

Our Earth • Our Home • Our Future



Who we are?

SAPROTERRA INC is a producer and exporter of highly efficient **organic** fertilizers and fodder additives. In addition to production, we research new organic materials, design unique processing methods for each substance and work closely with Organic Material Review Institute (OMRI) and National Organic Program (NOP) to ensure the recognition and licensing of our products. This approach allows our clients to have access to highly effective and unique products on the market. Products of **SAPROTERRA INC** completely restore soil fertility from various levels of depletion and ensure the production of organic fruits and vegetables that are safe for human consumption. Our products also preserve and maintain the health of farm animals and increase their productivity. Our goal is to restore the physical and chemical properties and fertility of arid, depleted, or saline agricultural lands that have been degraded by natural disruption or commercial activities. We restore the fertile soil layer in desert or arid regions for the purpose of their subsequent decorative rehabilitation or agricultural use.

Our motto reflects our values: The best fertilizer comes from nature and for nature.

Investment in soil health is imperative. At the same time, we would like to highlight the very important role of land resources in ensuring food purity and safety for our countries and the planet as a whole. We also need to make every effort to preserve and restore the soil, regardless of country, religion or language of communication, because our future on Earth depends on it.

Reasons for exhaustion of the soil are various. Among them are alienation of nutritive substances from harvest with subsequent incomplete return, loss of humus, deterioration of water regimen,

and the deterioration of other (physical or chemical) properties of the soil. Eventually, loss of fertility and desertification are the results of soil exhaustion.

The use of chemical and mineral fertilizers, pesticides, and herbicides also inflict large amounts of damage to the soil. They cause negative results such as disruption of biological balance, loss of biodiversity in communities of soil organisms, deterioration of biochemical processes, change of physical and chemical properties of the soil, and decreased resistance of the soil ecosystem to adverse environmental factors.

Application of organic fertilizers produced by SAPROTERRA INC is the main and most efficient way to return the nutritive substances extracted with the harvest to the soil, which leads to accelerated production of humus. Products of SAPROTERRA INC offer sustainable and quick solution of the problem of loss of soil fertility, deliver the extra support that it needs to be healthy and fertile. Each person using our products contributes to the recovery of the soil and promotes organic agriculture and animal farming.

Employees of our company are ready for cooperation with all interested companies and farmers on the matters of soil fertility recovery, increase of the yield of agricultural crops, production of environmentally clean food products, and the use of fodder additives for animals and fowl based on the range of products offered by SAPROTERRA.







SAPROFORM

Soil Conditioner Best for soil improvement and rehabilitation.

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Soil Conditioner Best for soil improve

SAPROFORM (soil conditioner) is a natural, organic silt-like substance which is formed from the deposits of dead plants and microorganisms at the bottom of fresh water basins based on the condition of limited oxygen presence. The composition of soil conditioner **SAPROFORM**, resulting from natural physical and chemical processes occurring in the body of water over thousands of years, determines its quality and agronomical value. It is raw material taken from nature to be used as fertilizer, ameliorating (recultivating) agent, and soil forming material. It is intended to restore soil fertility and stimulate plant growth.

SAPROFORM has a rich chemical composition.

It is used as environmentally compatible natural organic and mineral fertilizer. It contains a number of organic and mineral substances, compounds of nitrogen, phosphorus, potassium, sulphur, copper, boron, molybdenum, and other microelements. The organic part of the soil conditioner SAPROFORM includes biologically active substances: humic acids, fulvic acids, vitamins, amino acids, and enzymes. The mineral part of soil conditioner SAPROFORM contains a large number of trace elements. The SAPROFORM is an essential product which can be used for significant improvement of soil, farm land, land re-cultivation, and rehabilitation. It helps to re-create the soil and caespitose layer in virtually any desert territory.



Indoor planting:	Planting and transplanting of indoor plants, s saproform and 3 parts of soil (1: 3); Dressing the stem over the entire area of the pot with with the top layer. Then water the plant.
Outdoor planting:	When preparing the soil for planting small-se lettuce, celery, beets, etc.), outdoor flowers saproform on the soil surface, dig up to a depth 3,3 lb (0,5-0,8 gal) per 10 square feet. When planting vegetables (tomatoes, peppers, z potatoes, cabbage, etc.) and flower seedlings, hole. Be sure to mix the soil and Saproform. A plant. 1,3-1,6 lb per 10 square feet (0,3-0,4 g depth of 4-6 in.
	When planting fruit trees and shrubs (apple, pe cherries, peaches, apricots, grapes, etc.), add pit, mix with the soil in the ratio of 1:3 – 1: 6 abundantly.
	To improve the structure of the soil , create a fer Saproform is applied by a surface scatter meth lb per 10 square feet (2,1-3,1 gal per 10 square of 2-8 in.
Root feeding:	For top-feeding all types of plants Saproform plants or between rows (about 1 in for plants ar dig up the soil a little and water abundantly. So 1-3 times per season. For vegetable crops 1,8 each plant or 11-14 oz/ft2. Outdoor flowers, law Fruit and berry trees and shrubs can also be solution at the rate of 18 oz per 1,32 gal in the

www.saproterra.com





, seedling cultivation: 1 part of **ig indoor plants**: spread around th a layer of 0,8-1,2 in and mix

seeded crops (carrots, radishes, ers and also lawns distribute pth 4-6 in. **Application rate**: 2,2-

s, zucchini, eggplant, cucumbers, s, add Saproform to the garden **Application rate**: 1,8-2,5 oz per gal per 10 square feet) with a

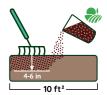
pear, plum, currants, raspberries, d Saproform into the planting : 6, plant a seedling and water

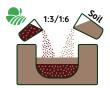
fertile layer of undeveloped soil, ethod in the amount of 8,8-17,6 are feet) with digging to a depth

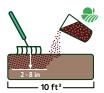
m is evenly distributed around and 2-3 in for shrubs and trees), Such top dressing can be done 8 oz of Saproform is applied for lawns 7-11 oz/ft2.

Fruit and berry trees and shrubs can also be watered with a Saproform solution at the rate of 18 oz per 1,32 gal in the flowering phase, at the stage of fruit formation and immediately after their removal.

High-quality soil











SAPROSOL

Improves growth and resistance of lawns, shrubs and trees.

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Saprosol is a non-toxic, environmentally friendly soil & plant amendment. A powerful plant growth stimulator. Saprosol enhances both plant growth and resiliency eliminating the use of environmentally unfriendly fertilizers or toxic pesticides. Useful throughout a plant's life cycle, Saprosol contributes positive effects from germination through flowering and fruit production.



Packaging options		
0,5 L (16.91 oz)		
1 L (33.81 oz)		
5 L (1.32 gal)		
Guaranteed analysis: MONOETHANOLAMMONIUM 2-(5-(PYRIDIN-4-YL)-1,2,4-TRI- AZOL-3-YLTHIO) ACETATE 2%, WATER 98%.		

How to use

Preparation of Saprosol working solution:

Working solution is a 1:200 dilution (16.91oz 2% Saprosol: 22 - 26 gal water). This solution is suitable for all types of plants. Use of the entire package (16.91 oz 2% Saprosol: 22-26 gal water) is sufficient for the treatment of 35,000 ft2 of lawns, treetops and/or shrubs.

Pre-germination treatment:

To optimize germination, soak seeds in Saprosol working solution for 5-7 hours immediately prior to sowing. Seeds should be soaked in equal volume of working solution. Seedlings germinated from pretreated seeds have enhanced root nutrition resulting in high resistance to diseases and adverse weather conditions.

Pretreatment of stalks:

Submerge stalks two thirds of their length in working solution 10-14 hours immediately prior to planting. Stalk pretreatment activates plant metabolism stimulating the growth and development of terrestrial biomass and root system resulting in enhanced survival of seedlings of trees and shrubs.

Treatment of lawns, shrubs and trees:

Spray with Saprosol working solution until plant and soil surrounding the plant is completely treated. Spray leaves and stalks of plants prior to moistening the surrounding. For optimal results, plants should be treated a minimum of 3X. Treatment is recommended for spring, summer and fall. Timely feeding strengthens the immune and root system of plants. Do not treat plants more often than once every 7-10 days. With regular and timely treatment with Saprosol, your plants will show enhanced resistance to drought, heavy rainfall, strong wind or sudden temperature changes. Saprosol accelerates the formation of the plant root system, increasing the vegetative mass of plant and enhancing tolerance to adverse weather conditions and diseases.







Improves growth and resistance of lawns, shrubs and trees.

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When to Apply	Expected improvement	Application Rates	
	Lawns		
	Newly seeded lawn		
Seedling phase (1.18 – 1.97 in); After mowing; Pre-winter *	Stimulates regrowth. Improves decorative qualities (density, color of the lawn).	Spray treatment: A ratio of 1:200 (16.91oz Sapro: 26.50 g water). Spray rate 0.5-1. gal per 1000 ft 2. Watering treatment: A ratio of 1:1000 (16.91ozSapro: 132.00 g water). The flow rate of the working solution during watering is 2.5-5.0 gal per 100 ft 2.	
Established lawn			
Early spring (Beginning of the growing season);After mowing;Before winter.	Stimulates regrowth. Improves decorative qualities (density, color of the lawn).	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 or water). Spray rate 0.5-1. gal per 1000 ft 2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 or water). The flow rate of the working soluti during watering is 2.5-5.0 gal per 100 ft 2.	
	Ornamental plants, trees and shr	ubs	
	Annual plants and perennial plan	nts	
 Early spring (Beginning of the growing season); During bud formation (approximately 3 weeks after initial treatment for perennial plants); During flowering of ornamental plants. 	Improves survival. Increases resistance to disease and stress. Stimulates growth and development. Improves decorative qualities.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 (water). Spray rate 0.5-1. gal per 1000 ft 2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 (water). Consumption rate – 0.1-0.15 gal watering treatment per herbaceous plant.	
	Shrubs and trees		
 Treat in early spring, (Beginning of the growing season) Treat twice following initial treatment at an interval of approximately 3 weeks. 	Improves survival. Increases resistance to disease and stress. Stimulates growth and development. Improves decorative qualities.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 g water). Spray rate 0.5-1. gal per 1000 ft 2. Watering treatment: A ratio of 1: 10 (16.91oz Sapro: 132.00 gal water). Consumption rate: For shrubs: 0.8 – 1.3 gal watering treatment per bush. Recommendation: Treat once every 1 14 days. For trees: 3.8-4.2 gal of wateri treatment per tree.	

Sapro is a pure, organic, micromineral fertilizer. **It is produced from a unique variety of freshwater sapropel deposits**, arising from biological humification of plants and animal remains for over thousand of years. Its main active ingredients – humic and fulvic acids – are natural, but provide powerful, fast and diverse effects, from enhancing plant growth to substantially improving overall soil structure.





Packaging options		
0,5 L (16.91 oz)	10 L (2.64 gal)	
1 L (33.81 oz)	20 L (5.28 gal)	
5 L (1.32 gal)	1000 L (264.17 gal)	

Guaranteed analysis:
Total Nitrogen (Ń)0.1%
Water soluble nitrogen0.084%
Total Phosphate (P 2 0 5)
Available Phosphate (P 2 O 5)0.01%
Potash (K 2 0)
Humic Acid (A&L)4.75%
Humic Acid (CDFA)2.17%
Organic Matter
C:Ň Ratio=29:1
pH=7.3
Aerobic Plate Count – 650 000 cfu/ml
Anaerobic Plate Count – 30 000 cfu/ml

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For all types of berries.

Sapro is an ecological, pure, concentrated, organic and micromineral fertilizer. It is a powerful, effective plant-growth regulator that provides fast and diverse effects, Sapro enhances plant production and improves soil structure. Sapro is produced from a unique variety of freshwater sapropel deposits. These sapropel deposits have a special composition due to their arising from chemical and biological humification for over thousands of years (plankton, animals, and plant organisms) with exposure to unique microflora. The use of Sapro increases productivity, improves taste, and prolongs shelf life.





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pH=7.3
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Anaerobic Plate Count – 30 000 cfu/ml

SAPRO

For all types of berries.

When to Apply	Expected improvement	Application Rates
Currant, gooseberry,	· ·	
3-fold treatment: 1st before flowering; 2nd 5-7 days after flowering; 3rd 10-15 days after the second.	 Stimulates plant growth and development: Increases productivity; Shortens ripening time; Accelerates flowering. 	Spray treatment: A ratio of 1:200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1. gal per 1000 ft 2. Watering treatment: A ratio of 1:1000 (16.91ozSapro: 132.00 gal water). The flow rate of the working solution during watering is 2.5-5.0 gal per 100 ft 2.
Gra	аре	
 1st treatment: The beginning of the spring resumption of growth. 2nd treatment: From the onset of swelling to the opening of vegetative buds. 3rd treatment: From the beginning to the end of budding. 4th treatment: Before the appearance of the color of the fruit. 5th treatment: Color starts appearing. 6th treatment: When berries are ripening. 	Increases productivity. Accelerates ripening by 8-11 days. Increases the mass of the bunch. Mobilizes the plant's immune system (increases resistance to disease and stress, frost and drought). Reduces the concentration of nitrates and improves taste.	
Blue	berry	
Treatment in the phase of budding, active growth, subsequent with an interval of 20 days.	Stimulates growth and development. Improves taste and prolongs the shelf life.	
Straw		
Processing 2 weeks after bedding-out, subsequent with an interval of 20 days.	Stimulates growth and development increases yield and resistance to diseases (verticillous and fusarious withering). Improves taste and prolongs the shelf life.	



10





Improves growth and resistance of indoor and garden flowers.

SAPRO

Improves growth and resistance of indoor and garden flowers.

Use for:			
Annual flower plants (begonia, petunia, tagetis, salvia, surfinia, etc.)			
• Perennial flower plants (clematis, bell, primrose, rose, chamomile, hosta, chrysanthemum, etc.)			
Bulb and bulbous flower crops (gladiolus, lily, tulip, etc.)			
• Potted indoor flower crops			
When to Apply	Expected improvement	Application Rates	
	Indoor and garden ornamental plants		
The first time - with the appearance of 2-3 leaves (for tulips, daffodils and other bulbs - with the appearance of sprouts), with the seedling method of growing - 10-15 days after planting in the ground). Carry out further processing with an interval of 20-25 days, in addition - before flowering in buds.	Activates growth, enriches leaf color, increases the number of buds and promotes earlier entry into the budding and flowering phase. Helps to increase the height of plants and the formation of a large number of new branching shoots, which increases the decorative qualities of indoor (potted) plants.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1. gal per 1000 ft2 Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.	
All types of roses			
Use once a month. Additionally - before flowering - by buds.	Active growth, high decorativeness, rich leaf color, an increase in the number of buds and an earlier entry into the budding and flowering phase.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1. gal per 1000 ft2 Watering treatment: a ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.	

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Packaging options		
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5 L (1.32 gal)	1000 L (264.17 gal)	

Guaranteed analysis: Total Nitrogen (N)
Aerobic Plate Count – 650 000 cfu/ml Anaerobic Plate Count – 30 000 cfu/ml

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SAPRO For all types of fruits.

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Water soluble nitrogen0.084%
Fotal Phosphate (P 2 O 5)0.01%
Available Phosphate (P 2 O 5)0.01%
Potash (K 2 0)
Humic Àcid (Á&I.) 4 75%
Humic Acid (CDFA)2.17%
Organic Matter
C:N Ratio=29:1
bH=7.3
Aerobic Plate Count – 650 000 cfu/ml Anaerobic Plate Count – 30 000 cfu/ml

When to Apply	Expected improvement	Application Rates
	Apple, pear, plum, apricot, peach, cherry, quinc	
There are 2 options of treatment: 1st option: Treatment in the phase of leaf blooming, subsequent watering with an interval of 10-15 days. Spraying at the first sign of illness with an interval of 10-15 days. 2nd option: 4-fold treatment: 1st 5-7 days after flowering; 2nd at the beginning of the physiological fall of the ovaries; 3rd in the period of laying flower buds; 4th in the period of intensive fruit growth.	Stimulation of growth and development. Resistance to disease and increase of yield. Taste improvement and prolongation of shelf life.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.
	Watermelon, melon	
Open ground: <u>1st treatment:</u> In the lash phase <u>2d treatment:</u> 15-20 days after the 1st tr. Closed ground: <u>1st treatment:</u> In the lash phase. <u>2d treatment:</u> 15-20 days after the 1st tr. <u>3rd treatment:</u> 10-15 days after the 2nd tr.	Stimulates growth and development. Increases productivity. Mobilizes the plant's immune system (increases resistance to disease and stress, frost and drought). Reduces the concentration of nitrates and improves taste. Accelerates ripening.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.
Citrus (Ora	nge, lemon, tangerine, grapefruit, lime, cleme	ntine etc.)
4-fold treatment: 1st 5-7 days after flowering; 2nd at the beginning of falling ovaries; 3rd and 4th with an interval of 2-3 weeks.	Stimulates growth and development. Increases yield, resistance to disease and stress, increasing productivity.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.









SAPRO For all types of vegetables and greens.

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Water soluble nitrogen0.084%
Total Phosphate (P 2 0 5)
Available Phosphate (P 2 O 5)0.01%
Potash (K 2 0)1.48%
Humic Acid (A&L)
Humic Acid (CDFA)2.17%
Organic Matter4,92%
C:N Ratio=29:1
pH=7.3
Aerobic Plate Count – 650 000 cfu/ml
Anaerobic Plate Count – 30 000 cfu/ml

SAPRO

For all types of vegetables and greens.

When to Apply	Expected improvement	Application Rates
	Potatoes	
Treat plants in full seedlings (15–20 cm) and in budding phase.	Increase of yield and nitrate reduction in tubers.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.5 gal water). Spray rate 0.5-1 gal per 100 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.0 gal water). The flow rate of the workin solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.
R	oot crops (carrots, radishes, beets, turnips, etc	-)
Treat plants during the growing season of the vegetative mass, the beginning of the formation of root crops and 3 weeks before harvesting.	Increases productivity and quality of root vegetables.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.5 gal water). Spray rate 0.5-1 gal per 100 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.0 gal water). The flow rate of the workin solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.
	Cabbage	
 Treat plants during the growing season: With an increase in vegetative mass; Beginning of formation of cabbageheads; Phase of growth of mass of cabbageheads. 	Increases yield and improves the quality of cabbage heads.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.5 gal water). Spray rate 0.5-1 gal per 100 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.0 gal water). The flow rate of the workin solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.









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When to Apply	Expected improvement	Application Rates
Cucumbers in the open and closed ground		
Treat at the time of appearance of 1 - 2 and 3 - 4 real leaves. Following treatment in 10 - 15 days after planting in the ground. Water and spray plants every 7 to 10 days. Spray with signs of illness.	Accelerates the formation of ovaries, prevents them from falling off. Increases yield, stimulates growth and development, resistance to disease and stress. Increases productivity.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.
Ni	ghtshade (tomatoes, peppers, eggplant and e	tc.)
There 2 options of treatment: 1-st option: Watering seedlings 3-4 days after landing and 7 days before planting in the ground. Watering or spraying plants every 10- 14 days. 2-nd option: <u>1-st treatment</u> : in the germination phase – the appearance of the first pair of real leaves; <u>2-nd treatment</u> : in the budding phase; <u>3-rd treatment</u> : in the budding of flowering phase; <u>4-th treatment</u> : in the fruiting phase.	 Increases yield; Stimulates growth and development; Stimulates resistance to disease and stress; Increases productivity. 	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.
	Pumpkin (zucchini, squash, pumpkin and etc.)	
<u>1-st treatment</u> : in the germination phase – the appearance of the first pair of real leaves; <u>2-nd treatment</u> : in the budding phase; <u>3-rd treatment</u> : in the beginning of flowering phase; <u>4-th treatment</u> : in the fruiting phase.	 Increases yield; Stimulates growth and development; Stimulates resistance to disease and stress; Increases productivity. 	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 ft2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.

When to ApplyExpected improvementGreen crops (salad, onions, garlic,1st treatment:in the phase of 2-4leavesIncreases yield;Subsequent treatment:every 10-14days after the previous.Stimulates resistanceIncreases productivity.
1st treatment:in the phase of 2-4leavesIncreases yield;Subsequent treatment:every 10-14days after the previous.Stimulates resistance
leavesStimulates growth andSubsequent treatment: days after the previous.Stimulates resistance stress;





provement	Application Rates	
lic, dill, parsley, celery, etc.)		
rlic, dill, parsley, celer and development; ance to disease and vity.	Spray treatment: A ratio of 1: 200 (16.91oz Sapro: 26.50 gal water). Spray rate 0.5-1 gal per 1000 t2. Watering treatment: A ratio of 1: 1000 (16.91oz Sapro: 132.00 gal water). The flow rate of the working solution during watering is 1-1.3 gal per 10 ft2 or 0.1-0.25 gal per plant.	



For all types of grains, legumes, oilseeds and forage crops.

SAPRO

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When to Apply	Expected improvement	Application Rates
	Winter grains / Spring grains	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectar 2205 lb seeds.
1-st treatment: in the fall, in the phase of 2-4 leaves.		Spray treatment: A ratio 1:200 (33.82c) 53 gal water : 2.47 ac).
2-nd treatment: in the phase of tillering.	Increases: Productivity by 14-21%; Gluten up to 5%; Glass up to 12%; Grain class.	Spray treatment: A ratio 1:200 (33.82c 53 gal water : 2.47 ac).
3-rd treatment: in the phase of the beginning of flowering, the beginning of milk ripeness.		Spray treatment: A ratio 1:200 (33.820 53 gal water: 2.47 ac).
	Buckwheat	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Frost resistance increase. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectar 2205 lb seeds.
1-st treatment: in the branching phase – the beginning of budding.	Increases: Productivity by 20%; Grain class.	Spray treatment: A ratio 1:200 (33.820 53 gal water : 2.47 ac).
2-nd treatment: 10-14 days after the previous.		Spray treatment: A ratio 1:200 (33.820 53 gal water : 2.47 ac).
	Sunflower	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectar 2205 lb seeds.
1-st treatment: in the seedling phase.		Spray treatment: A ratio 1:200 (33.8202 53 gal water : 2.47 ac).
2-nd treatment: in the phase of 3-4 real leaves.	 Increases: Productivity by 18-30%; Oil content up to 3-5%; Protein level on 1-5%; Grain class. 	Spray treatment: A ratio 1:200 (33.8202 53 gal water : 2.47 ac).
3-rd treatment: 10-15 days after the previous.		Spray treatment: A ratio 1:200 (33.82oz 53 gal water : 2.47 ac).

Sapro is an ecological, pure, concentrated, organic, and micromineral fertilizer. It is a powerful, effective plant growth regulator that provides fast and diverse effects. **Sapro** enhances plant production and improves soil structure. **Sapro** is produced from a unique variety of freshwater sapropel deposits. These sapropel deposits have a special composition due to their arising from chemical and biological humification of plant and animal remains (plankton, animals, and plant organisms) with exposure to unique microflora for over thousands of years. The use of **Sapro** increases productivity, improves the quality and marketability of products.



Packaging options		
5 L (1.32 gal)	10 L (2.64 gal)	
20 L (5.28 gal)	1000 L (264.17 gal)	

Comments and smallers in
Guaranteed analysis:
Total Nitrogen (Ň)0.1%
Water soluble nitrogen0.084%
Total Phosphate (P 2 0 5)0.01%
Available Phosphate (P 2 O 5)0.01%
Potash (K 2 0)1.48%
Humic Acid (A&L)4.75%
Humic Acid (CDFA)2.17%
Organic Matter4,92%
C:N Ratio=29:1
pH=7.3
Aerobic Plate Count – 650 000 cfu/ml
Anaerobic Plate Count – 30 000 cfu/ml





SAPRO

For all types of grains, legumes, oilseeds and forage crops.

When to Apply	Expected improvement	Application Rates
	Millet and sorghum	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the seedling phase.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the phase of the panicle initiation.	Increases: Productivity by 20%; Grain class.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
	Corn	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the seedling phase, phase of 3-5 leaves.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the phase of 6-8 leaves.	Increases: Productivity by 10-19%; Protein level on 1-4%; Grain class; Green mass when grown for on silage.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: in the phase between panicle initiation and flowering.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
	Soybeans	
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the seedling phase, phase of 2-3 real leaves.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the phase of stalking - the beginning of budding.	Increases: ■ Productivity by 10-12%; ■ Grain class.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: in the phase of the beginning of flowering.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).

When to Apply	Expected impr
	Winter and spi
Seed dressing with disinfectant before sowing.	 Germination energy increase up to 15% Root stimulation; Resistance to droug
1-st treatment: in the seedling phase - the appearance of the first pair of true leaves.	frost.
2-nd treatment: in the phase of illering.	Increases: Productivity by 10-1 Oil content up to 3-
3-rd treatment: in the phase of the beginning of budding.	Seed quality.
	Rice
Seed dressing with disinfectant before sowing. Soaking time up to 6 hours.	 Germination energy, increase up to 15% Root stimulation;
1-st treatment: in the phase of 2-4 leaves.	 Accelerates the enlings by 2-3 days; Resistance to drou frost.
2-nd treatment: in the budding phase.	Increases: Increases productiv
3-rd treatment: in the flowering phase.	 Improves grain grad Tillering phase is m Panicle initiation - 1
4-th treatment: in the fruiting phase.	earlier.





provement	Application Rates
spring rape	
gy, germination %;	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
ught, waterlogging,	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
)-15%; 3-5%;	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
	Spray treatment: A ratio 1:200 (33.82oz : 53 gal water: 2.47 ac).
e	
gy, germination %;	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
mergence of seed- ught, waterlogging,	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
ivity by 8-15%;	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
ade; more even; - four to five days	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).



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When to Apply	Expected improvement	Application Rates
	Pea	•
Seed dressing with disinfectant before sowing. Soaking time up to 10 hours.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the phase of the appearance of 5-7 leaves.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the budding phase.	 Increases: Increases productivity by 12-18%; Improves grain grade; Increases protein content. 	<u>Spray treatment:</u> A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: in the fruiting phase.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
Seed dressing with disinfectant before sowing.	Cotton Germination energy, germination increase up to 15%;	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant:
1-st treatment: in the phase of the appearance of 2-3 leaves.	 Root stimulation; Resistance to drought, waterlogging, frost. 	2205 lb seeds. <u>Spray treatment:</u> A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the budding phase.	Increases: ■ Increases productivity by 12-18%;	<u>Spray treatment:</u> A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: in the flowering phase.	 The opening of cotton bolls increases 13-95%; Increases the number of cotton bolls; Positively affects the properties of cotton fibers, such as fiber yield, fiber strength and breaking strength of fibers. 	<u>Spray treatment:</u> A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).

When to Apply	Expected imp
	Kidney b
Seed dressing with disinfectant before sowing. Soaking time up to 15 hours.	 Germination energ increase up to 15% Root stimulation;
1-st treatment: in the phase of the appearance of 2-4 leaves.	 Resistance to droug frost.
2-nd treatment: in the budding phase.	Increases: Increases product
3-rd treatment: in the flowering phase.	 Improves grain gra
	Flax
Seed dressing with disinfectant before sowing.	 Germination energ increase up to 159 Root stimulation; Resistance to drout
1-st treatment: in the phase of stem extension.	 Increases flax seed
2-nd treatment: 15-20 days after the first treatment.	Increases: Increases productiv
3-rd treatment: 15-20 days after the second treatment.	 Improves long fibe
	Clove
Seed dressing with disinfectant before sowing.	 Germination energ increase up to 15- Root stimulation;
1-st treatment: in the phase of emergence.	 Resistance to drouge frost.
2-nd treatment: in the phase of leave formation.	Increases: Increases productiv
3-rd treatment: in the branching phase.	 Increases feed valu





provement	Application Rates
bean	Application Rates
gy, germination %;	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
ught, waterlogging,	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
tivity by 12-18%;	<u>Spray treatment:</u> A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
ade.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
X	
gy, germination %;	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
ught, waterlogging, d production.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
ivity by 16%;	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
er quality.	Spray treatment: A ratio 1:200 (33.82oz : 53 gal water: 2.47 ac).
/er	
gy, germination -20%;	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
ught, waterlogging,	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
ivity by 24%;	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
ue.	Spray treatment: A ratio 1:200 (33.82oz : 53 gal water: 2.47 ac).



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When to Apply	Expected improvement	Application Rates
	Alfalfa (Lucerne)	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15-20%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the phase of leave formation.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the branching phase.	Increases: ■ Increases productivity by 24%; ■ Increases feed value.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: in the flowering phase.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
	Vetch-oat mix	
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the phase of leave formation.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: 15 days after the first treatment.	 Increases: Increases productivity by 24%; Increases feed value. 	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: 15 days after the second treatment.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
	Sugar and fodder beets	•
Seed dressing with disinfectant before sowing.	 Germination energy, germination increase up to 15%; Root stimulation; Resistance to drought, waterlogging, frost. 	Preparation of working solution: 10 oz Sapro: 2.2 gal water or disinfectant: 2205 lb seeds.
1-st treatment: in the phase of emergence of shoots - 2-3 pairs of real leaves.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
2-nd treatment: in the phase of 4 pairs of true leaves – joining of plants in the rows.	Increases: Increases productivity by 17-28%; Increases sugar content.	Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).
3-rd treatment: 3-4 weeks before harvest.		Spray treatment: A ratio 1:200 (33.82oz: 53 gal water : 2.47 ac).



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