A wooden mannequin is shown from the waist down, holding a small green seedling with two leaves in a wooden bowl filled with dark soil. The background is a light blue gradient.

Regional resource  
approved product

Organic material  
according to JAS

Liquid Fertilizer

**Fermented Microorganism  
Production Enzyme Fertilizer**

**Good Life Planning Co., Ltd.**

# Origin of this product



Obihiro University of Agriculture and Veterinary Medicine researched and developed organic matter which is occurred from stock farming.



By special manufacturing method using microorganism fermentation, good quality **fermented microorganism production enzyme fertilizer** was produced.



**This product promotes original power of plant, plant growth, and ripening power.**

# Product's characteristics



Material according to JAS organic

Improvement of soil & original power

High performance liquid fertilizer on joint research program within industry, universities and national research institutes

5 kinds 20 species of useful microorganisms represented by lactic acid bacteria & yeast, were fermented with special foods and environment to make this liquid fertilizer. It has excellent antibacterial activity force (force to reduce the harmful bacteria and to grow good bacteria ), and promotes growth of good bacteria in soil, and bad bacteria is reduced. Increased good bacteria resolves organic matter in soil such as roots, leaves, stems which were withered last year as nutrient source in early stage. It also softens soil and improves absorption of fertilizer. It also grows healthy plant which is strong against illness. Especially taste of vegetables is improved, and original color of flowers can be enjoyed. Combination of using organic fertilizer, wood vinegar, charcoal, appropriate amount of chemical fertilizer, can compose the fertile best soil.

Anti-bacteria test      Obihiro University of Agriculture and Veterinary Medicine, department of animal husbandry

Anti-bacteria activity test      Obihiro University of Agriculture and Veterinary Medicine, department of veterinary medicine

# Product performance

- **Good bacteria which makes good soil by only spraying, is increased suddenly.**
- **It reproduces soil which is strong against illness.**

Hokkaido Shari-town Makino farm  
Control, per 1 hectare  
Pesticide 0.5ℓ, 2000-fold dilution  
4ℓ, 250-fold dilution spraying  
Half of pesticide in use at the area  
September 2013



Hokkaido Shari-town Makino farm  
2012 2013 Continuous cropping beat  
No occurrence of disease.  
Harvest amount and sugar content  
are very good  
Autumn in 2013



# Effects on replant failure

Fuzariumu bacteria growth, and lack of nutrients, are one of the causes of replant failure. It has been made from seeds survival instinct to try to leave their offspring. Each crop secretes substance that checks the same kind and other growth from roots. The substance remains in soil. If replant is conducted, then it is thought to cause inhibits of the following year growth.

It is thought that merit to keep planting interval for a few years is that useful soil bacteria decomposes the growth inhibitor as bait, and Fuzariumu bacteria growth is controlled.

To make this product, urine and liquefaction of droppings of cattle in bacterial group below, are fermented. And large quantities of enzyme is produced.

This enzyme affects reducing harmful bacteria in soil. Useful soil bacteria such as photosynthetic bacteria group, the group of lactic acid bacteria, yeast group, and the gram positive actinomycetes group, the fermentation system filamentous fungi group, increase a lot and decompose causing substance.

It is thought that this effect can quickly improve replant failure.

From the old days, it is said that failure hardly occurs even after replant cropping in field with rich soil bacteria using lots of fertilizer. This is the reason.

NOTE: Breeding soil bacteria requires organic matter to become bait.

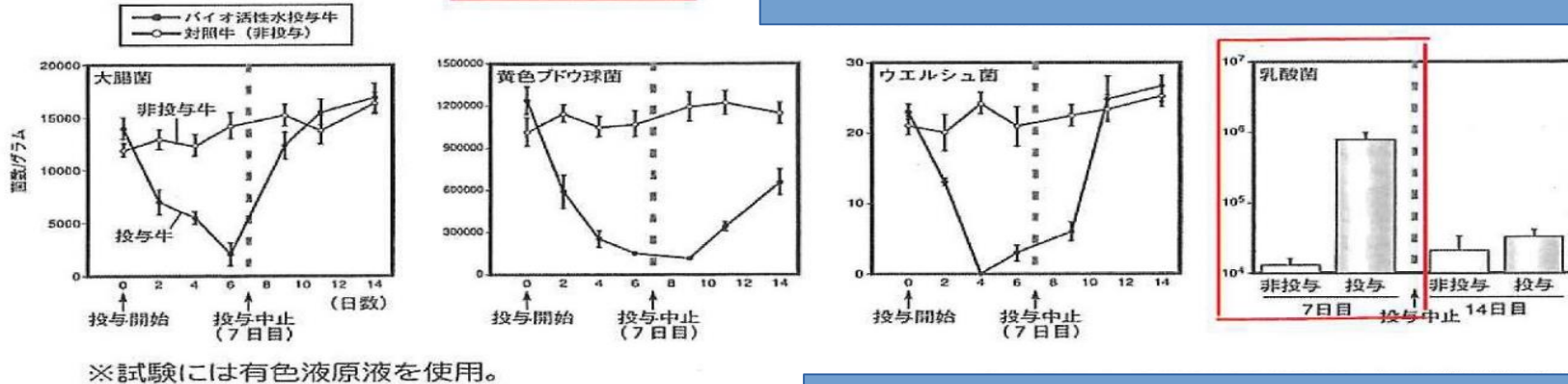
(Root leaf stems, etc. of last year and organic fertilizers, such as general compost)

# Effects on replant failure

As harmful bacteria dramatically reduced in the figure below, lactic acid bacteria increased a lot, and acted the same function in the soil-water, too.

Bacterial count of transition due to bio-active water (feces per gram)

1000-fold dilution was given in drinking water of cattle in breeding at Obihiro University. 1 week after given, and 1 week after stopped, feces taken. Counted number of bacteria. Checked causing 3 bacteria of bad smell and mastitis before testing.



R&D by Obihiro University of Agriculture and Veterinary Medicine

As the above graph, when pets and livestock drink fermentation microbial production enzyme fertilizer (test name : Bio-active water,) there are cases that manure odor becomes thinner, so that we requested survey to Obihiro University of Agriculture and Veterinary Medicine.

Cattle in breeding at the university drinks 1,000-fold dilution (1cc for 1ℓ water) water at all times to examine the changes in the stench occurrence bacteria and lactic acid bacteria in 1g of feces.



## **Our idea**

**From farmers**

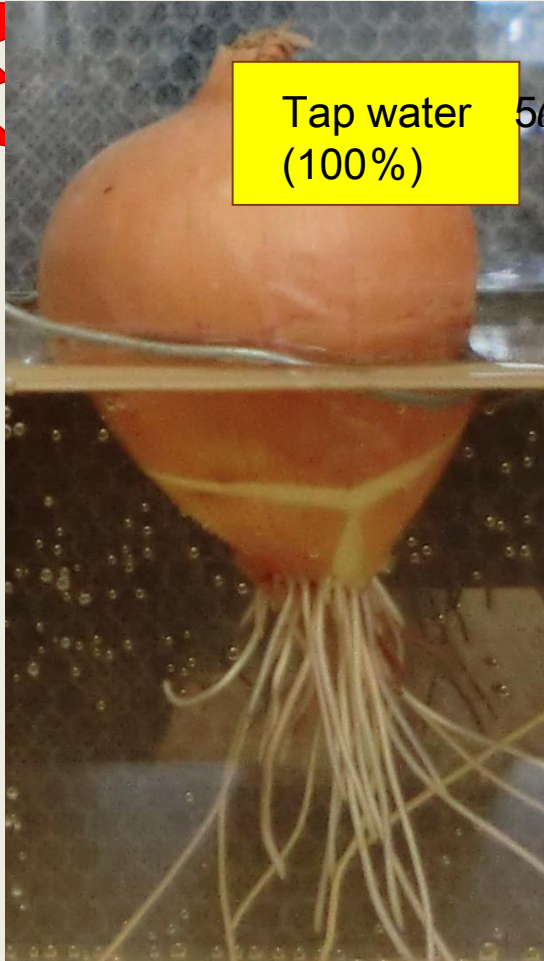
**About report « there is an effect on nematode »**

**In studies with Obihiro university, to grow beneficial bacteria such as lactic acid and to reduce harmful bacteria, have been testified. We believe that this is the maximum element to increase soil power. Nematodes will occur more often in many soils of Furajiumu bacteria (pathogens).**

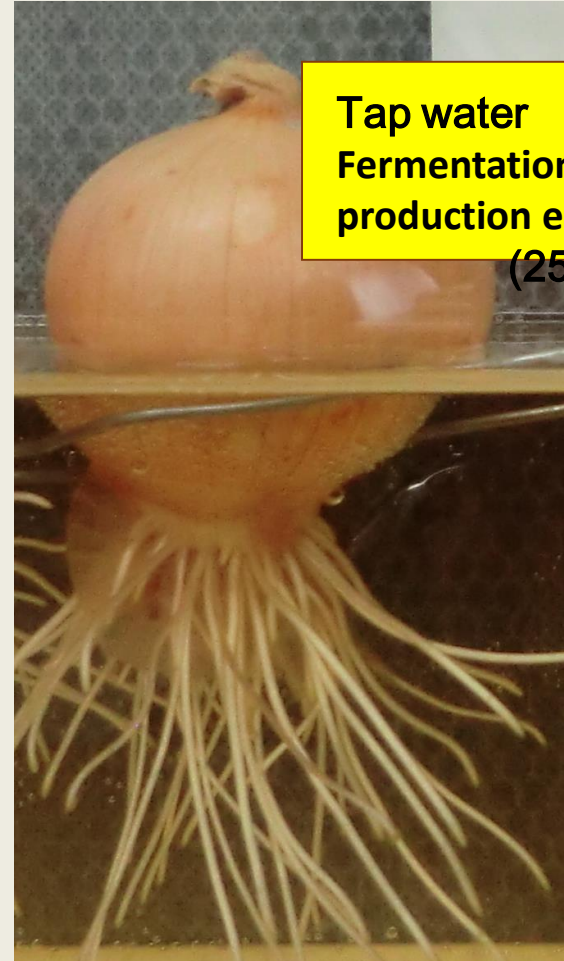
**Since the lactic acid bacteria in soil reduces Furajiumu bacteria by growing, as a result, nematode's living environment becomes poor. We believe we can reduce the number of occurrences.**

## Onion root spread test

Surprising difference  
by only 4 days



Tap water 5l  
(100%)



Tap water 5l  
Fermentation microbial  
production enzyme fertilizer 20g  
(250-fold dilution)

Root growth and thickness shows big difference.  
Since the same function works even in soil,  
It can be thought that it is strong against illness  
and improves the taste.

Start of the test : Mar. 27,  
Photo taking date : Mar. 31,  
(Room temperature 23 °C  
water temperature 20 °C)



# Spinach greenhouse



Unused

Used

**Test result (Photo taken in May, 2014)**

**Replant crop was conducted  
four times each year in Kushiro facility**

## Used to replant failure improvement of spinach

Mr. K in Tanno Town, Kitami in 2008

I was about to quit production because of failure of replant cropping.

If you use the "fermentation microbial production enzyme fertilizer", there is a large effect on the failure of the soil, and replant crop and germination rate have been improved, and I came to buy. This is my fourth purchase.



## Used in replant cropping of wheat

Mr. H in Kitami, in 2013

In the field of total area 21 hectare, and I planted wheat in 12 hectare and dent corn of in 9 hectare each year. Therefore the difference between the wheat in 12 hectare and 9 hectare was on replant cropping.

9 hectare of wheat is on a year crop rotation. Crop quantity is always top in the area.

Disease hardly occurs, and I feel that it is amazing that the soil has been improved.

## Used in crop rotation

**Mr. M in Tanno Town, in Kitami in 2013**

Potatoes, beet, dent corn are on crop rotation. Place of replant cropping used to be failed or ill, but it is no longer out completely since I started using it. It is possible to use in a mixture with pesticide, and it is easy to use for the same use in any crop. So, it can be distributed throughout a time. With the fermentation microbial production enzyme fertilizer, and the yield also comes up, and pesticide also can be reduced because the soil is improved.



## Used in Fukushima Prefecture tourism orchard

**M Tourism Orchard**

**We gave a foliar spray at 500 times mixed with fungicides, insecticides to peaches and grapes.**

**(Peach · 40a 10 times spraying, grapes · 20a 10 times spraying)**

The result : Average sugar content went up for both. Peach was 10-12 degrees average before, but this year it became 11-13 degrees (up to 15 degrees) even it rained a lot in harvest season. Also coloring was better than average. In addition, it is not full-fledged harvest season yet, but big grapes became 17-18 degrees. It will still go up to 20 degrees in harvest season.

## Used for rice paddy

Solve gas generation of rice paddy

**Report from agent**

In the past, rice straw was used for rope. Recently in many cases, it is cut by combine to be fertilizer at the same time with rice harvest, and is pushed in paddy soil.

Due to it, rice farmers are in trouble with soil corrosion by the rice straw and generation of gas toward the next summer.

“Fermentation microbial production enzyme fertilizer” will have a large effect on the resolution.

How to use

Insert 1.8 ℓ to 2 ℓ from water inlet of the paddy per one-tenth hectare.

Agency reported that the above solves most of paddies.

# Report through the agency

We have received high praise from farmers in Kitami, Abashiri, Shari area.

Year 2009 was a rainy year. Field crops in paddy were even seen. But in the field using this product, disease occurrence rate was low. Potatoes, beat, carrot, etc. were very easy to separate from soil.

Effect on scab disease of potatoes was also high.

Especially if seed potato is put in about 200-fold dilution, there was a good effect. Sugar content in strawberry, tomato, asparagus, long potato, beat raised about 2 degrees. So, farmers thank us.

\*These things show that , useful soil bacteria in soil increased by using a fermenting microorganism producing the enzyme fertilizers, by harmful bacteria is reduced, and it is considered the soil environment has been greatly improved.

# How to use

For vegetable garden, give original fertilizer, and then, spray about 2 to 3 liters of 100 to 200 fold dilutions per  $3.3\text{m}^2$ . And plow the soil. It is OK even after you have planted the seeds or seedlings. Spray 200 to 400 fold dilutions once or twice until harvest season.

Give appropriate amount of original fertilizer (organic and chemical) in soil regeneration of the previous year planter. For new culture soil, add if fertilizer is in a shortage. Spray 100-fold dilution on whole planter pots of soil to moist. When you water during growing period, spray 200 to 400 fold dilutions once or twice a month.

For larger vegetable garden and agriculture, after giving original fertilizer, spray diluted scatter in the amount of water that spreads over the entire field with guideline of 6 to 20ml per  $3.3\text{ m}^2$  (1.8 to 6 liters for  $300 \times 3.3\text{m}^2 =$  one tenth hectare.)

For the first use, try with thick dilution. Then dilute by the situation.

We recommend you to spray 5ml per  $3.3\text{m}^2$  once or twice until harvest season as the same.

\*When you water in a room, use 100 to 200-fold dilutions once or twice a month.

**We protect your soil for future.**

