



## Aloha Kitchen

Artisan Farmstead Cheeses, Salsas, Jams and more



3 hectares  
8 acres  
29 rai  
42 dou

## Aloha House

An Orphanage on an Organic Farm



7 hectares  
17 acres  
43 rai  
108 dou

## Aloha Ranch and Organic Farm

An Eco Village Half way to the Underground River



## Aloha House Inc.

Registered with SEC  
Non-profit, non-stock NGO  
Accredited by the DSWD  
Orphanage  
Christian Ministry  
Mother's Program  
Train Progressive Organic Farmers



What does it take to  
keep 3 Hectares (7 Acres, 21 rai) productive?

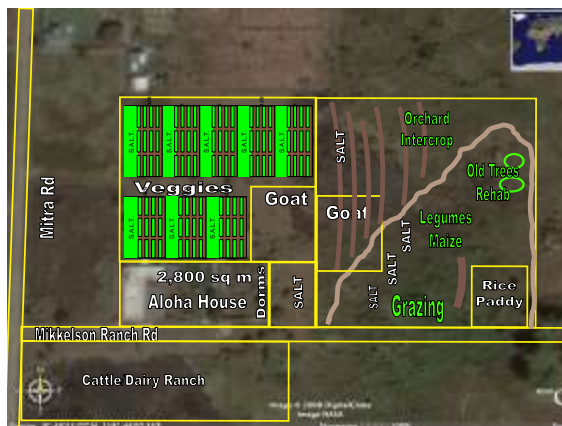


1.5 hectare  
vegetables/herbs  
1.5 hectares Pasture  
1 Farm Manager  
2 nursery workers  
6 Farm Technicians  
0-4 interns

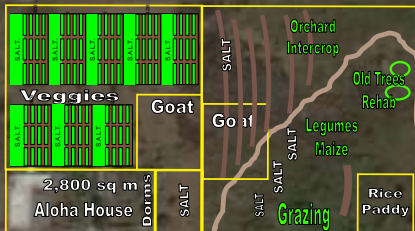


## Aloha Farm

- 1 dog
- 2 sows
- 4 cows
- 6 bucks
- 12 legumes
- 14 cover crops
- 17 fattener hogs
- 25 milking goats
- 33 various herbs
- 55 premium vegetables
- 520 pastured chickens
- 3,000 Black Nile tilapia fish
- 20,000 Domestic honey bees
- 1,000,000 manure earthworm - bulati
- 38,000,000,000,000,000,000 beneficial microorganisms



Mitra Rd



Mikkelsen Ranch Rd

Cattle Dairy Ranch

[illegible]

## We Practice and Teach The 10 Fundamentals

- Crop Rotation
- Legume Usage
- Companion Planting
- Composting
- Green Fertilizers
- Mulching
- Cover Cropping
- Minimal Tillage
- Insect Habitat



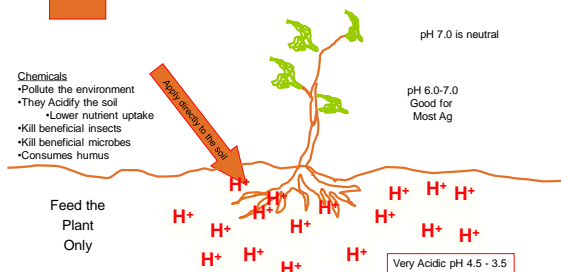
**Integrated Livestock**

## Traditional Agriculture

Urea

### Modern Theory of Fertility

46-0-0



## Traditional Agriculture

Urea

### Modern Theory of Fertility

46-0-0

N-P-K

46% Ammonium nitrogen

50kilo x 46% = 23kilo "N"

- Chemicals
- Pollute the environment
  - They Acidify the soil
  - Lower nutrient uptake
  - Kill beneficial insects
  - Kill beneficial microbes
  - Consumes humus

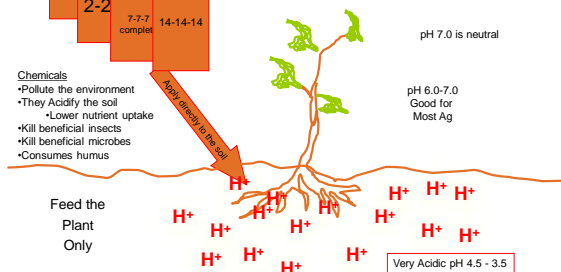
Feed the Plant Only



## Traditional Agriculture

### Modern Theory of Fertility

Ur



## Traditional Agriculture

### Modern Theory of Fertility

Ur

2-2

7-7-7

14-14-14



Feed the Plant Only

Very Acidic pH 4.5 - 3.5

## Traditional Agriculture

### Modern Theory of Fertility

Ur

2-2

7-7-7

14-14-14

1,000-1,000-1,000

Million-million-million

- Chemicals
- Pollute the environment
  - They Acidify the soil
  - Lower nutrient uptake
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Feed the Plant Only

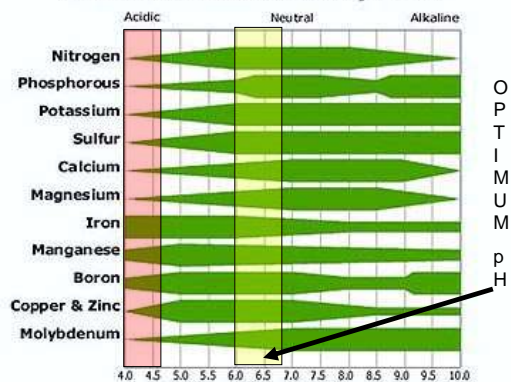
Very Acidic pH 4.5 - 3.5



## Traditional Agriculture



### Plant Nutrient Availability Chart

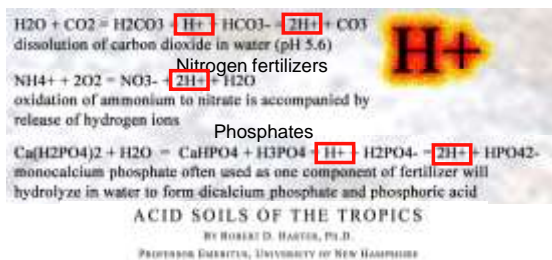


## Traditional Agriculture

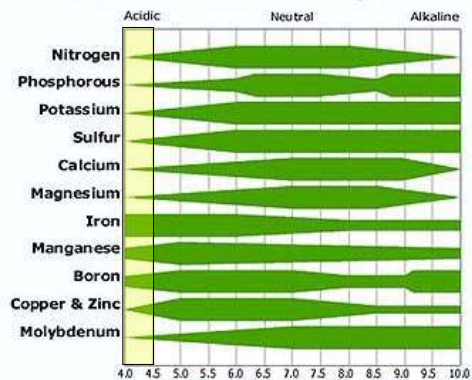
### Modern Theory of Fertility

Where does the acid come from?  $H^+$

Rain Water

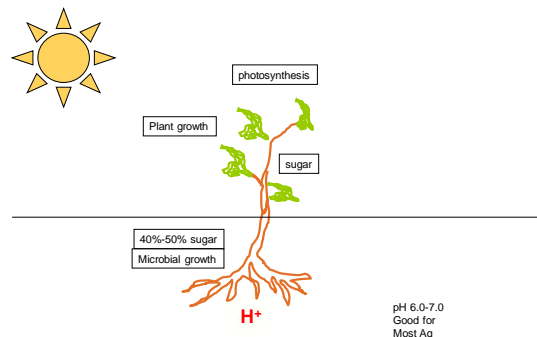
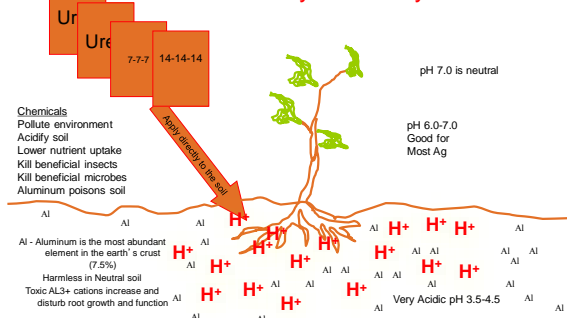


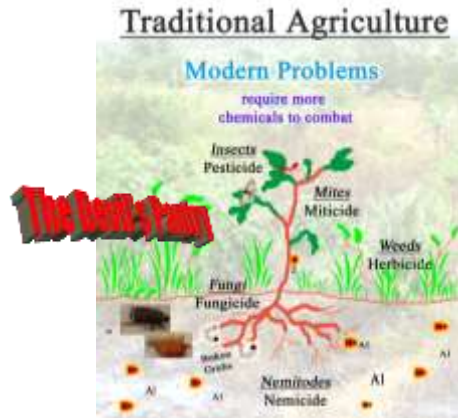
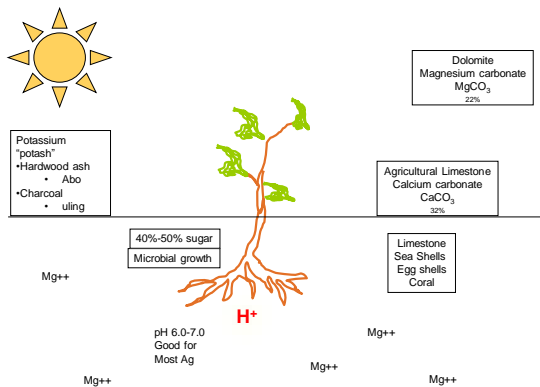
### Plant Nutrient Availability Chart



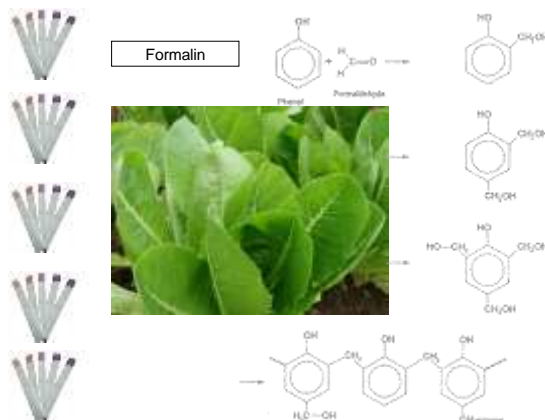
## Traditional Agriculture

### Modern Theory of Fertility





- Agent Orange was the code name for a herbicide developed for the military, primarily for use in tropical climates. Although the genesis of the product goes back to the 1940's, serious testing for military applications did not begin until the early 1960's. The purpose of the product was to deny an enemy cover and concealment in dense terrain by defoliating trees and shrubbery where the enemy could hide.
- The product "Agent Orange" (a code name for the orange band that was used to mark the drums) it was stored in, was principally effective against broad-leaf foliage, such as the dense jungle-like terrain found in Southeast Asia. The product was tested in Vietnam in the early 1960's, and brought into ever widening use during the height of the war (1967-68), though its use was diminished and eventually discontinued in 1971.
- Agent Orange was a 50-50 mix of two chemicals, known conventionally as 2,4-D and 2,4,5-T. The combined product was mixed with kerosene or diesel fuel and dispersed by aircraft, vehicle, and hand spraying. An estimated 19 million gallons of Agent Orange were used in South Vietnam during the war.
- The earliest health concerns about Agent Orange were about the product's contamination with TCDD, or dioxin. TCDD is one of a family of dioxins, some found in nature, and are cousins of the dibenzofurans and PCB's. The TCDD found in Agent Orange is thought to be harmful to man. In laboratory tests on animals, TCDD has caused a wide variety of diseases, many of them fatal. TCDD is not found in nature, but rather is a man-made and always unwanted byproduct of the chemical manufacturing process. The Agent Orange used in Vietnam was later found to be extremely contaminated with TCDD. Dow and Monsanto were sued and paid claims.





Aspartame



Eye  
blindness in one or both eyes  
decreased vision and/or other eye  
problems such as:  
blurring, bright flashes, squiggly lines,  
tunnel vision, decreased night vision  
pain in one or both eyes  
decreased tears  
trouble with contact lenses  
bulging eyes

Ear  
tinnitus - ringing or buzzing sound  
severe intolerance of noise  
marked hearing impairment

Neurologic  
epileptic seizures  
headaches, migraines and (some severe)  
dizziness, unsteadiness, both  
confusion, memory loss, both  
severe drowsiness and sleepiness  
paresthesia or numbness of the limbs  
severe slurring of speech  
severe hyperactivity and restless legs  
atypical facial pain  
severe tremors

Psychological/Psychiatric  
severe depression  
irritability  
aggression  
anxiety  
personality changes  
insomnia  
phobias

Chest  
palpitations, tachycardia  
shortness of breath  
recent high blood pressure

Gastrointestinal  
nausea  
diarrhea, sometimes with blood in stools  
abdominal pain  
pain when swallowing

Skin and Allergies  
itching without a rash  
lip and mouth reactions  
hives  
aggravated respiratory allergies such as  
asthma

Endocrine and Metabolic  
loss of control of diabetes  
menstrual changes  
marked thinning or loss of hair  
marked weight loss  
gradual weight gain  
aggravated low blood sugar (hypoglycemia)  
severe PMS

Other  
frequency of voiding and burning during  
urination  
excessive thirst, fluid retention, leg swelling,  
and bloating  
increased susceptibility to infection

Additional Symptoms of Aspartame

Toxicity include the most critical  
symptoms of all  
death  
irreversible brain damage  
birth defects, including mental  
retardation  
peptic ulcers  
aspartame addiction and increased  
craving for sweets  
hyperactivity in children  
severe depression  
aggressive behavior  
suicidal tendencies

Aspartame may trigger, mimic, or cause  
the following illnesses:  
Chronic Fatigue Syndrome  
Epstein-Barr  
Post-Polio Syndrome  
Lyme Disease  
Grave's Disease  
Meniere's Disease  
Alzheimer's Disease  
ALS  
Epilepsy  
Multiple Sclerosis (MS)  
EMS  
Hypothyroidism  
Mercury sensitivity from Amalgam fillings  
Lupus  
non-Hodgkins  
Lymphoma  
Attention Deficit Disor

### Aspartame side effects

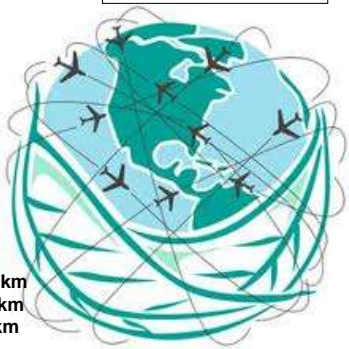


Regular Training for the Community



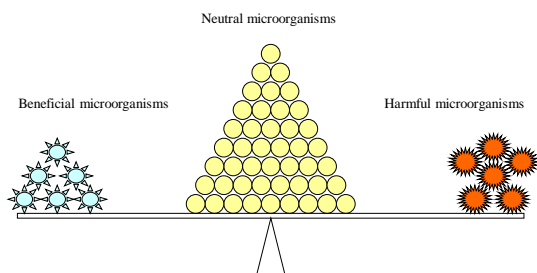
Become a localvore

Food miles  
On average, food travels between 2,500 km  
(1,500) to 4,000 km (2,500 miles) every  
time that it is delivered to the consumer.

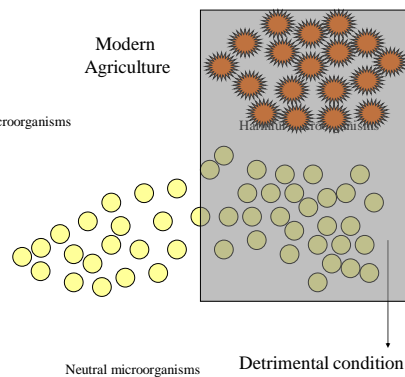
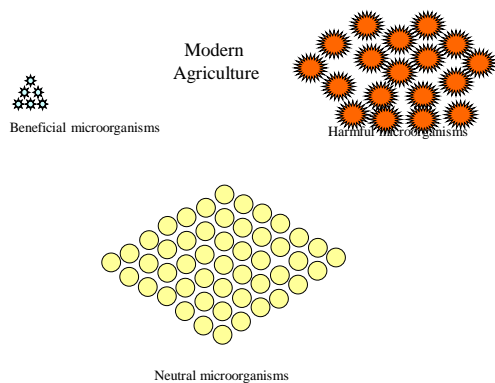
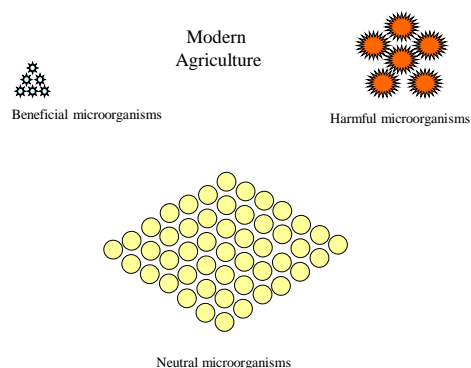


Shakey's Pizza: 1,984 km  
Ditchay's: 271 km  
Aloha House: 2 km

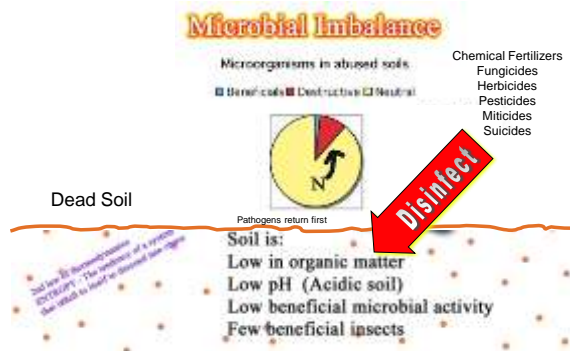




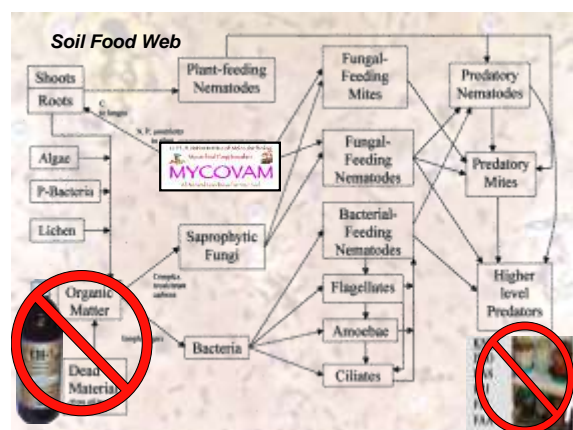
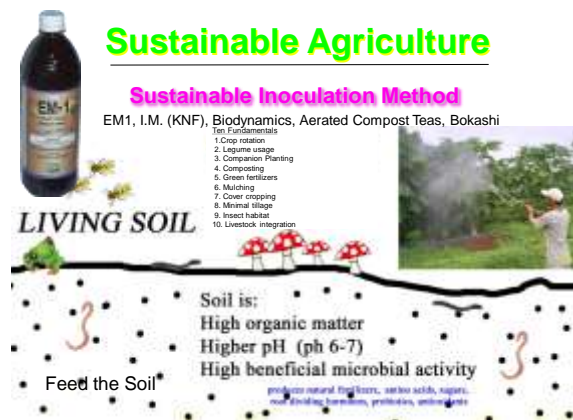
The balance of microorganisms in nature



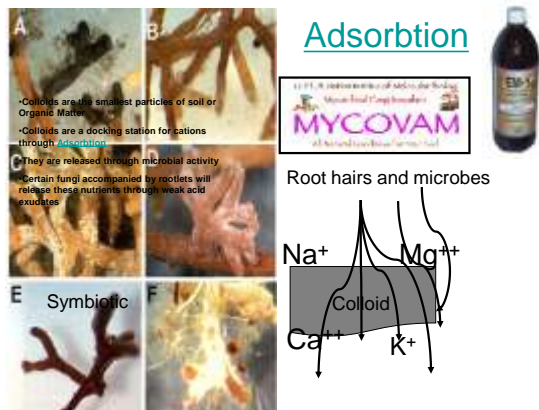
## Traditional Agriculture











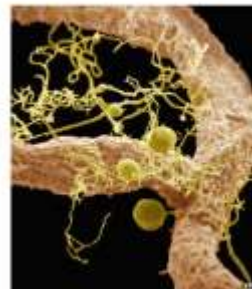
Plants can communicate the onset of an attack from aphids by making use of an underground network of fungi, researchers have found.

Instances of plant communication through the air have been documented, in which chemicals emitted by a damaged plant can be picked up by a neighbour.

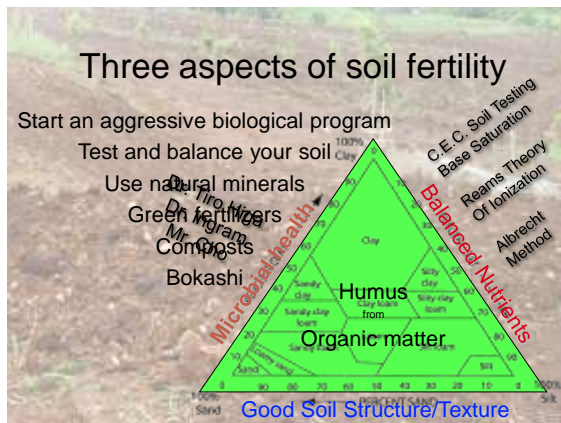
But below ground, most land plants are connected by fungi called mycorrhizae.

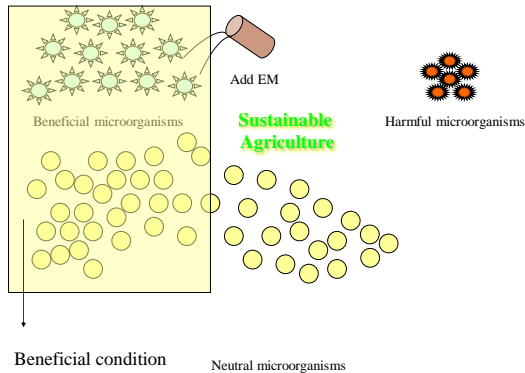
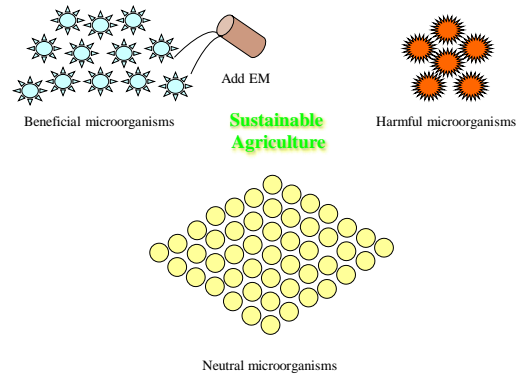
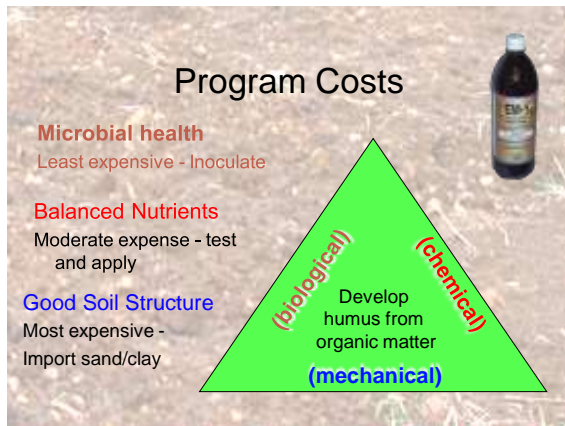
The new study, published in *Ecology Letters*, demonstrates clearly that these fungi also aid in communication:

It joins an established body of literature, recently reviewed in the *Journal of Chemical Ecology* and in *Trends in Plant Science*, which has suggested that the mycorrhizae can act as a kind of information network among plants.

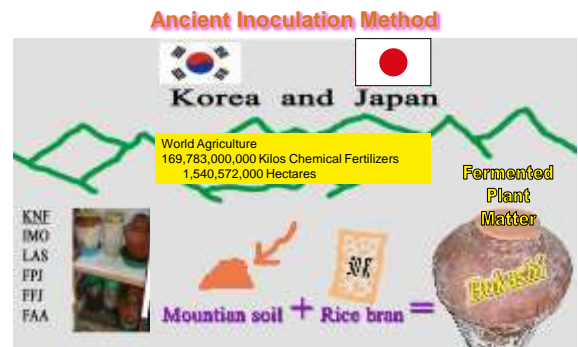


Mycorrhizae are mutualistic - they both need and are needed by the plants, where roots they inhabit

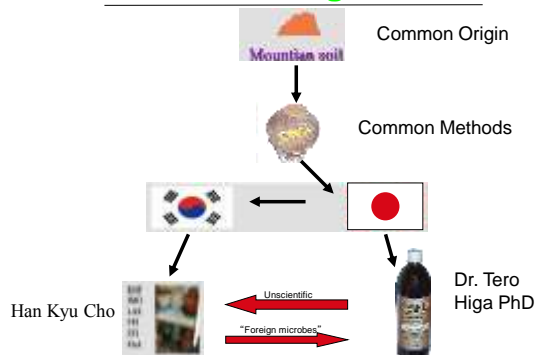
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## Sustainable Agriculture

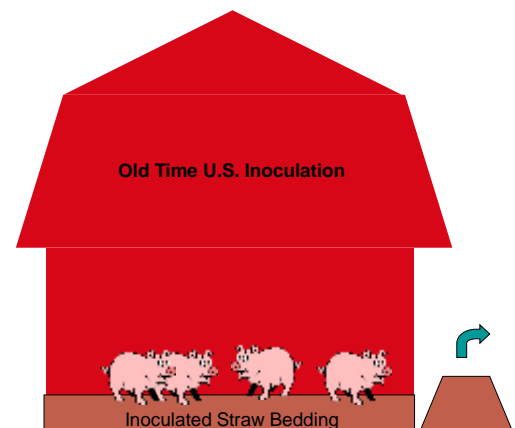
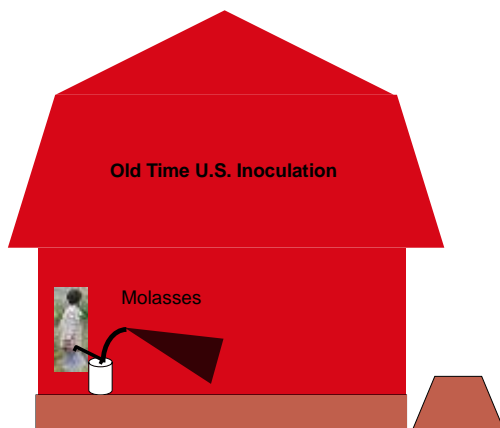
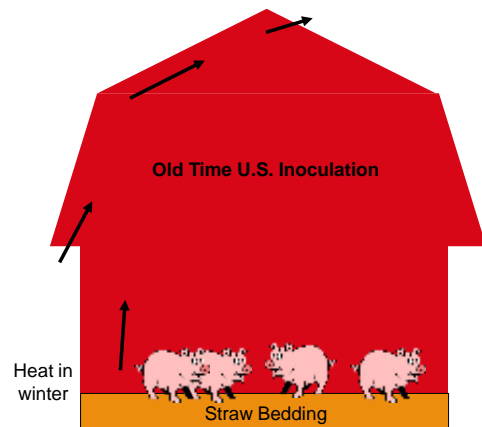
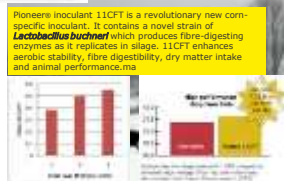


## Sustainable Agriculture





Noah, a man of the soil, planted a vineyard...  
...he drank some of it's wine...







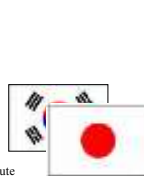
## 1994 Korean Natural Farming Association

approved by Japanese Ministry of Agriculture and Forestry (July 18, 1994)  
Published Natural Farming by Hankyu Cho (in Korean)  
Published Utilization of Indigenous Micro-organism (in Japanese)  
Started publishing Natural Farming Magazine

- 1967 Founded Less Labor and High Yield Farming Club
- 1986 **Changed name to Korean Natural Farming Center**
- 1993 Korea-Japan Natural Farming Exchange Association established in Japan
- 1997 Established Natural Farming Institute



Natural Farming Institute  
Mister Han Kyu Cho



Natural Farming pursues harmony with nature based on the law of nature  
three spirits : water, air, heat  
two heats :

heat from sky  
heat from ground  
three bodies :  
sky, earth, air



### Soil and philosophy/ religion

Soil has continuously influenced philosophy and religion throughout the world. For example, in ancient Japan, there were many spirits associated with soil (Chamberlain 1973). The famous Outer Shrine of Ise includes separate shrines (betsugu) to the soil and wind. From a modern (scientific) perspective, these shrines are the forerunners of soil science and meteorology.

**Lim's Natural Farming**

- Do not use herbicides
- Do not use pesticides.
- No tilling.** Minimal Tillage
- No artificial heating.
- Use natural agro-resources.
- Use the historical nutrients of the endosperm of seeds.
- Maximize the inborn potential.
- Zero emission** of livestock wastewater, odor and solid waste
- Minimal Waste

Practices soil preparation with hand tools and carabao

**PCARRD Message Board**  
"Here's the recipe we teach...  
50% IMO food (recipe above)  
25% rice bran D1  
25% commercial pig food"

## Korean Natural Farming

### Microbial Inoculants

- Indigenous Micro organisms (IMO)
- Fermented Plant Juice (FPJ)
- Fermented Fruit Juice (FFJ)
- Lactic Acid Bacteria (LAB)
- Oriental Herbal Nutrients (OHN)
- Fermented Fish Amino Acid (FAA)
- Water soluble calcium (WCA)
- Water soluble calcium phosphate (WSCP)



### Herb Hormone

### Foliar Fertilizers

Filter and spray  
Dilute 100:1



Bamboo



White Rice



Whole Raw Sugar

I.M.O.

"..... If you learn and practice natural farming today, you can get more knowledge and skill, it make you feel very happy....."



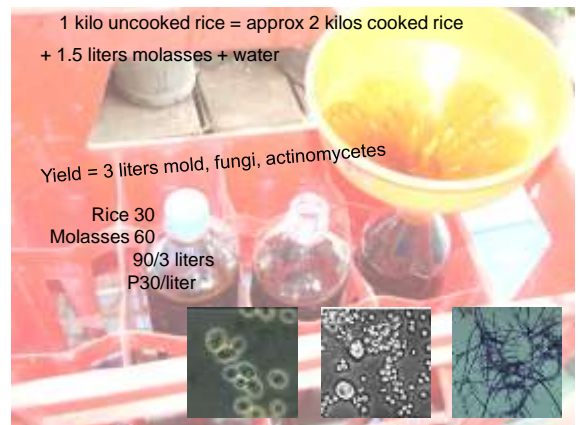


Harvest 3-5 days



Add molasses - ferment 1 week








Mr. Cho

## Korean Natural Farming

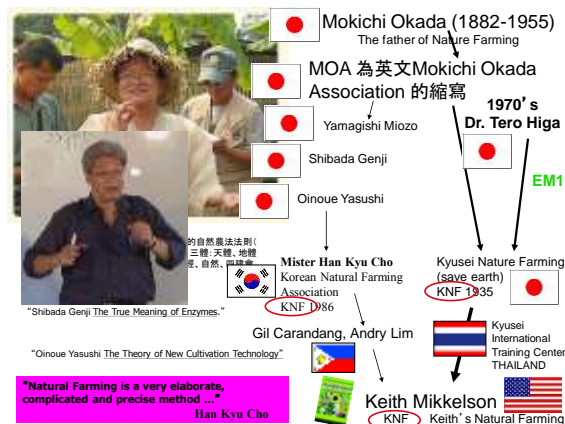



Over half century of learning and promoting Natural farming Mr Cho had 4 spiritual teachers and 3 human teachers:  
**The four spiritual teachers are:**  
 1- the Bible : it is not the words of the man but the voice of the Omnipotent God. 2- Nature : It reveals its secrets when the man steps humble. 3- 4H Clubs ideology: Head, Heart, Hand and Health. 4- Conscience : I chose to follow my conscience, not my greed.

Mr Cho was fortunate to meet three teachers in Japan. The first teacher he met was Yamagishi Miozo. He was a farmer full of love and respect for life. To him, the spirit and the mind were more important than the technology and the management.

His second teacher was Shibada Genji. He opened my eyes to the remarkable world of enzymes and micro-organisms. I still cherish his book *The True Aspect of Enzymes*.

His third teacher was Oinoue Yasushi. He read more than dozen times his book titled *The Theory of New Cultivation Technology*. The straightforward logic on the physiological and behavioral pattern of plants gave me wisdom to treat the plants with a new perspective, and his theory of the Nutritive Cycle has enabled me to talk with the plants.

1882-1955 **Mokichi Okada**

1930's - K.N.F. Kyusei Nature Farming

The main theme of Kyusei Nature Farming is to practice an IDEAL AGRICULTURE. **TAKE OF THE EARTH ONLY WHAT YOU CAN RETURN AGAIN!** The five principles of ideal agriculture as advocated by Kyusei Nature Farming are:

1. It produces safe and nutritious food to enhance human health.
2. It is economically and spiritually beneficial to both producers (farmers) and consumers.
3. It is sustainable and easily practiced by everyone.
4. It conserves our environment.
5. It produces sufficient food of high quality for an expanding world population.

The philosophy and practice of Nature Farming arose from Mokichi Okada's research, in the 1930's and 1940's. He discovered that if our agricultural methods respect the soil and enhance its innate power, then our food will always be rich in natural energy and will nourish and support our health. Human beings can thrive only by living in harmony with Nature.

Forecasting the agricultural situation in 1935, Mokichi Okada presented the ideals of Kyusei Nature Farming, which have contributed significantly to the organic agriculture and nature farming movements in Japan today.

In the 1980's, Prof. Dr. Tero Higa introduced the concept of Effective Microorganisms (EM) to Kyusei Nature Farming. Regular scientific conferences on Nature Farming.



## 1905 to 1924 Indore Compost System

- British botanist Sir Albert Howard is often referred to as the father of modern organic agriculture.
- He considered his methods "Nature Farming", a complete philosophy of natural farm management.
- From 1905 to 1924, agricultural adviser in Bengal, India, where he documented traditional Indian farming practices, found them as superior to his conventional agriculture science. Developed "Indore Compost" system.
- His research and further development of these methods is recorded in his 1940 book, *An Agricultural Testament*, which influenced many scientists and farmers of the day.



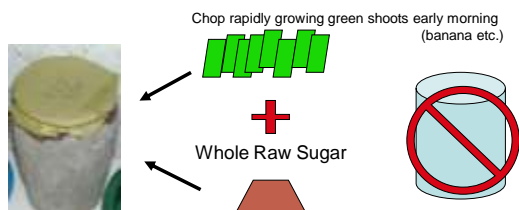


### Microbial Inoculants

KNF  
"Kimchi Farming"

- Indigenous Micro organisms (IMO)
- Fermented Plant Juice (FPJ)
- Fermented Fruit Juice (FFJ)
- Lactic Acid Bacteria (LAB)

Fungi, molds w/ actinomycetes  
Phototrophic Bacteria



### Capture and Culture Technology



### Microbial Inoculants

"Kimchi Farming"

- Indigenous Micro organisms (IMO)
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- Lactic Acid Bacteria (LAB)

Fungi, molds w/ actinomycetes  
Phototrophic bacteria

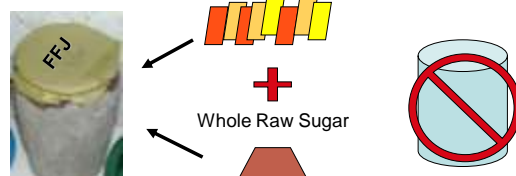
Wild Yeast

FFJ = ripe fruits

FPJ = young shoots

Yeast + sugar = CO<sub>2</sub> + Alcohol > vinegar

Chopped ripe tropical fruits





"Natural Farming is a very elaborate, complicated and precise method ..."

Han Kyu Cho

### Microbial Inoculants

"Kimchi Farming"

- Indigenous Micro organisms (IMO)
- Fermented Plant Juice (FPJ)
- Fermented Fruit Juice (FFJ)
- Lactic Acid Serum (LAS)

Mold, Fungi w/ actinomycetes

Phototroph

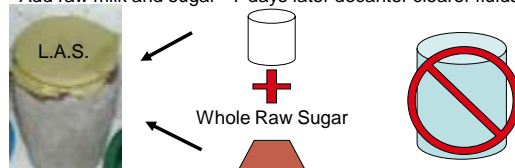
Yeast

Lactic Acid Bacteria

LAB + sugar = CO<sub>2</sub> + Lactic acid

Ferment rice wash 7 days in clay jar

Add raw milk and sugar - 7 days later decanter clearer fluids



Cost of materials?

Sugar  
Rice  
Milk  
Fruit

### KNF Inoculation

Dilution Rate 1:250

KNF 60 ml



Best Results: Cocktail

Mold, Fungi w/ actinomycetes

Wild Yeast

Lactic Acid Bacteria

Phototrophic bacteria



Mold, Fungi w/ actinomycetes



Wild Yeast



Phototrophic Bacteria



Lactic Acid Bacteria

Tablespoon  
15 ml



EM\$

4 gallons X 3.8 L/g = 15 Liters

15 Liters = 15,000 ml /100= 150 ml

Area Covered:



300 Sq M

### Growing rich, tasty veggies in harmony with nature

Jef Van Haute

D' Wheelbarrow Farm, Silang, Cavite

"...list of many microbes...put together theses microbes form a formula called E.M. (Effective Microorganisms), which is also available on the market but at a rather high price."

Sugar  
Rice  
Milk

### For All Inoculation Programs

#### What to Spray:

- Leaves
- Trunks
- Fruits
- Soil
- Roots
- Compost
- Cement
- Bedding
- Walkways
- Barns
- Livestock
- Odor control
- Human safe
- Children that smell



Mold, Fungi w/ actinomycetes

Wild Yeast

Lactic Acid Bacteria

Phototrophic bacteria

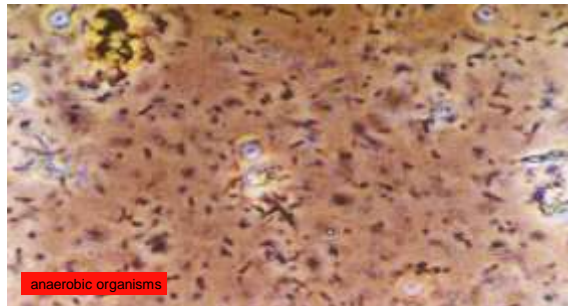




Dr. Hiro Higa found a way to make the best microbes dormant

MICROBIAL INOCULANT		
Contents: Organic Contents/oc		
Lactic acid bacteria	<i>Lactobacillus</i> sp.	$10^8$
	<i>Streptococcus</i> sp.	$10^8$
Actinomycetes	<i>Streptomyces</i> sp.	$10^8$
Photosynthetic bacteria	<i>Rhodospseudomonas</i> sp.	$10^7$
Yeast	<i>Saccharomyces</i> sp.	$10^8$
	<i>Candida</i> sp.	$10^7$
Bacteria	<i>Propionibacterium</i> sp.	$10^7$
<b>EM-1 Liquid</b>		

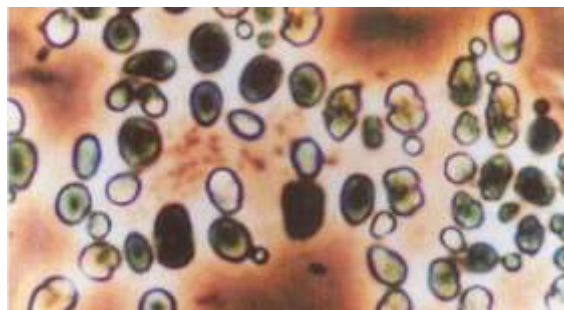
In Japan Dr. Hiro Higa studied the soil microbial relationships



### Photosynthetic bacteria (aerobic + anaerobic)

Reduces offensive smell, composes the nutrients for other beneficial microorganisms

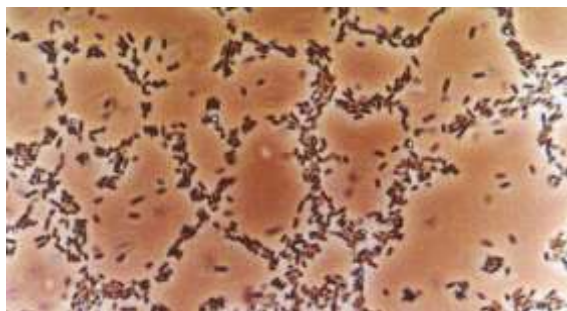
### Good Microbes



### Yeast, mold and fungi (aerobic)

Promote growth of plants, produce hormones, break down cellulose

In Japan Dr. Hiro Higa studied the soil microbial relationships



### Lactic acid bacteria (anaerobic)

Lactic acid keeps harmful microorganisms away, preserves

### Good Microbes

Dill Cucumber Pickles  
German Sour Kraut  
Whole Milk Yogurt  
Cheddar Cheese  
Korean Kimchi  
Achara



### Lactic acid bacteria (anaerobic)

Lactic acid keeps harmful microorganisms away

## Overview

- Microbial inoculant
- 100+ species of beneficial microorganisms
- Safe to use  
U.S. Dept. Ag. – GRAS Generally Recognized As Safe
- OMRI listed – Status A Organic Materials Review Institute
- 116 countries including USA & European countries
- For crop production, poultry & livestock production, industrial and community waste management, aquaculture

OMRI Approved for Use

with Organic  
Certification



EM-1 Concentrate  
Microbial Inoculant

Clients	Usage
Dole Philippines, <i>Davao</i>	Organic Banana Production
Central Azucarera dela Carlota, <i>Negros</i>	Wastewater management
Consolidated Distilleries, <i>Batangas</i>	Wastewater management
Pilipinas Kao, <i>Cagayan de Oro</i>	Wastewater management
Sanders, <i>Bulacan</i>	Organic fertilizer
Inocencio Farm, <i>Tunay Rizal</i>	Sasso Chicken production
Cocobeach Resort, <i>Puerto Galera Mindoro</i>	Waste Management
Five Star, <i>Bulacan</i>	Piggery
Paradizo/Zoobic Zafari, <i>Cavite &amp; Subic</i>	Animal & Crop Production

Client	Usage
Aloha House, <i>Palawan</i>	Integrated Farming
TGA Farms and Hatchery, <i>Pampanga</i>	Tilapia Production
Bauer International, <i>Quezon City</i>	Wastewater treatment
Harbest Agribusiness, <i>Pasig</i>	Seeds and Agri product dealer
Desmeg Farm, <i>Batangas</i>	Piggery
Dalisay Farm, <i>Cavite</i>	Piggery & Poultry
Choice Farm, <i>Valenzuela</i>	Piggery
Imelda Guellermo, <i>Isabela</i>	Piggery
Hacienda Zabarte, <i>Batangas</i>	Vegetable farm
PhilRice, <i>Nueva Ecija</i>	Rice Production
Yoshida Farms, <i>Davao</i>	Taro & Banana production

