

A Brand that will be joyful with everyone
All For You JOYBIO

www.joybio.co.kr




Coexistence of Nature and Life



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"For the coexistence of nature
and life and for making the world
to be thrive"



SMART ECO EXPERT

JOYBIO

Joybio Co., Ltd. has been producing BIO products that effect on safe agricultural, livestock and marine products with our NANO-SILICA and bioengineering technology.

We've been making an effort to improve the safe environment with useful products for humans, plants, cattle, and fish.

We, all Joybio Co., Ltd., have been doing our best to improve the healthy growth conditions for animal, plant and our environment with our sincerity and integrity.

All employees



PRODUCTS

JOYBIO will constantly strive on Research & Development for coexistence of nature and life.

Superior Technology



Save the
Future's Food

Save the Future's
Environment

SOIL CONDITIONER 06
SILI-LAND
SIO-FARM

**PLANT GROWTH-
PROMOTING AGENT 07**
SIO-FARM, SIO-SAM,
FARM-CHITO
AGRI-FERM

DEODORANT 09
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REEK-FREE HOME

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CLEAR-FISH

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WATER-CREA
SILI-RAX

BUSINESS AREA



Soil Conditioner

Prevents cellular oxidation and strengthens disease tolerance by enhancing immunity; an eco-friendly product increasing crop yields



Plant Growth-Promoting Agent

Increases the productivity of beneficial microorganisms by forming cuticles; helps plants grow healthy and strong and reduces the disease and insect damage



Deodorant

Decomposes contaminants fundamentally; an eco-friendly, next-generation deodorant harmless for animals, plants and even humans



Safe disinfectant

An eco-friendly oxygen product that is non-toxic for animals, plants and humans; able to exterminate infectious agents such as viruses and bacteria instantly



Fermented Microbial

As a fermented microbial, it is effective in removing offensive odors with powerful sterilization.



Supplementary Livestock Feed

Accelerates livestock growth and improves the quality of meat; prevents diseases by enhancing immunity and mitigates offensive smells



Supplementary Fish Feed

Improves immunity and flesh quality; reduces excretion and purifies water, increases fish performance



Rust inhibitor / Boiler compound

Improves water quality and prevents pipe corrosion; no harm to human

PRODUCTS

SOIL CONDITIONER FOR ALL CROPS

SILI-LAND

FOR ALL TYPES OF PLANTS



Soil Conditioner – Water Soluble Silica (Granule 1kg, 5kg)

Invention Patent No. 0637289

Organic Materials Disclosure-1-4-056

A Water soluble alkaline agent that is composed and synthesized with the rare minerals and SiOx which is of materials that JOYBIO developed. Prevents soil acidification and helps its neutralization, and it is resistant to disease and insect damage. It is eco-friendly Pollution free product that leads to increase of crop yields.

BENEFITS

- Neutralization of acidified soil and effect on fertility improvement
- Prevent damages against repeated cultivation by finding & neutralizing of the specific harmful ingredients in soil.
- Available with increase of crop yields by 20%-40% according to the plant variety.
- The crop can grow stronger, and it has an excellent disease tolerance against various pests.
- Improvement on rice quality and availability of high value-added agricultural production along with the increase of glucose & taste of fruits.

USER'S GUIDE

- Use once a year before plowing or planting
- Applicable to all plants in combination with organic fertilizer and other soil conditioners.

NET CONTENT 2kg per 660m²

SIO-FARM

FOR ALL TYPES OF PLANTS



Plant Growth-Promoting Agent - Water Soluble Silica (Liquid 1L, 5L, 20L)

Invention Patent No. 0739347

Organic Materials Disclosure-1-4-053

Utilizes alkaline property of Nano-Silica. Contains about 30 essential microelements and releases anion. Utilizes far infrared radiation in the wavelength range of 5 ~ 20 microns (μ)

BENEFITS

- Neutralization of acidified soils and improvement of fertility
- Excellent germination rate and uniform growth
- Improvement of rice quality & excellent yield effect.
- Prevention of pest infestations and maintenance of crop freshness
- Fast fruit setting and higher levels of sugar in fruit

USER'S GUIDE

- This liquid soil conditioner is applicable to all types of plants.
 - ※ Dilute with water at a ratio of 1: 1,000 for soil drenching
 - ※ Adjust the amount of conditioner according to the types of soil as needed.

PRODUCTS

PLANT GROWTH- PROMOTING AGENT

SIO-FARM

FOR ALL TYPES OF PLANTS



Plant Growth-Promoting Agent - Water Soluble Silica (Liquid 500mL, 1L, 5L, 20L)

Invention Patent No. 0739347

Organic Materials Disclosure-1-4-053

Utilizes alkaline property of Nano-Silica. Contains about 30 essential microelements and releases anion. Utilizes far infrared radiation in the wavelength range of 5 ~ 20 microns (μ)

BENEFITS

- Neutralization of acidified soils and improvement of fertility
- Excellent germination rate and uniform growth
- Improvement of rice quality & excellent yield effect.
- Prevention of pest infestations and maintenance of crop freshness
- Fast fruit setting and higher levels of sugar in fruit

USER'S GUIDE

- Applicable to all vegetables including bulbous and leafy vegetables
 - Use as a foliar spray at the dilution ratio of 1: 500 ~ 1,000.
 - Use as a soil drench at the dilution ratio of 1: 2,000-3,000 before and after transplanting into a nursery.
 - Either foliar spray or soil drench at a ratio of 1: 300 ~ 500 around infected parts, where growth is inhibited
- ※ Please contact us before using in combination with acidic pesticides.

SIO-SAM

FOR GINSENG ONLY



Plant Growth Stimulant Based on Water Soluble Silica (Liquid 500mL, 1L, 5L, 20L)

Invention Patent No. 0739347

Trademark Registration No. 0749712

Utilizes alkalescent property of nano silica. Contains about 30 rare earth elements, required trace elements and anions. Utilizes far infrared radiation in the wavelength range of 5 ~ 20 microns (μ).

BENEFITS

- Beneficial effects on the prevention of fungi, viruses and various pests
- Lots of fine roots and hardened stems
- Hardened ginseng roots, extended shelf life and longer freshness

USER'S GUIDE

- Either foliar spray or soil drench at a ratio of 1: 1,500 ~ 2,000 before sprout starts to grow its first leaves
- After the first leaves have grown, dilute at a ratio of 1: 1,000 and spray every 15-20 days

PRECAUTIONS

- Comply with the recommended dilution ratios for foliar spraying
- It can be mixed with disinfectant and pesticide at an appropriate ratio
- Do not mix it with the same wettable copper fungicid, emulsified concentrates, trace element product, and other Silica products

PLANT GROWTH-PROMOTING AGENT

FARM-CHITO

Proliferates beneficial microbes such as actinobacteria, and inhibits the growth of plant pathogenic fungi. Suppresses pest occurrence by strengthening cuticle formation as a protective layer. Assists worm habitat (earthworms, etc.) and forms aggregated structure of soil.



Water Soluble Silica and Chitosan Enzyme
(Liquid 500mL, 1L, 5L, 20L)



BENEFITS

- Activated cells promote plant growth and prevent soil damage
- Inhibited growth of internode length for anti-lodging
- Antibiotic against pathogenic bacteria prevents and combats pests



USER'S GUIDE

DESCRIPTION	APPLICATION TIME AND SPRAY VOLUME
Seedlings	Make a 1:500 dilution and soil drench after transplantation into the pot
Growing in the field	After transplanting seedlings in the field, make a 1:500 dilution and apply to around roots Dilution 1:500 for fruit and root vegetables (soil drench) Dilution 1:1,000 for foliar feeding
Fruit trees	Dilution 1/300 ~ 500 for soil drench and 1/1,000 for foliar spray

AGRI-FERM

Natural solution containing microbial enzymes. Enhances plant immunity with various enzymes and organic acids. Aids healthy growing and promotes chemical breakdown of soil organic matter.



Microbial Enzymes for Agricultural Use
(Liquid 500mL, 1L, 5L, 20L)



BENEFITS

- Biologically controlled pathogenic fungi
- Anti-bacterial and antioxidant effects and environmental hormone breakdown
- Deodorizing and antibacterial effects, prompt fermentation, soil improvement and enzymatic hydrolysis



USER'S GUIDE

- Dilute with water at a ratio of 1: 200 ~ 5000L for foliar spray or soil drench
- Use either foliar spray or soil drench once a week, depending on plant condition



DEODORANT



REEK-FREE

Next generation, eco-friendly, high- concentration deodorant; it completely decomposes into water and carbon dioxide when used for removing bad odor. Harmless to plants, animals and humans without leaving any residue.



Concentrated Deodorant for Industrial use
(Liquid 1L, 5L, 20L)



BENEFITS

- Eliminates animal-related odors in the stall and kennel
- Anti-bacterial and disinfecting effects on bacteria and viruses, etc



USER'S GUIDE

- Directly mix the product with 20t of excreta after diluting with water. (10L of the product + 10L of water)
- **Spray:** dilute with water at ratio of 1:500~1000. If it is 1 ton of water, dilute 1~1.5 ton of the product.



APPLICATION

Use in livestock barns (cows, pigs, chickens) and kennels (dogs, ducks, geese) as well as facilities related to agricultural and livestock wastewater treatment, manure treatment, waste treatment, food processing, agricultural and fisheries bidding, animal slaughtering, and other industrial processing.

REEK-FREE Plus

Next generation, eco-friendly, high- concentration deodorant; it completely decomposes into water and carbon dioxide when used for removing bad odor. Harmless to plants, animals and humans without leaving any residue
It's fragrance provides continuous diffusion.



Concentrated Scented Industrial Deodorant (Liquid 1L, 5L, 20L)



BENEFITS

- Eliminates animal-related odors in the barn and kennel
- Anti-bacterial and disinfecting effects on bacteria, viruses and the like



USER'S GUIDE

- Directly mix the product with 20t of excreta after diluting with water. (10L of the product + 10L of water)
- **Spray:** dilute with water at ratio of 1:500~1000. If it is 1 ton of water, dilute 1~1.5 ton of the product.



APPLICATION

Use in livestock barns (cows, pigs, chickens) and kennels (dogs, ducks, geese) as well as facilities related to agricultural and livestock wastewater treatment, manure treatment, waste treatment, food processing, agricultural and fisheries bidding, animal slaughtering, and other industrial processing.

PRODUCTS

DEODORANT



REEK-FREE HOME

Eco-friendly deodorant with all natural ingredients. Harmless to plants, animals and humans. Made from extracts of Chamaecyparis Obtusa water, lavender oil and rosewood oil, oxidized water and sterilized distilled water.



Premium Deodorant for Household Use (Liquid 500mL)

BENEFITS

- Deodorant and antibacterial effects
- The source of unpleasant smell can be blocked when used in putrid areas

USER'S GUIDE

- Spray at the source of odor
- Indoor spaces, human body and pets, clothing, shoe racks, blankets and vehicle interiors



PRODUCTS

SAFE DISINFECTANT



UNI-CARE



**Disinfectant for Everyday Use
(Liquid 100mL, 120mL, 200mL,
350mL, 500mL, 1L, 5L, 20L)**

Eco-friendly formulation that can be applied directly to the human body, in addition to indoor spaces and contaminated areas. Eliminates germs, including viruses and bacteria, immediately after spraying.



BENEFITS

Eliminates the cause of contamination



USER'S GUIDE

Dilute with water at ratio of 1:100 for indoor and outdoor spraying. If it is 100L of water, dilute 1~1.5L of the product.

ANI-CARE



**Antiseptic and Disinfectant
for Pets (Liquid 500mL)**



BENEFITS

- Designed for pets; harmless to animals
- Powerful anti-bacterial effects through breakdown of causative bacteria
- Easy to disinfect kitchen utensils and deodorize food production facilities



USER'S GUIDE

- Spray from a distance of 25cm

PRODUCTS

SAFE DISINFECTANT



AGRI-CARE



Agricultural Disinfectant
(Liquid 1L, 5L, 20L)

Its disinfection effectiveness and time is 50 times higher than rival products. This eco-friendly product is harmless to humans with the ability to destroy pathogenic bacteria. As an organic antiseptic disinfectant, it does not produce heavy metals or carcinogens.

BENEFITS

- Eliminated bacterial and fungal organisms responsible for the onset of blight disease, anthrax and damping-off
- Excellent cleaning and deodorizing effects and removal of residual pesticide

USER'S GUIDE

- Dilute at a ratio of 1:500 ~ 1,000 before use.
- If it is 1,000L of water, dilute 1~1.5L of the product.

CIT-HOME



Mosquito Repellent (Liquid 200mL)

It's a mosquito repellent of natural ingredients Harmless to plants, animals and humans. Made from extracts of chrysanthemum, pasque flower, lavender and citronella, oxidized water and sterilized distilled water.

BENEFITS

If you spray it, it blocks access to mosquitoes and flies.

USER'S GUIDE

- Spray over transmission routes of insects
- It's okay to spray it on your skin.
- It is available for hiking, fishing, camping and outdoor activities.

PRODUCTS

FERMENTED MICROBIAL



LS-FERM



Microbial Agent for Fermentation of Animal Manure (Liquid 5L, 20L)

Useful strains are selected after evaluating several thousands of strains to be used for fermentation/ripening. This eco-friendly product has excellent sterilization, antioxidant and deodorization capabilities.



BENEFITS

- Sterilization and antioxidant action
- Deodorizing and cleaning effects
- Antibacterial action and fermentation efficiency



USER'S GUIDE

Dilute with water at ratio of 1:100~500. If it is 500L of water, dilute 1~1.5L of the product.

LS-FERM Plus



Scented Microbial Agent (Liquid 5L, 20L)

Useful strains are selected after evaluating several thousands of strains to be used for fermentation/ripening. This eco-friendly product has excellent sterilization, antioxidant and deodorization capabilities. The fragrance provides continuous diffusion.



BENEFITS

- Sterilization and antioxidant action
- Deodorizing and cleaning effects
- Antibacterial action and fermentation efficiency



USER'S GUIDE

Dilute with water at ratio of 1:100~500. If it is 500L of water, dilute 1~1.5L of the product.

SUPPLEMENTARY LIVESTOCK FEED



SILI-COM

Water soluble silica product containing Siox, a material developed in-house.



Silica-based Animal Growth Promoter (Liquid 1L, 5L, 20L)

Invention Patent NO. 0764462

BENEFITS

- Reduced the overall volume of animal excretion and consequently decreased ammonia emissions in stalls
- Disease is prevented through enhanced antibacterial and immune function
- Promoted livestock growth and improved meat quality

USER'S GUIDE

- Disinfect inside the stall once or twice a week using a 1:1,000 dilution
- Use the half amount of 1:1000 when starting to apply for the first time. And then increase the amount gradually

Chicks	100cc (100 ppm) per ton of water
Laying hens	500cc-1,500cc (500 ~ 1,500ppm) per ton of water
Broiler chickens	1,000cc (1,000 ppm) per ton of water
Breeding chickens	2,000cc (2,000 ppm) per ton of water
Piglets	500cc (500 ppm) per ton of water
Breeding pigs	500cc (500 ppm) per ton of water
Pigs for meat	500cc (500 ppm) per ton of water
Calves	500cc (500 ppm) per ton of water
Milk cows	1,000cc (1,000 ppm) per ton of water





CLEAN-COM

These eco-friendly microbial enzymes, which are produced from herbs, exert excellent antibacterial and antioxidant activity. As plant-associated microbes, their sterilization and deodorizing effect is excellent.



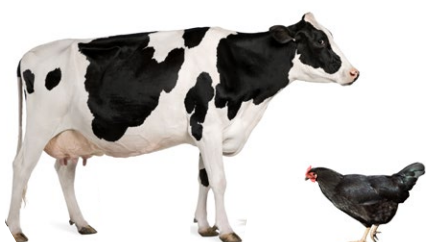
**Microbial Animal Growth Promoter
(Liquid 1L, 5L, 20L)**

BENEFITS

- Strengthens animal digestion/absorption and immune system
- Improved farm environment as a result of deodorization and purification of sewage and wastewater

USER'S GUIDE

General Instructions	<ul style="list-style-type: none"> · For starters, dilute with drinking water and feed at a ratio of 1: 1,000 dilution · For growers, dilute with drinking water or feed at a ratio of 1: 500 · For finishers, use a 1:100 dilution if body fat needs to be reduced · To help cattle make more fat and marbling, apply less than a 1:1,000 dilution every 2 to 3 days
Broiler Chickens	<ul style="list-style-type: none"> · At 1-10 days of age, feed the amount equal to 1/10,000 of body weight · For older chickens, feed the amount equal to 3/10,000 of weight
Laying Hens	<ul style="list-style-type: none"> · At 1-20 days of age, feed the amount equal to 2/10,000 of weight · For older chickens, feed the amount equal to 3/10,000 of weight
beef cattle	<ul style="list-style-type: none"> · At 1-10 days of age, feed the amount equal to 1/10,000 of weight · At 100-200 days of age, feed the amount equal to 2/10,000 of weight · At 200-270 days of age, feed the amount equal to 2/10,000 of weight [Quality control for finishers] Increase the amount of this product in case of lipolysis or reduce it for weight control
Milk Cows	<ul style="list-style-type: none"> · At 1-100 days of age, feed the amount equal to 1/10,000 of weight · At 100-200 days of age, feed the amount equal to 2/10,000 of weight · For older chickens, feed the amount equal to 1/10,000 of weight
Pigs for Meat	<ul style="list-style-type: none"> · At 1-100 days of age, feed the amount equal to 1/10,000 of weight · At 100-150 days of age, feed the amount equal to 1/10,000 of weight [Quality control for finishers] Increase the amount of this product in case of lipolysis or reduce it for weight control



SUPPLEMENTARY FISH FEED



PRO-FISH



**Aquaculture and aquarium use
(Liquid 1L, 5L, 20L)**

SIOX, a material developed in-house, is the active ingredient of this composite water purifying agent of various minerals. It maintains a proper level of pH, protects the skin of ornamental, tropical and sea fish and makes their color clear.

BENEFITS

- Activated dissolved oxygen (DO) in fish farms or aquariums
- Decomposing fish waste and keeping water quality constant
- Maintaining a proper level of pH to suppress generation of scale and moss on glass walls
- Eliminating odors and fishy smells of ornamental fish and healing wounds early

USER'S GUIDE

- For a water tank, dilute 5 mg of Pro-Fish with 25-30L of water
- For a fresh water, dilute 1L of Pro-Fish per 20-30

CLEAR-FISH



**Microbial Enzymes for Fish Farms
(Liquid 1L, 5L, 20L)**

This is vegetable based extract that include some ingredients and high concentrated and rich enzyme-microorganism.

BENEFITS

- Powerful effect on water quality improvement, green algae, etc.
- Releases antibiotics, a function of antagonization, decomposes harmful substances, and protects fisheries.
- Removes a taste peculiar to fish and improves meat quality.
- Improves bubbles in the surface of water, and green algae beneath the water.

USER'S GUIDE

- Dilute with the water at ratio of 1:500 ~ 2,000

PRODUCTS

RUST INHIBITOR



WATER- CREA

It's main component (silica) has proven effective in suppressing corrosion and improving water quality. The solution itself is not solidified or hardened. Harmless to human body, tasteless, odorless and nontoxic.



BENEFITS

- Thin film formed on pipe or metal surface prevents contact with air or water
- Usable regardless of cold and hot water, and the solubility in water is constant
- Effective for both ferrous and non-ferrous metals



USER'S GUIDE

- Water in motion (water flow out of pipes): 15~25 PPM per ton
- Circulating water and water at rest: 15~25PPM per ton
- After the supply device is installed at the incoming line, infuse the prescribed amount of the solution into the device to have it dissolved in the water running through
- The device can be installed at all water lines (hot or cold) (5~10ppm per ton)



SILICATE INHIBITOR
(Granule 20KG / Liquid 20L, 200L)
Trademark Registration
NO. 0425802



PRODUCTS

BOILER COMPOUND



SILI-RAX

Regulates the hardness of boiler water and keeps a proper level of pH. Capable of inflating itself and retains components even at elevated temperatures. Resistant to heat and high temperature.

BENEFITS

- Extended boiler life and reduced the pipe cleaning costs
- Protection of boilers and piping against corrosion
- Preventing scale and sludge generation
- Maintaining a proper level of pH and softening water
- Converting impurities in boilers into insoluble compounds for removal
- Effective for both ferrous and nonferrous metals

USER'S GUIDE

- Add the solution directly into a water tank linked to boiler or use a metering injector
- Dilute 100~150ppm with 1 ton of water before use






Pipe Cleaning Agent
(Liquid 5L, 20L, 200L)
Trademark Registration
NO. 0741295



Patent and Trademark Registration Certificate

Our company has a lot of inventions patents related to silica. Our Researchers and engineers our best to continuously develop new agricultural products and new technologies.

SMART ECO EXPERT JOYBIO

			
PATENT NO. 10-0764462	PATENT NO. 10-0637289	PATENT NO. 10-0739347	PATENT NO. 10-0756185
			
PATENT NO. 10-0620210	TRADEMARK REGISTRATION NO. 40-0681861	TRADEMARK REGISTRATION NO. 40-0749712	TRADEMARK REGISTRATION NO. 40-0741295
			
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