

2018 STUDY BY RICE INSTITUTE OF INDONESIA: USING GROALOE BIO-STIMULANT



Prepared By: The Rice Institute of Indonesia in Cooperation with The International Rice Research Institute





International Rice Research Institute





Fail-Proof and Productive Agricultural System for Rice and Cacao Crops

Application of GroAloe Bio-stimulant (GBS) protects Rice Crops from noxious pests they are Brown Plant Hopper (Nilaparvata lugens, Green Plant Hopper (Nephottetix viresens) In the our rice fields in Cilebar, Karawang, Regular application of GBS has successfully develop Antibody on Rice crops that clears back Phloem dan Xylem vessels clogged by Tungro virus and Rice Ragged Stunt Virus (Virus RRSV), Rice Crops STAY HEALTHY.

Brought 8TONs/HA Harvest - measured by Statistical Bureau

Nilaparvata Lugens Spread Rice Ragged Stunt Virus (RRSV)

GBS Heals Toxicity Damages of Brown Plant Hopper Attacks



Damage done by Brown Plant Hopper



Green Plant Hoppers spread the Tungro Virus

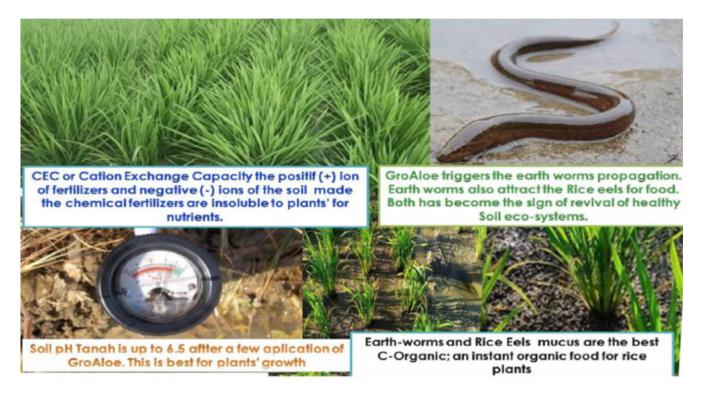
Rice plant suffers Chlorosis (leaves become Yellow) then the plants died.

GBS Heals Rice Crops from damages Green Plant Hopper attacks





Back to Nature – Return the Nature's Equilibrium Farm Productively without Pesticides



GroAloe: Soil ph, Earth-worms, and Rice Eels revive Agro-Eco-System in Sawah Wetland Rice Fields





Explanation of How Fatal Plant Diseases Kills the Plants and How GroAloe Bio-stimulant (GBS) Protects them.

- High lignin content on Bio-stimulant GroAloe can pierce through Blockage of xylem and Phloem like the picture in the next slide. Lignin serves as the deliverer of nutrients and food plants through Phloem and xylem vessels. The Blockage happen because of the inflammation caused by disease, compare such as aspirin that thin human blood that unclogged the blockage of nose blood vessels when a person suffers from influenza.
- The of Healing Agent content (healer of the wounds, neutralizing Myco –toxin poison) turn back on the liveliness of the plants that have been "broken" by the virus or fungus attacks, plant's metabolism put back into the place and plant begins to shoots new leaves buds then produce flowers.
- On Rice crops Myco toxin spread by Tungro Virus (TV) and Rice Ragged Stunt Virus (RRSV) spread by Green Plant Hopper and Brown Plant Hopper. We can protect the crops with routine application of GroAloe Bio-stimulant and the deadly myco-toxin caused by viruses can be cured.
- On Cacao plants Myco-toxin spread by bacterium Oncobasidium theobromae, which causes Cacao leaves to fall and plant branches to die; this leads to the occurrence Kanker that will eventually kill the whole plant. GroAloe Bio-stimulant is capable of neutralizing this myco-toxin.



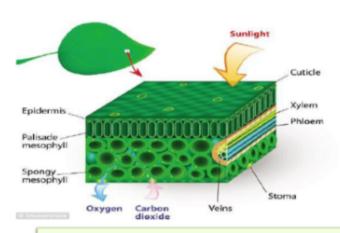


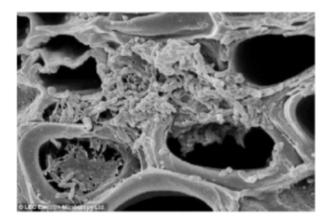


Leaves Anatomy Before and After Fungus, Bacterium or Virus Attack

Healthy Leaves Vessel before the Attack
-> Green and Alive

Dead leave Vessel after the Attack ->
Dry and Dead





Routine Application of GroAloe Bio-stimulant will trigger the regrowth of new leave buds followed by abundant flowers, later abundant fruits.

GroAloe Bio-stimulant for Cacoa Crops

GroAloe Bio-stimulant application on Cacao crops in Polman, West Sulawesi revived the dying Cacao crops because of VSD attack, after revival those Cacao plants

Produce 30-40 Healthy and Big fruits from each tree.







After VSD (Vascular Streak Diback) or Dying Twigs Syndrome These Trees Revive After Spraying with GBS



During the VSD Attack

After the VSD Attack











Why and How GroAloe Bio-stimulant Made The Soil Fertile and High Quantity and Quality of Harvests

- High content of Potassium stimulates abundant flowering and fruiting.
- High content natural giberelin hormone that stimulate formation of internal Florigen that started the flowering then produce abundant fruits.
- GBS formula neutralizes Pesticide
 Poison and soften the soil from and
 Salts originated from too much use of
 Chemical fertilizers in the soil. Soil like
 this kills Earth-worms and Rice-eels;
 earth worm mucus and rice eels slime
 contributes to the high content of Corganic which is instant food for the
 plants..
- Fully charging the carbohidrat content to the paddy grains as the final leave just above the panicle stay green through harvest time.
- Straw Bio-mass can be used as fodder for Livestock Because paddy Plant applied with GAB remains green through harvest and because no toxic pesticides were in use the leftover Bio-mass can be used for livestock fodder by processing it into silage; silage this can last long for animal food.







GroAloe Biostimulant (GBS) Application to trigger Flowering and fruiting – Kiojay Mango (Thai Mango) which normally gives 5-10 fruits after GBS treatment the same tree produces 70 fruits on the first batch and continuously gives fruits afterward.

