

NATURAL FARMING TECHNOLOGY

Introduction

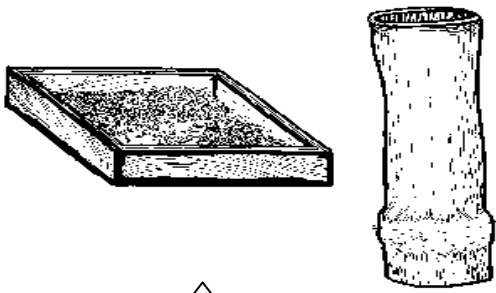
We looked for years various technology and looked at possible solution to ensure high yields but these methods, sadly, are not always the “best” solutions. The “Korean Natural Farming Technology” provides us the system of using fully local materials both for farm inputs and processing methodology. About two decades ago came Green Revolution’s “miracle” seeds a short term for narrow-minded search for higher yields of grains. The widely used of these chemicals landed us in such a mess, obscure as it may seems but the fact remain that the death of our farmers is a result of economic policies that promote modern agriculture. When two third of the country are farmers faces extinction we viewed this as genocide. With this system, we can now grow more food and higher incomes to farmers without destroying the environment and killing our farmers. This paper will focus on the methodology of men and women who has acquired competencies and commitment in giving quality of life to its people. The formula of success is “you walk, the talk” by teaching the technology more widely and challenges the local government unit (LGU) to adopt and embraces the technology. Eventually, bring prosperity for rural communities - a debt-free farmer.

Natural farming system has unleashed the most creative and the most innovative men and women from private sector and local government officials in this country. It created a common ground and unified knowledge and understanding about the many aspect of natural farming technology. It internalized the reason for the need of improving the farming industry as a whole. It created awareness and interest on the need to sustain subprojects that are geared to natural farming technologies. This development approach will have an impact on the rural scenario since activities will involve the use of crops, livestock other indigenous materials and skills of the local residents as the result will eventually also benefit the from the farmers' increased economic income.

Our program for farmers makes them responsible for their activity because they have a clear understanding of the principles of natural farming - **follow the law of nature and respect for life!** To make the choice of the life and the survival of human beings is to make the choice of sustainable development through natural farming. We do not till the land. *Our model farmers and farm development is Zero Chemical and is not negotiable to use insecticides, herbicides, fungicides also known to us as CIDE family- suicide, genocide!* Instead we use ecological pest management; instead of chemical fertilizers we use our homemade liquid fertilizer to soil and plants.

Indigenous Micro Organisms (IMO)

1. Revive soil nutrients. It speeds growth of plants
2. Speed up composting works like "vaccinating" against sickness, illness and weeds.
3. These are present in the soil but has deteriorated due to many factors



1

Put cooked/ steamed rice in a wooden box or perforated plastic tray that is 8½" x 11" x 3" or a length of a bamboo pole open or split open on one side. Make sure there is enough moisture in the box. Fill half of the container. Do not compress.

HOW TO MAKE THE CONCOCTION

2

Cover the box, tray or bamboo with a clean sheet of paper and tie with a string. Label day made and harvesting day.

3

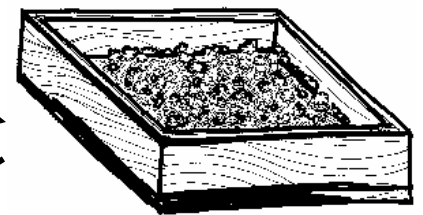
Cover and wrap with plastic to keep out rainwater, protect from wild rats or small rodents that may come and take it.

4

Collect from forest floors, leaf molds, bamboo forest, rice paddy or coconut husk

Remove after 3 days (in cold area you need five days to do the process) white molds will form on top of the rice disregard black molds.

5



HOW TO USE THE CONCOCTION

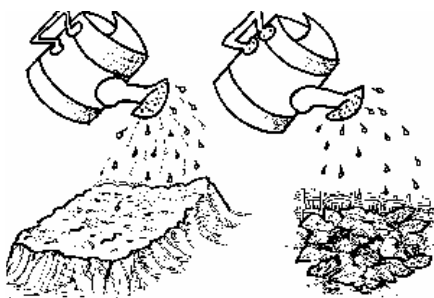
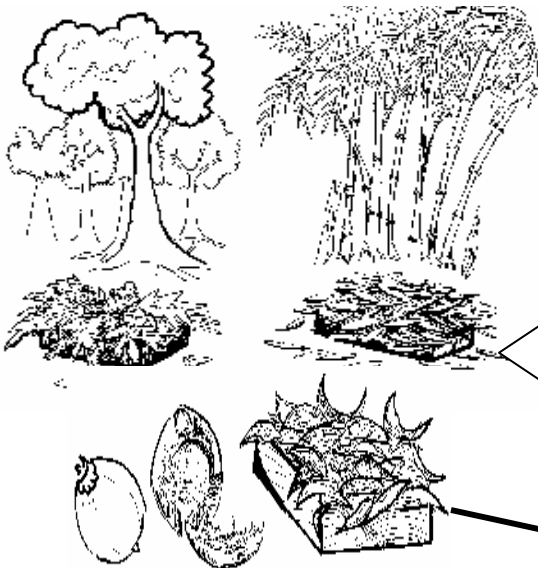
1. Mix 2 tablespoons of the juice to 1 liter of water
2. Spray on soil and plants

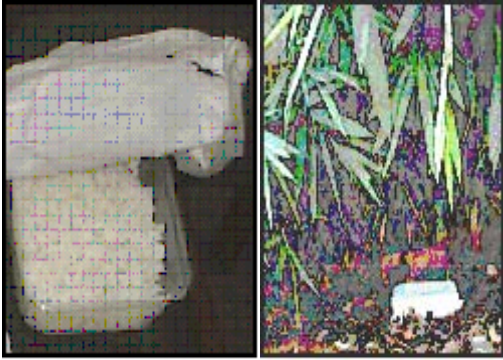
6

Place in a plastic container/ jar the moldy rice and mix with 1 kilo of molasses or crude sugar.

7

Cover the jar with a clean sheet of paper and tie with a string. Place in a cool and shaded place. After 7 days this will yield a mud like juice.





MAKING OF THE IMO 5

IMO 1 Place cooked rice in a bamboo stump (split open) or plastic container and cover with clean sheet of paper and place underneath bamboo plants or pile of rice straw. Leave it for three days (hot season) or five days (rainy season). After three to five days Mycelium of fungi (white molds) appears on the top of the rice. **IMO2** Add rice molds then mixed Muscovado or mollasses (ratio 1:1) to the IMO1. Place in a plastic container and cover with a clean sheet of paper. Ferment for seven days.

IMO 3 After seven days, harvest the one liter of liquid and add 10 liters of water (ratio 1:1000) and pour the solution to 100 kilo of rice bran (D1) and mix thoroughly, cover the mixture and leave for three days. Temperature will reach 36-40 degrees Celsius and molds will appear on top.



Mixing the IMO3, cover the mixture and leave for three days. On the fourth day, **IMO 4** Mix 100 kilo of clean soil thoroughly and cover. Soil must be from the field not just from anywhere. Farm soil has many organisms and soil from the field has its own native microbes and the field becomes a village of microbes. Leave for one day or overnight. **IMO 5** Mix IMO 4 to 200 kilo of chicken manure. Make the pile height at three feet high to start microbial working. Cover with plastic or jute sacks and leave for seven days.



During the seven days. Water or spray on top of the pile daily with the following solution: FPJ 1:500 and KAA 1:500. If manure is not possible in the area shredded leguminous plant maybe used.



Oriental Herbal Nutrient (OHN)

1. Natural Pest repellent. It is use throughout the early, vegetative and change over and fruiting stages.
2. Is a very important input in natural farming
3. To develop the immune system of your plant and animals

1

Ingredients:

8 kilo crushed ginger for plants/garlic for animals
 2 kilo muscovado sugar
 10 liters of gin or liquor 30-40 proof
 Use ceramic or glass jar

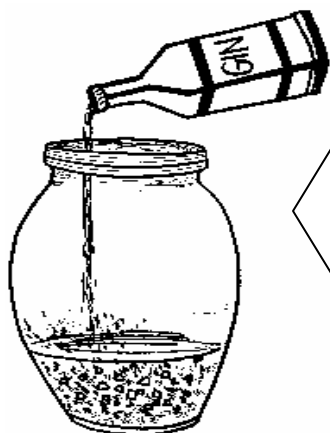
2/3

1/3



2

Divide container into three parts. Mix ginger /garlic and muscovado sugar together preferably by hand and put inside jar cover and sealed ferment for seven days.



3

After seven days add 10 liters of gin. Cover and sealed. Decant liquid after ten days. **First extraction is good for animal.** Second extraction is good for plants. Just add gin same amount taken from the first extraction. You may add fresh or dry chili, neem fruit, curry fruit, makabuhay, marigold for stronger potency and repeat same process the third time. And continue to ferment for ten days.

Together with other mixtures spray on plants every week when they weaken or start to flower.

4

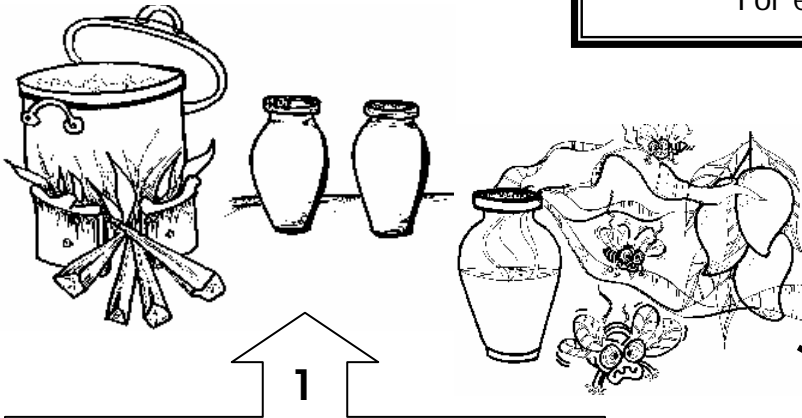


HOW TO USE THE CONCOCTION

1. Mix the following:
 2 tablespoons of OHN to 1 liter of water
2. Add to the IMO and FPJ mixture and spray together on the leaves and soil every week

Natural Attractant for Flying Insects and Butterflies

For elimination of flying insects

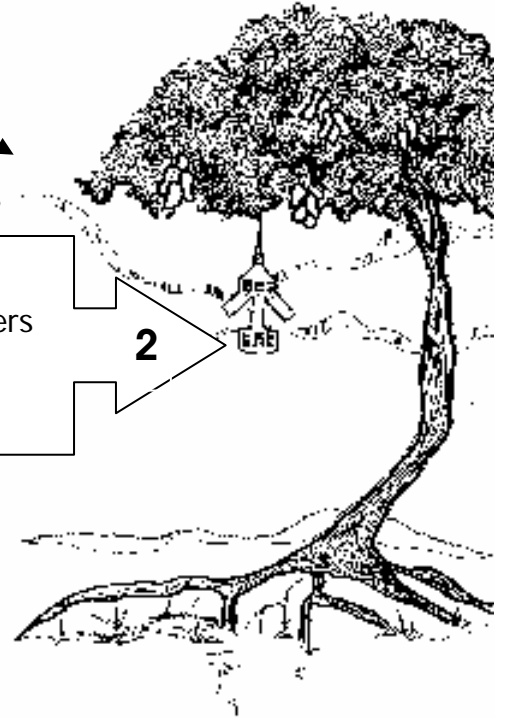


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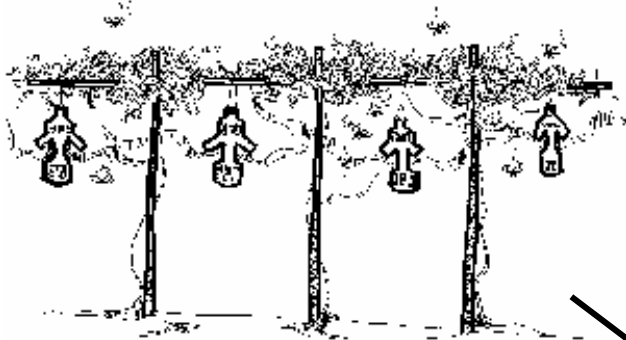
1 gallon of coconut vinegar or coconut wine (tuba) and add ½ kilo of crude sugar before boiling. Cool and add 1/3 liter of FPJ concentrate.

Put some of the mixture in containers and hang on fruit-bearing trees.

2



INSECT ARE ALCOHOLICS
PUT A LITTLE BAR. THE INSECTS
COME BY, HAVE A DRINK, GET
DRUNK, FALL AND DIE!
Dead insect cannot multiply!

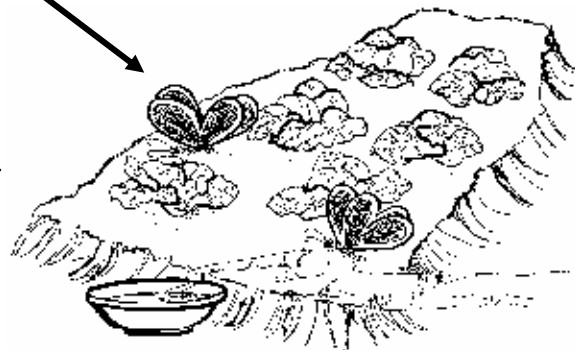


3

Put some of the mixture and hang on vegetable trellises.

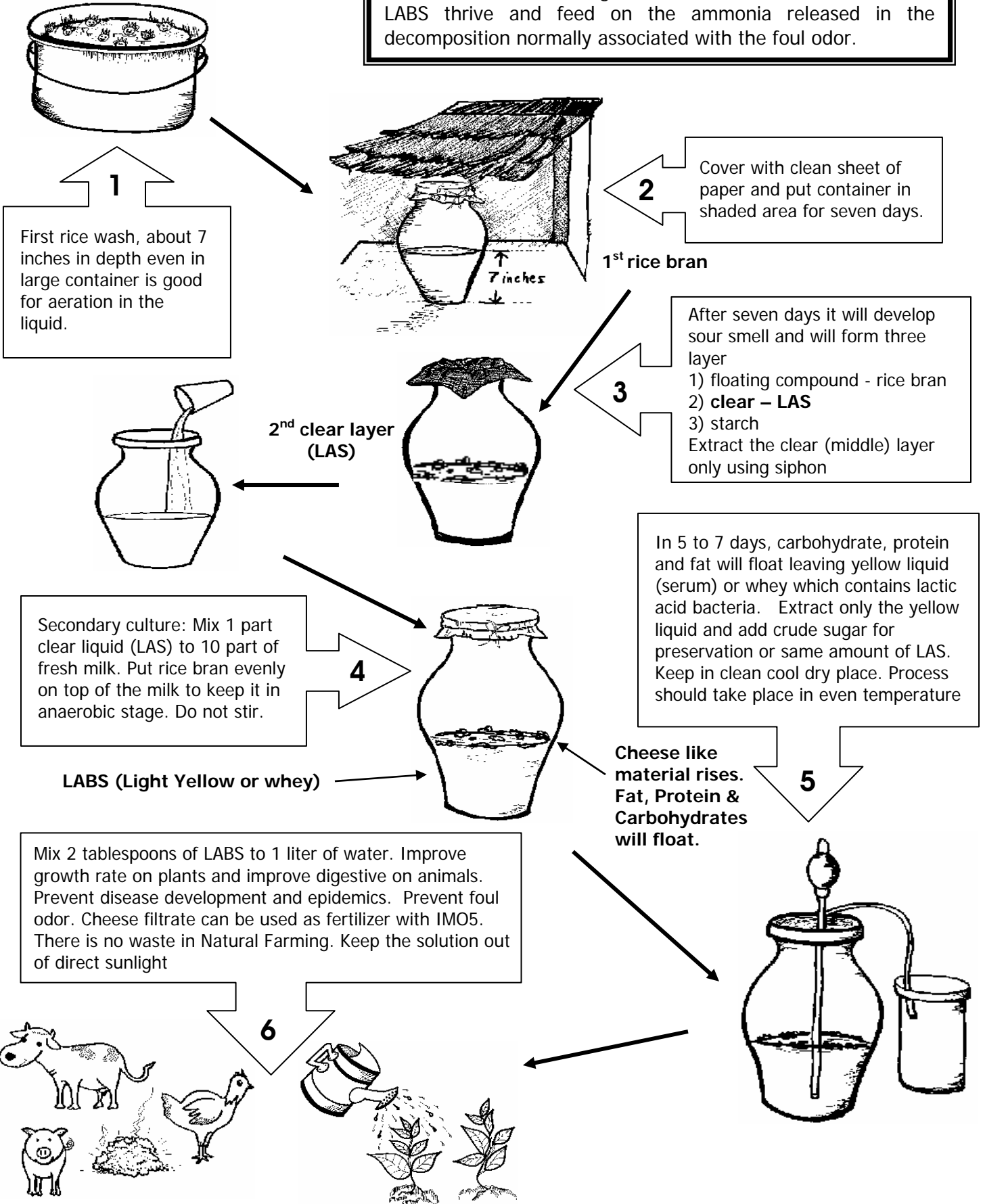
Put some of the mixture in a container and place near vegetable plots.

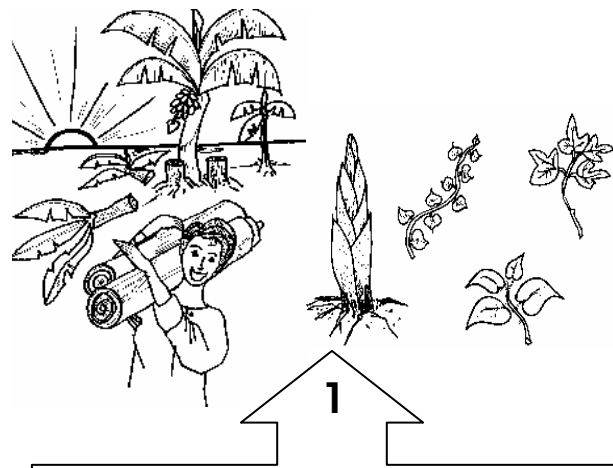
4



Lactic Acid Bacteria Serum (LABS)

It converts waste into organic matter and basic minerals. LABS thrive and feed on the ammonia released in the decomposition normally associated with the foul odor.

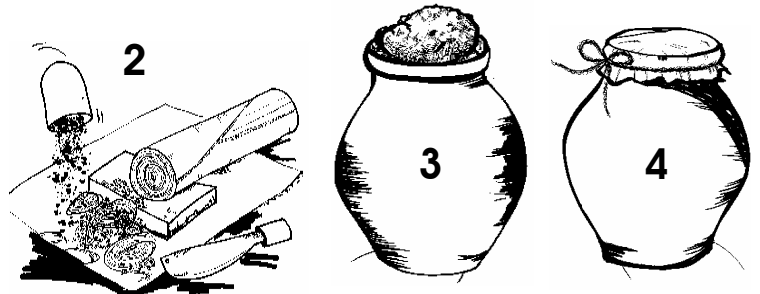




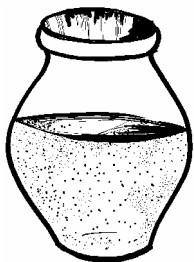
Fermented Plant Juice (FPJ)

- There are a lot of enzymes in leaves
- Enhances plant growth
- For greener leaves - Photosynthesis

Use any green colored leaves such as kangkong, kamote, kalabasa, alugbati tops, bamboo shoots and other fast growing plants can also be used. Fresh, juicy, succulent leaves are best. Some suggestions are Banana Stem, Water Spinach, Bamboo Shoots, Green grasses, Bamboo leaves, and Duck Weed or azola. Cut young banana trunk (cardava) Collect before sunrise. Avoid collecting after excessive rain. Quickly snap the growing points of the plants. Baby fruits can be used to promote growth.



- 2 Chop 2 kilo plants and mix 1 kilo of crude sugar in a large basin. Place in a clay jar or **plastic container**
- 3 Put a rock on top for the $\frac{3}{4}$ of the contents to settle at the bottom.
- 4 Wait for five hours and remove the rock and cover the jar with a clean sheet of paper and tie with a string. Put the jar/plastic container in a cool and shaded place. Fermentation will be complete in seven days.



This will yield 2 $\frac{1}{2}$ liters of juice when the banana trunk is used. Filter to separate sludge.

POINTS TO REMEMBER

- DO NOT wash the material.
- Seal the container with clean sheet of paper at room temperature. Avoid direct sunlight. Solution is ready in seven days. Strain and transfer in a clean container.
- Drain the liquid and place in plastic or glass bottles (always leave about 1/3 of bottle empty so IMO to breathe). **IMPORTANT:** Do not tighten bottle lid for 2 weeks to allow gasses to escape and avoid a sticky explosion!
- Note: Wait till the tiny bubbles disappear then close the container tightly. if you observe un dissolved sugar at the bottom means the fermentation did not take place. Extend for another day and add a little water to reactivate.

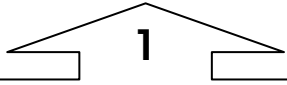
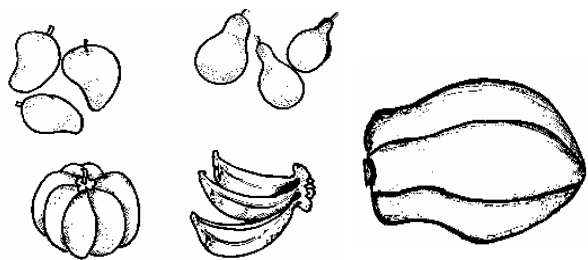


Application:

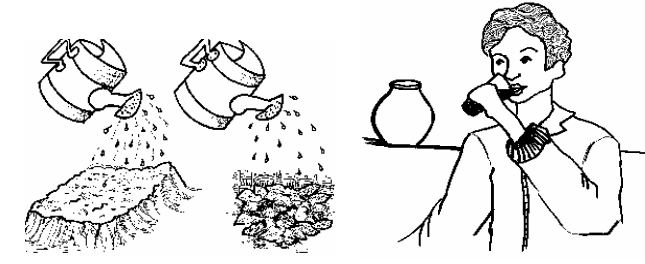
Apply using 2 tablespoon of FPJ / 10 liters water.

Apply directly to the leaves of plants when sun is not hot. Before sunrise or two hours before sunset.

Plant material can be used as animal feed or compost. FPJ should have a pleasant smell and sweet, tangy taste. Keeps for about one year.



Prepare 1 kilo sweet fruits to 1 kilo brown sugar you may use molasses. Suggested materials include banana, papaya, pineapple, mango, jack fruit, star fruit, guava, pumpkin, etc (citrus fruits is not recommended). Matured squash can also be used. Recommended "best" mixture is banana 3 kg, papaya 3 kg, and pumpkin 3 kg. Rule of thumb-fermented fruit juice from tomatoes fed to tomatoes is just like feeding breast milk to the baby!



HOW TO USE THE CONCOCTION

For Plants:
Apply using 2 tbsp of FFJ / 10 liters of water. Apply directly to leaves of plants when sun is not out. Add to the IMO and FPJ mixture and spray together to the leaves and soil of fruit bearing trees or during vegetative and reproductive stages.

For Animals:
Mix 2 tablespoons of the juice to 1 liter of water. This is also good for human consumption.

IMPORTANT:
Do not tighten bottle lid for 2 weeks following bottling to allow gasses to escape and avoid a sticky explosion! Solid material can be used as animal feed or compost. FFJ should have a pleasant smell and sweet, tangy taste. Keeps for about a year.

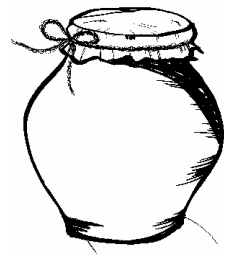
Other:
Use FFJ to reduce latrine smell. Use 3 spoons / 10 liters while cleaning. Pour 2-4 spoons directly down toilet to help septic system.

Fermented Fruit Juice (FFJ)

- To sweeten the fruit (Potassium)
- It increases plant nutrition through leaves and roots with potassium factor



2 Ratio 1:1 Put 1 kilo sweet fruit inside the clay jar /plastic container & add 1 kilo of crude sugar. Best time to prepare in the evening to prevent flying insect.



3 Cover with a clean sheet of paper and tie with a string and put a date. Place in a cool and shaded place. Ferment for 7 days.



4 This will make approximately 1 ½ liters of juice. Drain the liquid and place in plastic bottles (always leave about 1/3 of bottle empty so IMO can breathe).

POINTS TO REMEMBER:

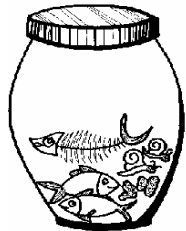
Chlorophyll in leaves does not dissolve in oil or water. It can dissolve only with very weak alcohol. There are lot of enzymes in leaves, when enzymes are mixed with brown sugar or molasses they ferment through osmosis pressure and in the process we get the liquid or juice. Small fruits fermented in brown sugar are used to promote growth. Get the little fruits and fed back to the tree to make fruits grow a lot larger. You can also used the flowers or blooms of acacia and flowers that bee loves.

It helps digestion of animal and plant nutrients. It resists plant diseases and protects plant nutrients. It resists plants and protects plants from insects. It speeds harvesting. It is plant hormones. Spray to leaves and soil.



1

Put whole fish or bones, gills and guts, scales, tails etc. Washed, crushed live snail or kuhol (eggs can also be used) place in a plastic container. Pestle or crush materials Don't use hands. Add the same amount of molasses or Muscovado sugar. Mix sugar in ¾ container with fish ingredients then remaining molasses. Prepare at night to prevent flies from breeding.



2

Cover and keep in a cool place or shaded area. Drain to extract liquid after 10 to 15 days. Transfer liquid into a clean plastic bottles Wait till tiny bubbles disappear before sealing the cover before storing. Always leave about ¾ of bottle empty so IMO can breath.

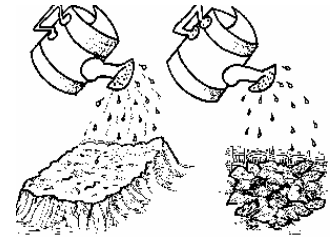
Fish Amino Acid (FAA)

Make nitrate from fish it contains abundant amount of nutrients and various types of amino acid.

APPLICATION:

Apply using 2 tbsp / 1 liters of water. Apply directly to the soil or to the ground, not to the leaves.

Keep concoction from direct sunlight. Store in dry cool place.



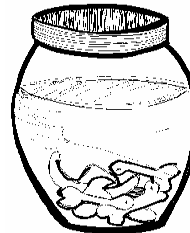
Calcium Phosphate Ca-P (Animal Bone)

Induced flowering, prevent overgrowth. For older plants, it Increase calcium factor on roots and leaves. Calcium Phosphate (Ca-P) is the product which according to the plants' lifecycle and can be fast-effective. Ca-P is applied when the plants are about to flower. Feed to animals during pregnancy or breeding time at 200 times dilution. Spray when first flowers come out. Ex. tomato plant, cucumber, eggplant etc.



1

Boil or broil 2 kilos of animal bones to separate meat and fat until remaining meat to the bone is charcoal black scrape charred meat and let it cool. Do not burn the bone. Ratio 1:10



2

Place bone in a plastic container and pour 5 gallons of pure coconut or sugarcane vinegar. Cover for 30 days. Filter and used. Keep air tight container.

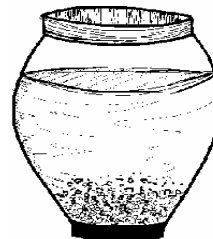
Calcium (Eggshell and Shells)

Strengthen Flowers. Contributes to better utilization of carbohydrates and protein. It is also a major element in forming a cell membrane and enables smooth cell division make fruit hard and sweet. Spray CA on the leaves after the fruits has become large. They prevent overgrowth and get a sweet hard fruit. Add seawater, calcium phosphate or OHN for better taste and aroma of the fruits. It is applied when nitrogen is big. It is the most important ingredients for flowering.



1

Wash and crushed eggshell and take the inside filament or film. Pan fry 2 kilos eggshell until brown, set aside and cool. **Vinegar first**, then pour slowly the eggshell.



2

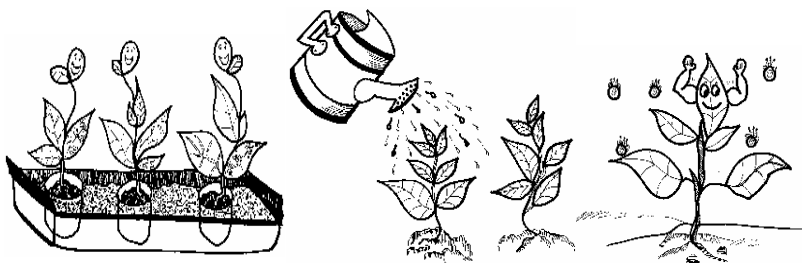
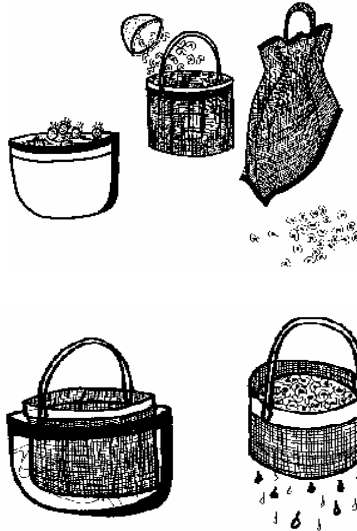
Wait till the tiny bubbles disappear and stop. Use exact container. Cover and ferment for 20 days. Filter and use keep in airtight container.

Seed and Seedling Treatment and Revitalization

To assure good plant growth seed must be genetically healthy and free from weeds seed.

In 3 liters of water mix 2 tablespoons of coconut vinegar **(to break up the thick cotyledon)**, 2 tablespoons of FPJ **(to make plant powerful and vigorous)** and 2 tablespoons of OHN **(tolerable to diseases and good root development)** Place seeds in a net bag or wire basket.

Soak seeds for 4 to 8 hours. The slower the seeds germinate the longer they should be soaked. Plant immediately before they dry.



Before transplanting seedlings do not water for 2 days. In 3 liters of water mix 2 tablespoons of coconut wine, 2 tablespoons of FPJ and 2 tablespoons of OHN. Put in a container and soak the seedlings for 15 seconds. Immediately transplant the seedlings. The seeds will develop thick cotyledons making it immune to worms. They will also have good root development making them tolerable to diseases. Sprinkle the remaining mixture on plants after they are transplanted.

Points to remember:

For one sacks of rice seeds (45/50 kilo) soak for 16hrs water in running water or change water every three hours suggested time (5am-3hrs/8am-6hrs/11am-9hrs/2pm-12hrs/5pm-15hrs/ 8pm soak to solutions for 8 hours. Prepared 32 liters of water, 300ml OHN, 300 ml FPJ (riceplant), 300 ml coconut vinegar.

15 ml = 2 tbsp (used tin can of sardine for measurement). Incubate for 24 hours before sowing.

TRANPLANTING OF RICE:

Soak rice seedling for 15 seconds, do not allow to dry. Sow immediately. Apply the remaining liquid treatment to soil after transplanting.

DURATION OF TREATMENT APPLIED TO TYPE OF SEEDS:

Soaking time/day

- Half hour – 1 day (ex: mungo)
- One hour – 2 days (ex. corn)
- Two hours – 1 week
- Four hours – 2 weeks
- Six hour – 3 weeks
- 8 hours – one day – 1 month such as hardwood)

- Fast germinating (rensonii) 6 hours
- Intermediate (indigofera) 8 hours
- Slow germinating (flamengia) 24 hours