100% ECO

GEKKA®
BIOCHAR

RO
ÎNGRĂȘĂMÂNT

Approved by ECOCERT INPUTS

WESSLING
CALITATE CONTROLATĂ

CE
nr. 2806

BIOCHAR

Plant-based charcoal for soil fertilizing
& regenerative soil improvement

WOOD VINEGAR

Organic bio-condensate
obtained through pyrolysis

BIOCHAR & WOOD VINEGAR

Biostimulant obtained through pyrolysis

www.gekka.bio

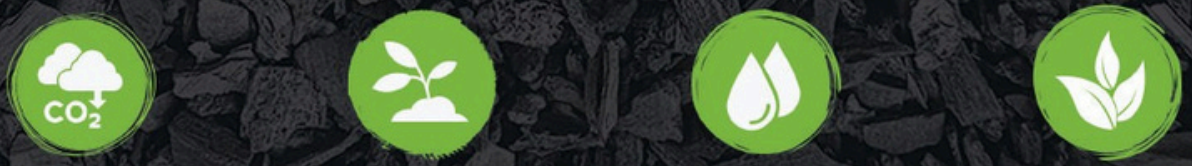
FOR A SUSTAINABLE & ENVIRONMENTALLY FRIENDLY AGRICULTURE!

Dr. engr.
Ion TONCEA
Head of the Fundulea
Agricultural Research Institute

BIOCHAR is the simplest technological solution with multiple advantages: soil amendment in order to increase the accessibility of nutrients, especially phosphorus and the abundance of some useful bacteria, such as Bradyrhizobacteriaceae and Hyphomicrobiaceae and to decrease the abundance and activities of pathogens; restoring degraded soils by reducing erosion, increasing water storage capacity, decreasing apparent density, increasing porosity and stabilizing the structure and sequestering (capturing) carbon in the soil and reducing N_2O emissions from the soil.

WHY BIOCHAR?

1. Reduces CO2 and N20 pollution
2. Stores carbon in the soil
3. Reconditions the quality of the soil
4. Significantly reduces nitrogen leaching
5. Stops water pollution with nitrates and nitrites
6. Increases soil water retention capacity by 40%
7. Limits the effects of drought
8. Increases the yield of fertilizers incorporated into the soil
9. Unlocks phosphorus in the soil
10. Stimulates plant growth
11. Improves root system structure and increases plant biomass
12. Favors the absorption of minerals and nutrients from the soil
13. Increases the biological activity of the soil
14. Accelerates cell division (in root and leaves)
15. Reverses soil damage processes



EXPLOCOM GK LTD

We are the first BIOCHAR and WOOD VINEGAR factory in Romania. Researches conducted in the recent years helped us develop a diversified range of products that can ensure **complete soil amendment and fertilization technology, protection against plant pests with ecologically certified products**, which have the great advantage to **reduce pollution with CO_2** through the carbon storage capacity of the soil.

In 1992, we started the production of charcoal for grilling, then, in 2013, we patented the invention of **biomass carbonization through pyrolysis**. In 2018, inspired by the ancestral tradition, which records that they have been using charcoal as a soil fertilizer long time ago, we decided to further research what are the advantages of using BIOCHAR in agriculture. This is how the following studies began:

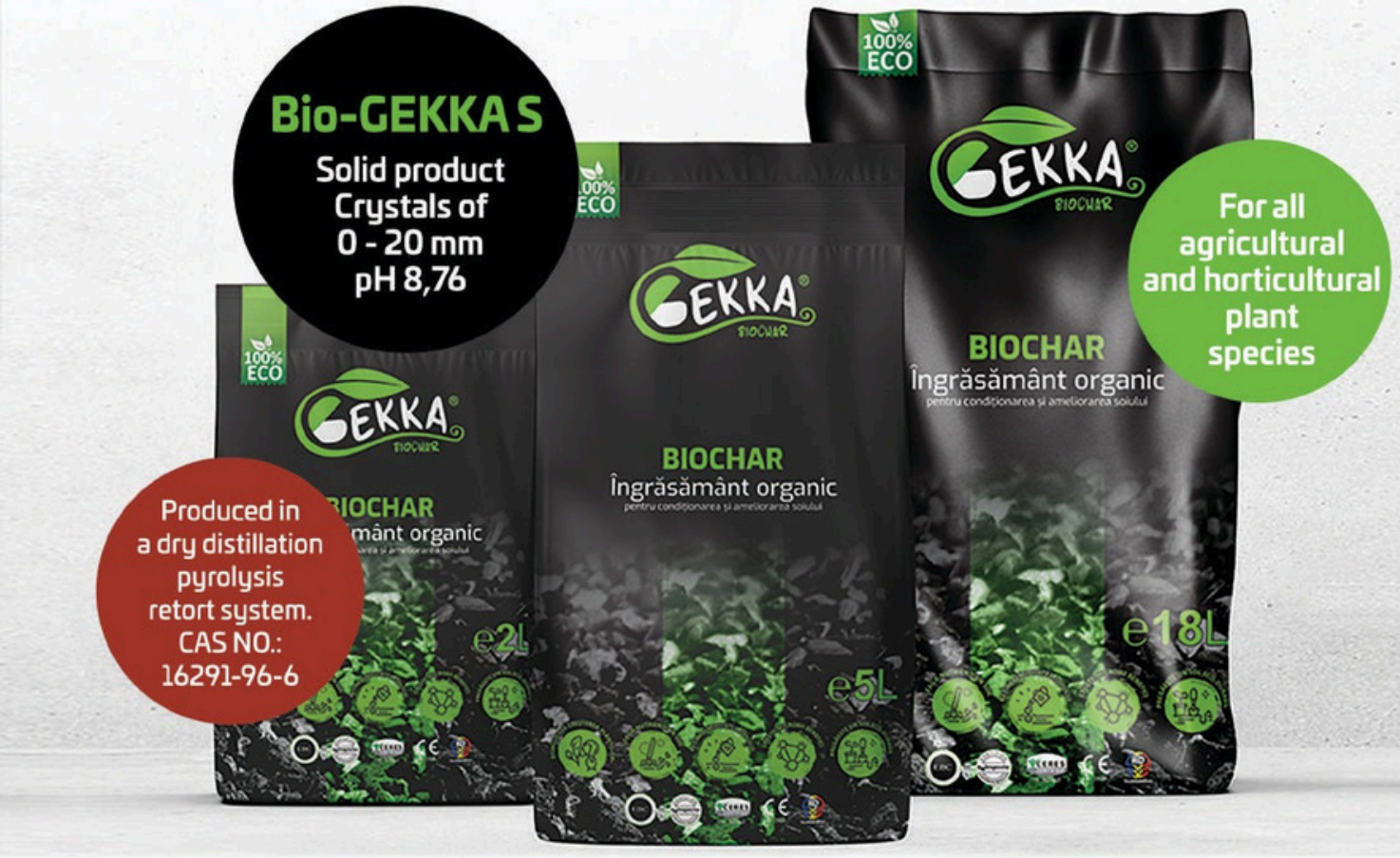
1) ICPA Bucharest(2019 - 2021)
2) Fundulea Research Station (2019 - 2020)
3) USAMV IAŞI (2020 - 2021)
4) KITE ZRT - HUNGARY (2019 - 2020)
5) SAPIENȚIA UNIVERSITY OF TG.MUREȘ (2020)
6) GEORGIKON UNIVERSITY OF KESZTHELY-HUNGARY(2019)

The results were beyond expectations, so we decided to obtain the **CE certificate** *"conformité européenne"*

We aim high to attain great goals

- Saving the soil from aridity, because in Romania 33% of land has lost humus, becoming arid, desertification being a growing process
- Reducing water and air pollution
- Obtaining large, but also quality productions, rich in organic nutrients
- **We want a clean and healthy world, sustainable agriculture, clean atmosphere, fertile land, pure water, free of nitrates and nitrites or heavy metals**
- **Through our technology you have the guarantee of a healthy life, ecological productions and the guarantee of a safe future for the next generations**
- **We offer effectful products and solutions for a sustainable & healthy agriculture**

This is how we change the world for the better! :)



ADVANTAGES / BENEFITS

- Considerably improves the structure of the soil, increasing its aeration
- It is main a source of active organic carbon for plants and soil microorganisms
- Balances the PH value of the soil by reducing its acidity
- Decontaminates soils affected by the use of chemicals and pesticides
- Reduces phytopathogenic agents in the soil
- Improves the resistance of plants to the attack of phytopathogenic agents
- Improves soil fertility, stimulating the development of soil microflora
- Intensifies the flowering and fruiting process
- Unlocks phosphorus and potassium accessible to plants from the soil, increasing the concentration of phosphorus and potassium in soluble form
- Boosts the rate of photosynthesis, thus stimulating plant growth and yield
- Accelerates nutrient absorption, so better rooting occurs

CHARACTERISTICS

Density in volume **<3mm**	276	kg/m^3	Water retention	162.5	%
Specific area **(BET)**	557.76	m^2/g	Humidity	6	%
Ash content **(550°C)**	4.1	% (w/w)	pH value	8.76	CaCl2
Organic Carbon **[C]**	91.3	% (w/w)	EPA-PAH **(without LOQ)**	6	mg/kg
Total nitrogen **[N]**	0.66	% (w/w)	Plumb **[Pb]**	< 2	mg/kg
Potassium **[K]**	0.25	% (w/w)	Cadmium **[Cd]**	<0,2	mg/kg
Sodium **[Na]**	0.02	% (w/w)	Copper **[Cu]**	5	mg/kg
Calcium **[Ca]**	1.1	% (w/w)	Nickel **[Ni]**	4	mg/kg
Iron **[Fe]**	0.09	% (w/w)	Mercur **[Hg]**	< 0,07	mg/kg
Magnesium **[Mg]**	0.05	% (w/w)	Zinc **[Zn]**	15	mg/kg
Mangan **[Mn]**	0.04	% (w/w)	Crom **[Cr]**	1	mg/kg
Sulphide **[S]**	0.03	% (w/w)	Bor **[B]**	15	mg/kg

Spread directly on the ground. Dosage: 500 gr /m2 - In larger agricultural areas, it can be spread using a fertilizer spreader.

Plant species on which the product has been tested: sunflower, maize, wheat, tomato, flower species (Pelargonium grandiflorum), sugar beet, potato, apple and vine.

Storage information: at a temperature between 5 and 20 C, in the original packaging, protected from direct sunlight, its quality will be preserved indefinitely. Avoid direct contact with skin and eyes. Keep away from children and any food.

A HEALTHY CHOICE FOR

- Reducing N2O and CO2 pollution by storing carbon in the soil
- Amendment and base organic fertilizer
- Reconditioning the soil
- Soil decontamination of heavy metals, pesticides and chemicals
- Combating drought and reducing the amount of water for irrigation
- Source of active carbon (contains 75-90% C)
- It can be used on any type of soil

BIO GEKKA S / S PLUS

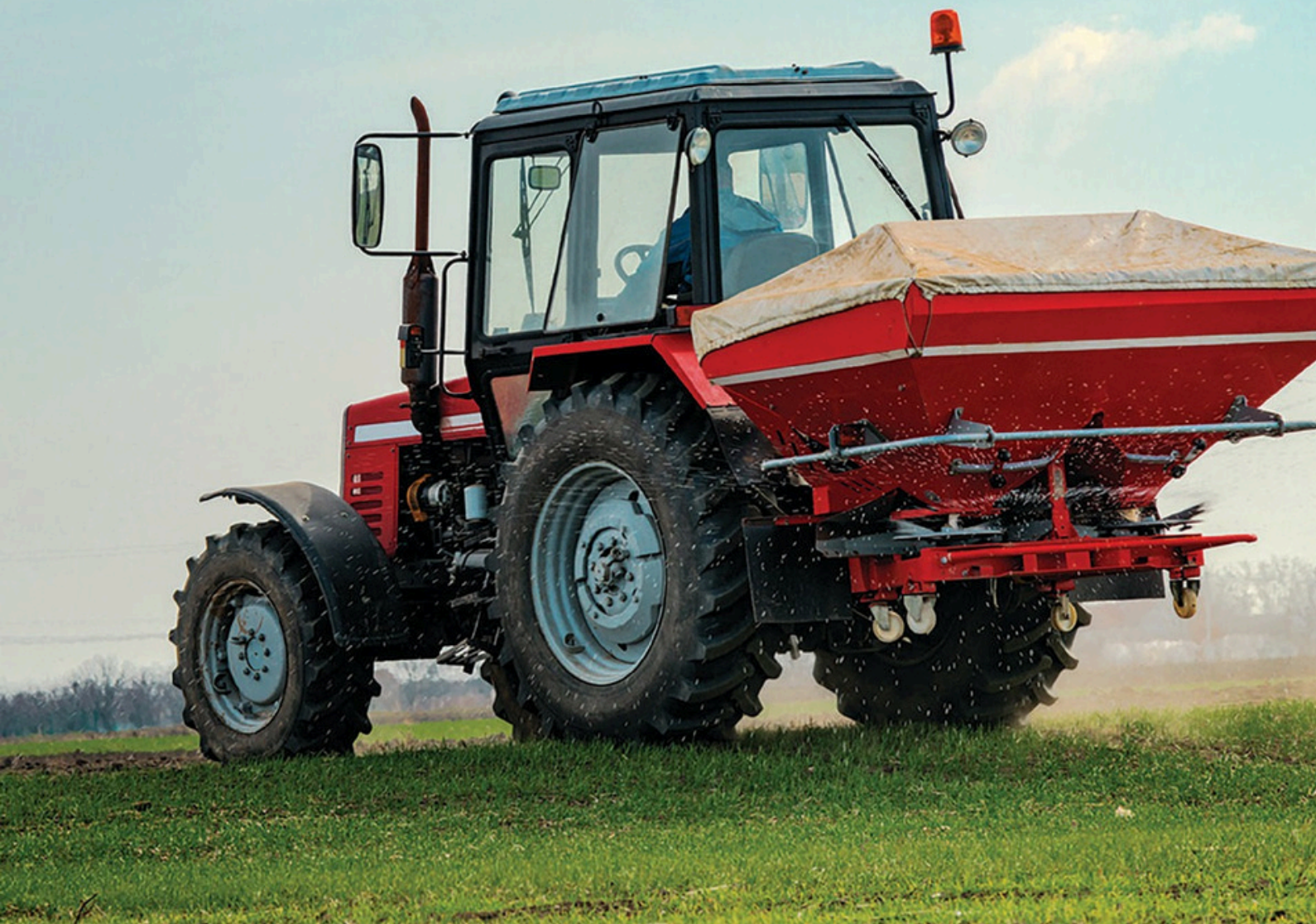
Cristals of 0-20mm

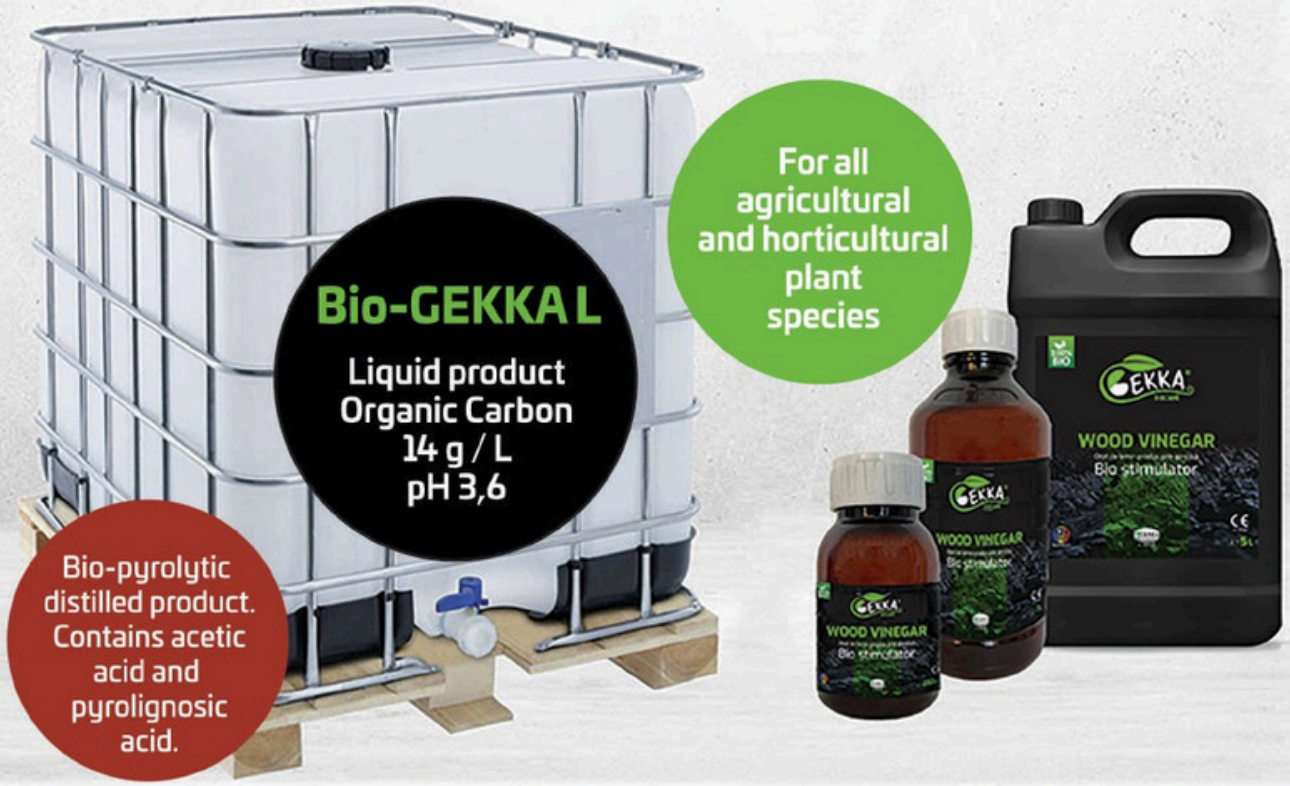
BIO GEKKA SFN

Granules of 0-7mm

APPLICATION METHODS

- Spread directly on the soil
- Application equipment: MA-AG (Light incorporation into the soil with the combiner)
- Long application period: from plowing to sowing
- Recommended quantity: 200-300 kg/ha





ADVANTAGES / BENEFITS

- It can be used with maximum efficiency for the treatment of seeds as germination STARTER and for insecto-fungal protection in the first phases of vegetation
- Effective in combating diseases and pests (Nematodes, Musculita alba, Tonymelus, Ostrinia, Diabrotica) also having a 100% organic insect-fungicidal effect
- Increases the biological activity of the soil and has a protective role for the seeds
- Blocks the absorption of heavy metals from the soil by plants
- Accelerates the absorption of microelements and nutrients from the soil, causing 22-26% production increase
- Supports plants overcome periods of thermal and water stress
- Application of 15-20L/ha over plant residues results in 50% faster degradation
- PH regulator and adjuvant for treatment solutions applied to plants
- Fights the phenomenon of phytotoxicity
- Stimulates vegetative growth, photosynthesis and the development of the root

CHARACTERISTICS

Organic Carbon [C]	14	g/L	Magnesium [Mg]	0.809	mg/dm^3
Nitrogen [N]	33,5	g/L	Mangan [Mn]	3.42	mg/dm^3
Potassium [K]	16,5	g/L	Molybdenum [Mo]	< 0,2	mg/dm^3
Bor [B]	< 2	mg/dm^3	Zinc [Zn]	0.922	mg/dm^3
Copper [Cu]	< 0,4	mg/dm^3	pH value	3.6	
Iron [Fe]	533	mg/dm^3	Nitrites [NO_2]	< 5*	mg / dm^3
Phosphorus [P]	< 0,4	mg/dm^3	Nitrates [NO_3]	< 50*	mg / dm^3

It can be used for both foliar spraying and irrigation systems. 5-10 ml/ 1L of water once a week.

CAS No. 94114-43-9

Storage information: at a temperature between 5 and 20 C, in the original packaging, protected from direct sunlight, its quality will be preserved indefinitely. Avoid direct contact with skin and eyes. Keep away from children and any food.

Foliar application (3 times). Dosage: 2,5 – 3 L / ha | For seed treatment 3 L / ton
It is used as a biostimulator and foliar fertilizer in concentrations of 0.5 - 1%.

Tested on: sunflower, maize, wheat, tomato, flower species (Pelargonium grandiflorum), sugar beet, potato, apple and vine..

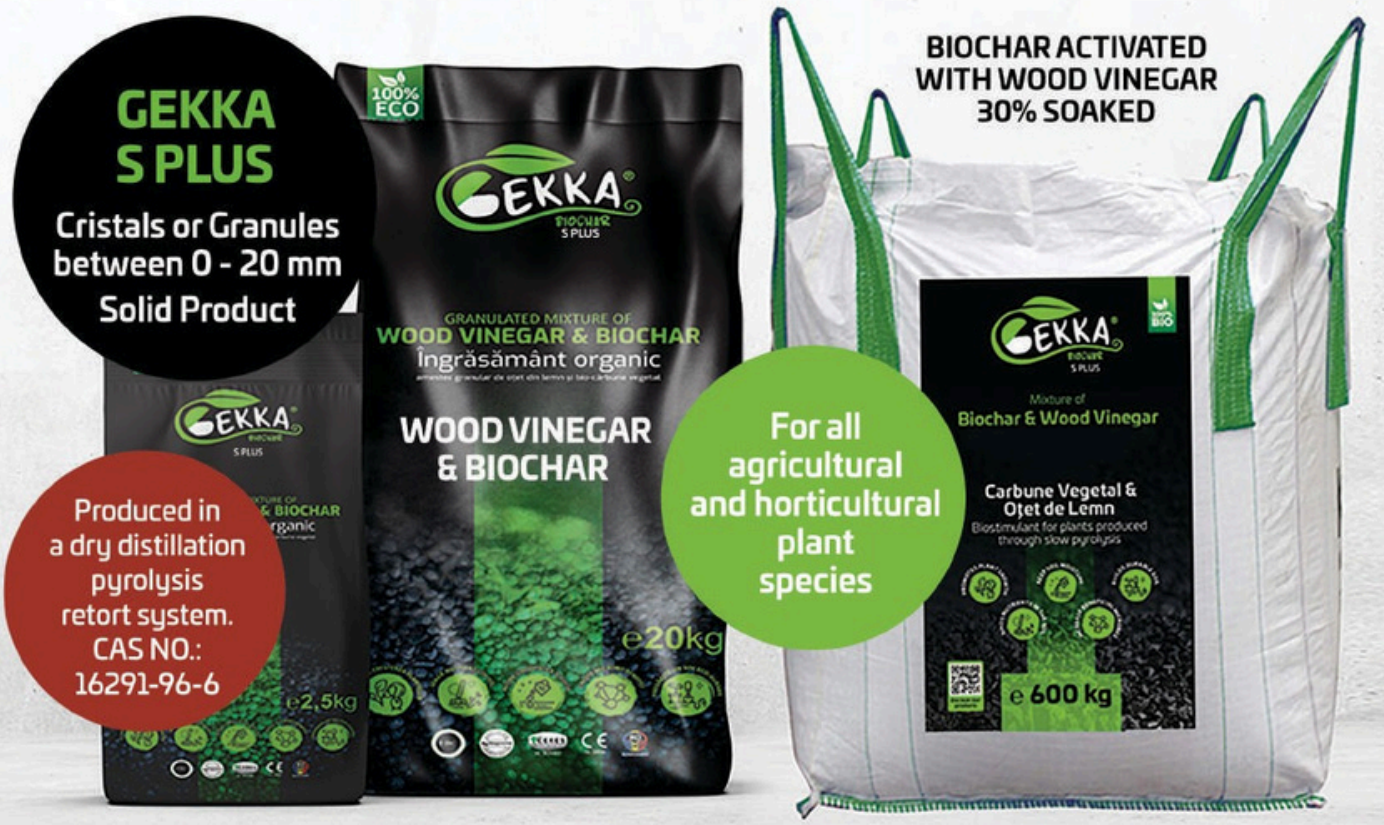
BEST CHOICE FOR

- Preventive treatment for cereals, vegetables, orchards, vines, in the first phases of vegetation
- Fertilization treatment with foliar application and fertigation
- Stimulation of plant flowering; Soil disinfection in the garden and solariums

- Compatible with most chemicals used in agriculture
- Can also be used as a liquid fertilizer through fertigation
- PH regulator for phytosanitary treatment solutions
- Applied foliar with the help of spraying systems

APPLICATION: foliar with the help of the MET, Self-propelled or Atomizer systems

DOSAGE: **L:** 3 - 5 L / ha **L PLUS:** 2,5 - 3 L / ha both in 0,5 - 1% concetration



ADVANTAGES / BENEFITS

- Slight application for land preparation:
  Administer with the MA-AG and incorporate with the combiner
- Reconditions the pH value by stopping soil acidification and increases the pH of acidic soils
- Binds volatile nitrogen compounds, stops nitrogen leaching and gradually releases it
- Keeps nutrients and trace elements in the soil and releases them progressively according to the needs of the plants
- Increases nutrient yield by 26-30%
- Unlocks phosphorus and potassium in the soil
- It acts as a buffer by storing water in the soil, limiting the effects of drought
- Repairs soils affected by chemicals and pesticides
- Improves soil fertility
- Stimulates photosynthesis by increasing the percentage of chlorophyll A and B
- Accelerates the absorption of nutrients from the soil, stimulates strong rooting, vegetative development and plant fruiting

CHARACTERISTICS

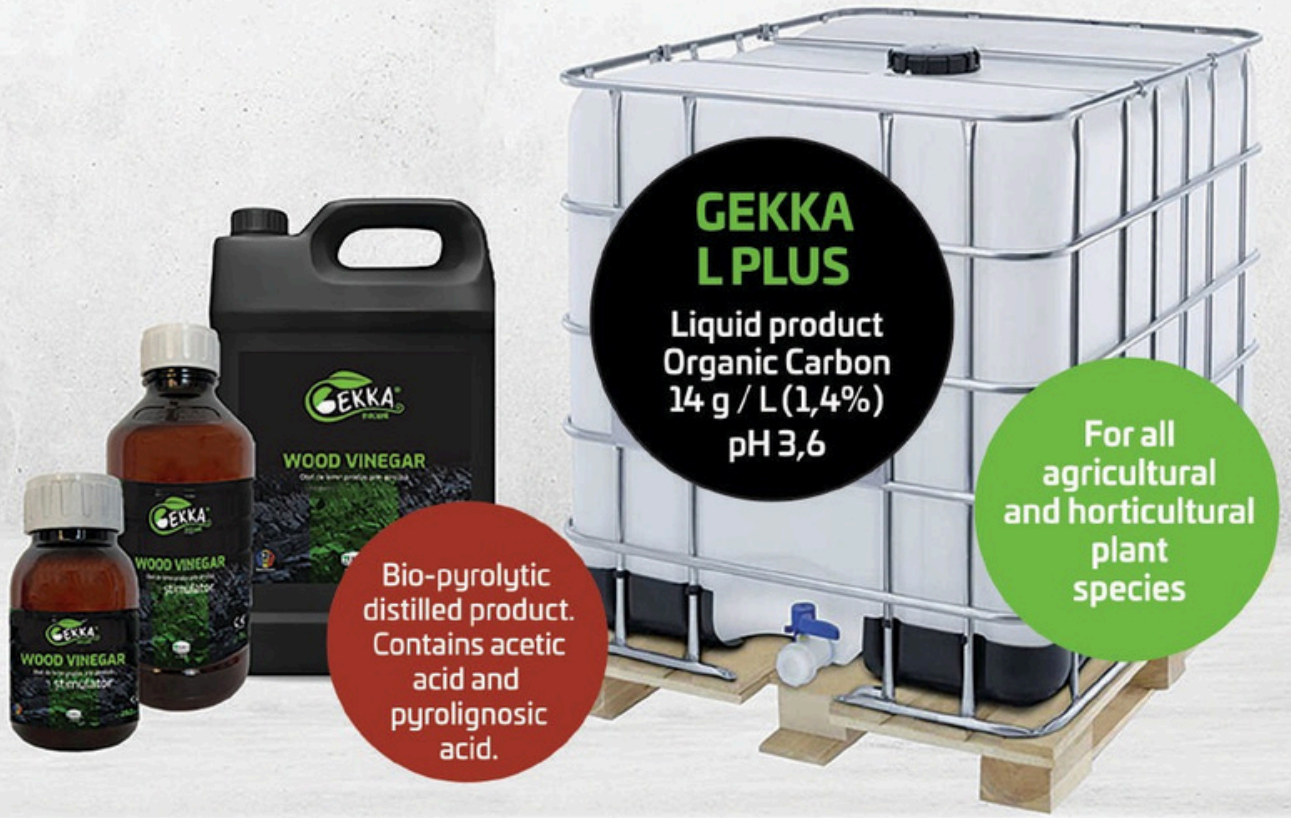
Density in volume **<3mm**	**276**	kg/m^3	Water retention	**162.5**	%
Specific area **(BET)**	**557.76**	m^2/g	Humidity	**28**	%
Ash content **(550°C)**	**4.1**	% (w/w)	pH value	**8.76**	CaCl2
Organic Carbon **[C]**	**66**	% (w/w)	EPA-PAH **(without LOQ)**	**6**	mg/kg
Total nitrogen **[N]**	**0.66**	% (w/w)	Plumb **[Pb]**	**< 2**	mg/kg
Potassium **[K]**	**0.2**	% (w/w)	Cadmium **[Cd]**	**<0,2**	mg/kg
Sodium **[Na]**	**0.01**	% (w/w)	Copper **[Cu]**	**5**	mg/kg
Calcium **[Ca]**	**0.8**	% (w/w)	Nickel **[Ni]**	**4**	mg/kg
Iron **[Fe]**	**0.07**	% (w/w)	Mercur **[Hg]**	**< 0,07**	mg/kg
Magnesium **[Mg]**	**0.04**	% (w/w)	Zinc **[Zn]**	**15**	mg/kg
Mangan **[Mn]**	**0.03**	% (w/w)	Crom **[Cr]**	**1**	mg/kg
Sulphide **[S]**	**0.02**	% (w/w)	Bor **[B]**	**15**	mg/kg

Spread directly on the soil. Dosage: 250 gr /m2 | 250-300 kg/ha
In larger agricultural areas, it can be spread using a fertilizer spreader.

Tested on: sunflower, maize, wheat, tomato, flower species (Pelargonium grandiflorum), sugar beet, potato, apple and vine.

Dark color, smoke smell.

Storage information: at a temperature between 5 and 20 C, in the original packaging, protected from direct sunlight, its quality will be preserved indefinitely. Avoid direct contact with skin and eyes. Keep away from children and any food.



ADVANTAGES / BENEFITS

Carbon: 14g/L **Nitrogen: 33,5 g/L** **Kalium: 16,5 g/L**

- It can be used as a foliar fertilizer on all species of agricultural and horticultural plants
- Accelerates the absorption of nutrients from the soil, offering a 24-30% increase in production
- Increases plant resistance to stress factors
- Ensures a fast mineralization of plant residues - dose 8-10 L/ha
- Stimulates vegetative growth and fruiting of plants
- Develops the root system of plants; It improves the absorption of nutrients through the roots
- With a double effect: fertilizer and insecto-fungicide
- Stimulates disease resistance of plants
- Increases the microbial activity of the soil
- Improves the quality, aroma, color and firmness of fruits and vegetables
- Improves plant metabolism and increases the concentration of sugar in fruits
- Increases the content of chlorophyll A and B in plants - 21.5 - 27.5%
- Stimulates photosynthesis; Insect repellent
- Good as soil disinfectant as it inhibits the development of viruses and diseases in the soil

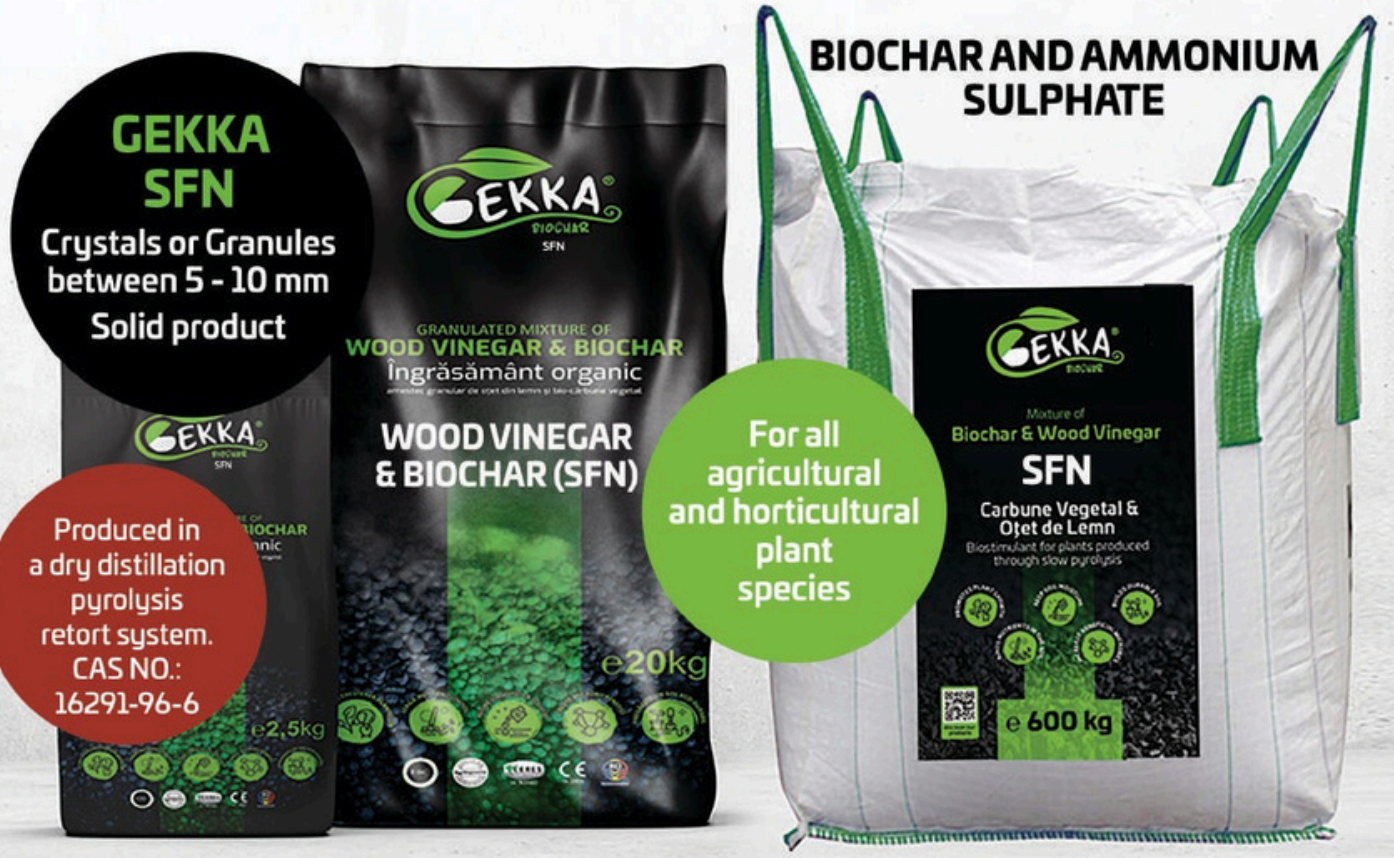
CHARACTERISTICS

Organic Carbon [C]	14	g/L	Magnesium [Mg]	0.809	mg/dm^3
Nitrogen [N]	33,5	g/L	Mangan [Mn]	3.42	mg/dm^3
Potassium [K]	16,5	g/L	Molybdenum [Mo]	< 0,2	mg/dm^3
Bor [B]	< 2	mg/dm^3	Zinc [Zn]	0.922	mg/dm^3
Copper [Cu]	< 0,4	mg/dm^3	pH value	3.6	
Iron [Fe]	533	mg/dm^3	Nitrites [NO_2]	< 5*	mg / dm^3
Phosphorus [P]	< 0,4	mg/dm^3	Nitrates [NO_2]	< 50*	mg / dm^3

Foliar application (2 times every 10-12 days). Dosage: 2.5 – 3 L / ha
It is used as a biostimulator and foliar fertilizer in concentrations of 0.5 - 1%.

First application 3-4 leaves in fallow crops, from the moment of twinning until the first internode in wheat and barley. Second application 8-10 leaves for fallow crops, for cereals up to the 2-3 internode, or 10-12 days after the first application.

Storage information: at a temperature between 5 and 20 C, in the original packaging, protected from direct sunlight, its quality will be preserved indefinitely. Avoid direct contact with skin and eyes. Keep away from children and food.



ADVANTAGES / BENEFITS

Organic Carbon: 32% | **Kalium: 0,2%** | **Nitrogen: 7,5%**

- Reconditions the PH of the soil, stopping acidification
- Provides the doses of nitrogen needed by the plants, and reduces its loss through leaching
- Increases water retention in the soil; Improves soil fertility
- Stimulates photosynthesis by increasing the percentage of chlorophyll A and B in plants
- Determines strong rooting and vegetative development
- Stimulates production growth and quality indices
- Ensures faster ripening and harvesting of the production by 7-10 days
- Increases the hectoliter weight by 0.9%
- Ensures important increases in production, between 19.5 - 34.6%
- Increases the protein content in cereals; Increases the sugar content in fruits and vegetables
- Reduces atmospheric pollution with greenhouse gases METHANE –CH4, NITROGEN OXIDE NO2 and CO2
- Reduces water pollution with NITRITE and NITRATE

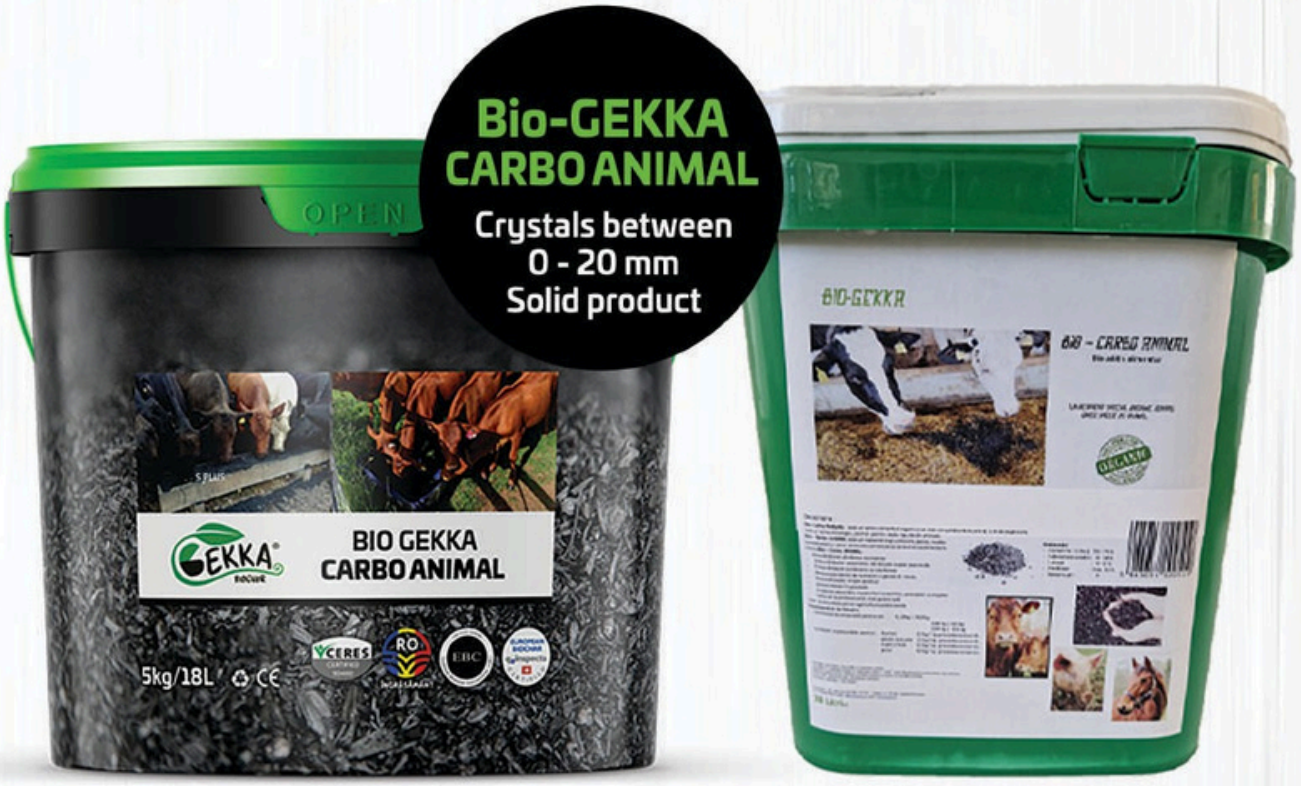
CHARACTERISTICS

Density in volume <3mm	276	kg/m^3	Water retention	162.5	%
Organic Carbon [C]	32	% (w/w)	EPA-PAH (without LOQ)	6	mg/kg
Potassium [K]	0.2	% (w/w)	Plumb [Pb]	< 2	mg/kg
Nitrogen [N]	7.5	% (w/w)	Cadmium [Cd]	<0,2	mg/kg
Sulphide [S]	8.5	% (w/w)	Copper [Cu]	5	mg/kg
Sodium [Na]	0.1	% (w/w)	Nickel [Ni]	4	mg/kg
Iron [Fe]	0.07	% (w/w)	Mercur [Hg]	< 0,07	mg/kg
Magnesium [Mg]	0.04	% (w/w)	Zinc [Zn]	15	mg/kg
Mangan [Mn]	0.03	% (w/w)	Crom [Cr]	1	mg/kg
Calcium [Ca]	0.8	% (w/w)	Bor [B]	15	mg/kg

Spread directly on the soil. Dosage: 200-300 kg/ha
It is possible to additionally intervene with a new dose on the occasion of the first mechanical sling.

Slight application over extended periods of time. Administered with the MA-AG and incorporated with the help of the combinator when preparing the germinal bed.

Storage information: at a temperature between 5 and 20 C, in the original packaging, protected from direct sunlight, its quality will be preserved indefinitely. Avoid direct contact with skin and eyes. Keep away from children and food.



Bio-GEKKA CARBO ANIMAL is an organic food additive which carries nutrients and microorganisms, suitable for all animals.

ADVANTAGES / BENEFITS

- Improves animal health
- Improves water storage capacity in animals
- Reduces nutrient losses and environmental gases
- Helps increase appetite
- Promotes weight gain
- Increases resistance against fungi, bacteria, parasites and viruses

CHARACTERISTICS

Density in volume <3mm	276	kg/m^3	Water retention	162.5	%
Specific area (BET)	557.76	m^2/g	Humidity	10	%
Ash content (550°C)	5	% (w/w)	pH value	9	CaCl2
Organic Carbon [C]	80	% (w/w)	FPA-PAH (without LOQ)	4	mg/kg
Total nitrogen [N]	0.66	% (w/w)	Plumb [Pb]	< 2	mg/kg
Potassium [K]	0.25	% (w/w)	Cadmium [Cd]	<0,2	mg/kg
Sodium [Na]	0.02	% (w/w)	Copper [Cu]	5	mg/kg
Calcium [Ca]	1.1	% (w/w)	Nickel [Ni]	4	mg/kg
Iron [Fe]	0.09	% (w/w)	Mercur [Hg]	< 0,07	mg/kg
Magnesium [Mg]	0.05	% (w/w)	Zinc [Zn]	15	mg/kg
Mangan [Mn]	0.04	% (w/w)	Crom [Cr]	1	mg/kg
Sulphide [S]	0.03	% (w/w)	Bor [B]	15	mg/kg

Recommended dosage

- Horses:
  0.12 kg > 700 kg
  0.08 kg > 500 kg
  0.04 kg > 250 kg
- Cattle, Poultry of yard, Goat/Lamb, Pigs: 0.5g / 1kg body weight.

Storage information: at a temperature between 5 and 20 C, in the original packaging, protected from direct sunlight, its quality will be preserved indefinitely. Avoid direct contact with skin and eyes. Keep away from children and food.

GEKKA® BIOCHAR

100% ECO

RO ÎNGRĂȘĂMÂNT

Approved by ECOCERT INPUTS

WESSLING CALITATE CONTROLATĂ

CE nr. 2806

“

dr.
Becsek László
BIOFARM Ltd, Transylvania

The soil is a living organism that needs to be treated strictly with natural helpers, and biochar is the perfect tool for this purpose. When mixed with wood vinegar it is a revolutionary combination. Examining its effectiveness, we experience similar results to those of the conventional products, while we can produce certified organic products.

I have tested wood vinegar on four different sunflower hybrids for two years. The results showed an increase in production ranging between 5% to 7%. The test was conducted in a culture where only 20-20-0 complexes were applied during sowing, without the use of urea during the vegetation stage. After a few days of treatment, a noticeable change in the crop's appearance can be observed, with the leaves displaying a higher level of turgor.

dr.
Ion Coman
Farmer on 100+ ha

EXPLOCOM GK LTD

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FOR A SUSTAINABLE & ENVIRONMENTALLY FRIENDLY AGRICULTURE!