	API KH test kit	0 - 400 ppm	50+	\$7.36	API	http://www.apifishcare.com/product.ph	
	pH / Alkalinity Test Kit	0 - ~	55	\$15.16	Red sea	http://www.redseafish.com/reef-care-p	
Macro							
Ammonia	Hanna ammonia checker	0 - 3ppm	25	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Hanna Ammonia Medium Range Checker	0 - 9.99 ppm	25	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Hanna Ammonia High Range	0 - 99.9ppm	25	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Ammonia (Nitrogen) Test Strips	0 - 6 ppm	25	\$22.39	Hach	http://www.hach.com/ammonia-nitroge	
	Nutrafina Ammonia Test	0 - 7.3ppm	70	\$15.25	Hagen	https://ca-en.hagen.com/Aquatic/Wate	
	API ammonia test	0 - 8 ppm	130	\$6.29	API	http://www.apifishcare.com/product.ph	
Nitrite	Hanna Nitrite Low Range Checker	0 - 600 ppb	6	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Hanna Nitrite High Range Checker	0 - 150 ppm	6	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Marine Nitrite Ultra Low Range Checker	0 - 200ppb	6	\$49.99	Hanna	http://shop.hannainst.com/products/te	
	Nitrate and Nitrite Test Strips	0 - 3 ppm	25	\$20.85	Hach	http://www.hach.com/nitrate-and-nitrite	
	Nutrafina Nitrite Test	0 - 3.3 ppm	75	\$10.51	Hagen	https://ca-en.hagen.com/Aquatic/Wate	
	API Nitrite	0 - 5 ppm	100	\$4.00	API	http://www.apifishcare.com/product.ph	
+ ☰	Intro ▾	Participants ▾	Additioinal Notes ▾	Nutrient Types ▾	Liquid Testing ▾	Soil Testing ▾	Mu



i live in oklahoma i want to make a well rounded locally sourced fertilizer for my tomatoes, kale, watermelon, and cannabis



Greetings! It's great to hear about your interest in creating a locally sourced fertilizer solution for your diverse crops. As a Natural Farming Fertilizer Assistant and Organic Nutrition Advisor, I'm here to guide you through this process.

Nutritional Needs of Your Crops

Tomatoes, kale, watermelon, and cannabis, like any other plants, require a balance of macronutrients (Nitrogen, Phosphorus, Potassium) and micronutrients (Calcium, Magnesium, Iron, etc.) for optimal growth. The Nutritive Cycle Theory, as proposed by Dr. Cho, suggests that plants need different nutrients at different stages of growth. For instance, Nitrogen is crucial during the vegetative stage, while Phosphorus and Potassium become more important during the flowering and fruiting stages.

Locally Available Plants with Needed Nutrients

Based on the information provided in the `Dynamic_Accumulators_and_Nutrient_Contents` document and the `Nutrient Bio Accumulators.xlsx` document, here are some plants available in the Oklahoma region that can be used as nutrient sources:

1. **Alfalfa (*Medicago sativa*):** High in Nitrogen, Phosphorus, and Potassium (NPK: 3-1-2)
2. **Corn Gluten:** High in Nitrogen (NPK: 6-0-0)
3. **Compost:** Balanced NPK (1-1-1)
4. **Bat Guano:** High in Nitrogen and Phosphorus (NPK: 10-3-1)
5. **Horse Manure:** Balanced NPK (5-2.5-6)
6. **Soybean Meal:** High in Nitrogen and Potassium (NPK: 6-1.5-2)
7. **Worm Castings:** High in Nitrogen (NPK: 1-0-0)
8. **Kelp:** High in Potassium (NPK: 1-0.2-2)

Fertilizer Recipes

Here are some recipes you can create using the above ingredients:

1. **Vegetative Stage Fertilizer:** Mix Alfalfa Pellets, Corn Gluten, and Compost in a 3:2:1 ratio. This will provide a high Nitrogen content for the vegetative stage.
2. **Flowering Stage Fertilizer:** Mix Bat Guano, Horse Manure, and Kelp in a 2:2:1 ratio. This will provide high Phosphorus and Potassium content for the flowering stage.

Instructions on Using the Fertilizers (SOPs)

1. Mix the ingredients thoroughly in the recommended ratios.
2. Apply the fertilizer to the topsoil of your field. It's better to apply in small lump form than in smashed form to allow microorganisms to survive better.
3. For liquid fertilizer, place an amount of the mixed fertilizer in a cloth and immerse it in water. Adding Lactic Acid Bacteria (LAB) to the solution can enhance its effectiveness.
4. Spray the solution on your crops in the evening or at night.

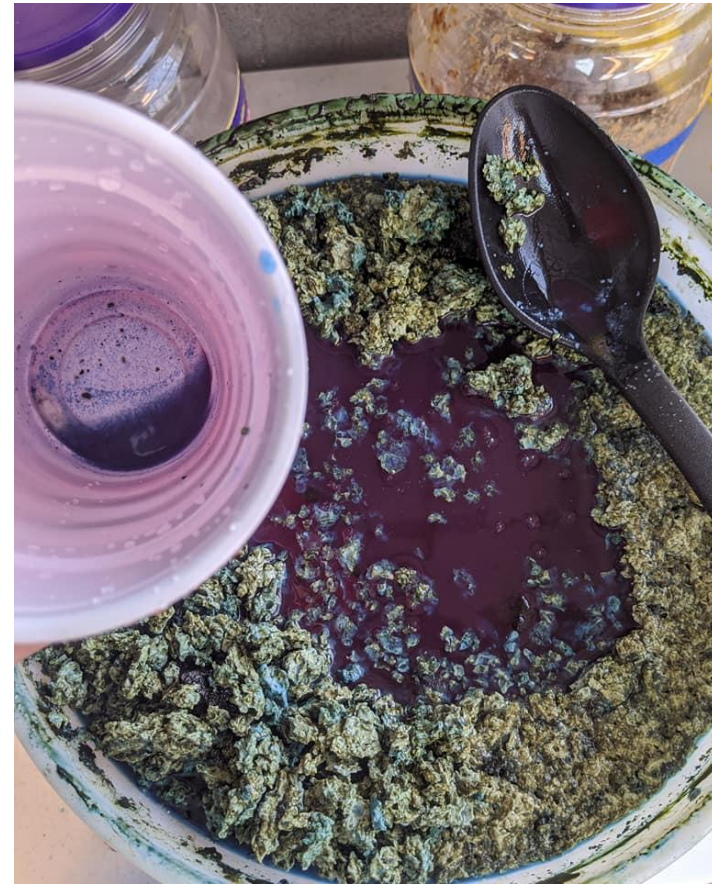
Fertilizer Application Schedule and Crop Rotation Recommendations

1. Apply the Vegetative Stage Fertilizer during the vegetative growth stage of your plants.
2. Once your plants start to flower, switch to the Flowering Stage Fertilizer.
3. Rotate your crops with a legume crop like soybeans or alfalfa to replenish Nitrogen in the soil.

Isolated Plant Compounds



- Organically isolated plant compounds can give you incredible increases in yields and plant growth
- Isolated Phycocyanin as seen here increases plant growth by providing base building blocks for chlorophyll and other complex plant compounds allowing the plant to produce more per day and increase metabolic rate in a way that normally is only achievable by using synthetic plant growth regulators
- We are currently working on documenting a wide range of isolates all derived using completely organic sources. Interested in helping?



IMO Indigenous MicroOrganisms

- Collecting Local Microbes has a ton of benefits for both soil and aquaponics alike
- Can dramatically increase mineralization by as much as 80%+
- Eliminates diseases such as normally untreatable viruses and other pathogens
- Improves flavor, heat & cold resistance, reduces plant stress and many other beneficial effects on plants
- Easy to store long term



IMO Indigenous MicroOrganisms 1

- Native Fungi, Bacteria, Archaea and other beneficials
- Great way to fill the gaps in your mineralization microbes
- Great for introducing native microbes that are adapted to your local climate and adverse conditions
- The best sources of plant beneficial microbes
- Done by using cooked rice to collect Microbes



IMO 2 Indigenous MicroOrganisms 2

- Made by combining equal parts IMO1 and Sugar
- Mix & ferment for 5 days
- Can be kept shelf stabilized this way for up to 3 years
- Can be added directly to MBBR, Sumps, Mineralization Tank, or soil to increase system biodiversity and increase mineral conversion
- Best to collect & label new samples monthly



LIMO Liquid Indigenous MicroOrganisms

- Made from brewing IMO2, Humic acid, and sometimes other inputs depending on crop needs
- Best way to increase microbial diversity
- Maximizes mineralization using local microbes
- Significantly enhances mineralization tanks and compost teas
- Creates unparalleled plant health as well as increases flavor
- Fills in many gaps in mineralization often found in aquaponic systems or composted soil mixes



Fermented Plant LIMO (Liquid Indigenous MicroOrganisms)



- FPLIMO is a method of fermenting plants in LIMO for 90+ days to make the minerals much more plant available
- Quốc Khánh Phạm in vietnam is using this to supplement all of his required nutrients in aquaponics & is a pioneer in this method
- This tek is great for getting those higher nutrient levels that can be harder to achieve with organic inputs in other ways
- You want a to use a 1:20 - 5:20 ratio of plant inputs to LIMO. Once the plant material dissolves add more plant material every 30 - 45 days for 3 - 6 months until you reach the desired nutrient levels
- Provides very high potassium, calcium, Iron, and other minerals that are not always easy to come by with traditional organic farming methods
- Try different inputs for different results
- For Nitrogen use 1kg of fish to 20L of LIMO for 2 weeks

What is Indigenous Predatory MicroOrganisms?



- IPMO is a method of collecting native predatory microorganisms first discovered by Chris Trump
- IPMO is similar to IMO accept we add insect frass / insect part or corpses in either the IMO 1 or IMO 3 propagation phase to target insect feeding microbes more heavily and then propagate them into LIPMO for foliar application
- This allows you to make your own pesticide anywhere in the world that is based on the local microbiology

Why & When to use IPMO?

- Primarily used against medium to large insects
- Think of it like an DIY *Beauveria bassiana* or *Isaria fumosorosea*
- Use **ONLY** on plants not being used by pollinators actively
- Use in Veg and up to week 2 of flower (Can be used later with caution) foliarly
- Can be used all run on the cover crop & surrounding area



Indigenous Predatory Microorganisms

Target Insect + + 

- Made from adding target insect & insect frass to your IMO 1, 30% Insect Frass to 70% rice
- Convert to IPMO 2, IPMO 3, or IPMO 4 to be use in LIPMO application
- Huge Breakthrough in localized biocontrol
- Ideally use some of the target insect as all or part of your insect frass portion
- Easy to make any where in the world
- Can be used to treat enormous areas cheaply





IPMO Recipe 1 IMO2 Version



1. Determine the how many collection boxes you are making. The more the better.
2. Collect the corpses of as many of your target insect as possible. (Insect frass can be used in a pinch)
3. Wash your rice. Collect and save rice wash for later use.
4. Thoroughly mix a combination of 70-75% rice to 25-30% insect frass & target insect. Use insect frass to make up the remaining mass to get to 25-30%.
5. Cook rice & insect frass / collected target insect mix until cooked 80 - 85% of the way cooked.
6. Strain well thru a mesh strainer.
7. Place rice & insect mix into your premade wood or plastic collection box.
8. Cover with a paper towel and chicken wire or other rodent barrier.
9. Locate and place at the base of a tree or bush with ground clutter such as leaves, moss, sticks, ect and place the collection box there. Cover from above with a waterproof barrier.
10. Allow to mature for 4 - 7 days depending on temperature until the surface is completely colonized.
11. Once fully matured its is now ready to be converted into IPMO 2.
12. Place your mature IPMO 1 into a container and weigh it.
13. Weigh and then add an equal amount of raw sugar to your IPMO 1.
14. Ferment for 5 days. (Note in emergency situations IPMO 1 can be used right away inplace of IPMO 2 in step 14.)
15. Add ½ cup of IPMO 2 to 4 gallons of water.
16. Place your weighted airstone into the bucket or container and brew for 12 hours.
17. Strain and apply foliarly.
18. Use in veg and early flower foliarly, do not use in the second half of flower accept as a root drench as it may cause you to fail microbial testing.

Careful Using IPMO Around Pollinators



Liquid IPMO Recipe

1. Fill your mixing tank with 4.5 gallons of dechlorinated water.
2. Add 1/2 cup of IPMO 2 or 1 cup of IPMO 3 or IPMO 4.
3. 1 tablespoons of Humic Acid.
4. Place your weighted airstone into the bucket or container and brew for 12 - 24 hours.
5. Strain, fill your sprayer and apply.

Additional Resources

Chris Trump ~ www.biomei.solutions ~

Chris Trump Youtube

Matt Powers ~

www.thepermaculturestudent.com ~

Matt Powers Youtube

Nigel Palmer ~ www.nigel-palmer.com ~

Nigel Palmer Youtube

Growing With Fishes Podcast

- 1000+ Hours of free educational content
- Cannabis, Aquaponics, Living Soil, and other sustainable production methods are the focus of the podcast
- Hundreds of different expert guests from around the world
- New Episodes Each Week
- Long format interviews with Experts in Aquaponics, Cannabis, Living Soil, Pest Control, Microbes, Soil Science, System Design and so much more!



Youtube 1000+ Hours of Free Info

Potent Ponics

Podcast on Your Favorite App

Growing With Fishes

Email

PotentPonics@gmail.com

Aquaponic Cannabis Classes

APMJClass.com

Pest Control Course

ThePestClass.com

Website

PotentPonics.com

Facebook Group

Aquaponic Cannabis Growers

