PRODUCT PRESENTATION

Contents

“The foundation of agriculture and human progress”

"Civilization as it is known today could not have evolved, nor can it survive, without an adequate food supply. At its base is fertile soil."

Norman Borlaug. Nobel Lecture, 1970.

Norman Borlaug – recipient of the Nobel Peace Prize in 1970 and widely recognized as the father of the Green Revolution.

Uniflor Group is a manufacturer of innovative and environmentally friendly organic fertilizers under the PAROSTOK® brand. We offer a wide range of formulations, modifications, and substrates that effectively restore and enhance soil fertility, promoting sustainable agriculture and higher crop yields. Our technologies leverage advanced 21st-century biotechnologies to meet the growing demand for eco-friendly and resource-efficient solutions within the agro-industrial sector.

Uniflor Group is a trusted partner ensuring innovation and sustainable development in the future of agriculture.

PLANET
RENEWAL
PROJECT

UNI
FLOR

Product – PAROSTOK® organic fertilizer

PAROSTOK® is a new-generation organic fertilizer with prolonged action, available in various formulations and modifications. It delivers a synchronized, comprehensive effect that ensures long-term restoration of soil fertility, increased crop yields, and improvement of agro-landscape structure.

The fertilizer contains a large amount of macro- and microelements, biologically active substances, and a balanced symbiotic consortium of effective microorganisms, all presented in a form harmonious and readily available to plants.

Product – PAROSTOK® organic fertilizer

PAROSTOK® organic fertilizer:

- restores soil fertility by improving its structure and biological activity;
- increases the yield and quality of agricultural crops;
- reduces the anthropogenic impact on the environment;
- enhances farming efficiency by improving the soil's water retention and aeration properties;
- promotes plant resilience to stress factors (drought, diseases, and adverse climatic conditions);
- increases the content of organic carbon in the soil, improves aeration, and helps reduce greenhouse gas emissions;
- provides long-lasting effects thanks to its balanced composition of macro- and microelements, biologically active substances, and a symbiotic consortium of beneficial microorganisms.

PAROSTOK® is available in loose, granular, liquid, and paste formulations. ach formulation offers specific modifications adapted to different soil types and plant crops. el-like and concentrated granular formulations have been developed and are ready for industrial-scale implementation.

Product – PAROSTOK® soil substrates

Product name: PAROSTOK® organic fertilizer

- Type of packaging
  (loose, granular, gel-like, and concentrated granular formulations): 1 kg, 5 kg, 10 kg, big bag 500 kg, 1000 kg.

- Type of packaging (liquid formulation): 1 L, 2 L, 30 L, 60 L, 600 L, 1000 L, loading.

- Type of packaging (paste formulation): 1 L, 2 L, 30 L, 60 L, loading.

- Product derivatives:
  More than 200 modifications of fertilizer formulations and over 20 types of substrates.

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  More than 200 modifications of fertilizer formulations and over 20 types of substrates.

- By-products:
  Ammonia water, carbon, hydrogen sulfide, carbon dioxide, methane, organic acids, water-soluble salts, dust, and aerosols.

Proven effectiveness and registration in the EU

PAROSTOK® organic fertilizer, based on the results of official state trials conducted in the Republic of Poland and the European Union, has been included in the State Register of fertilizers approved for use.

PAROSTOK® organic fertilizer holds quality and compliance certificates issued by leading specialized research institutions in Poland:
– The Institute of Soil Science and Plant Cultivation (Puławy);
– The Institute of Veterinary Medicine (Puławy).


MINISTER ROLNICTWA I ROZWOJU WSI

DECYZJA Nr 296/12


IUNG Instytut Uprawy Nawożenia i Gleboznawstwa Państwowy Instytut Badawczy

Proven effectiveness and registration in the EU

– The Institute of Environmental Protection – National Research Institute (Warsaw);
– The Institute of Rural Health (Lublin);
– The Forest Research Institute (Raszyn);
– The Research Institute of Horticulture (Skierniewice);
– The Research Institute of Vegetable Crops (Skierniewice).







Official state registration and approval for application within Ukraine

PAROSTOK® organic fertilizer has successfully undergone state trials in Ukraine and has been included in the State Register of Pesticides and Agrochemicals approved for use. All products are certified in accordance with the current legislation of Ukraine.

The product quality is confirmed by the following expert conclusions and assessments issued by:
– The State Sanitary and Epidemiological Service of Ukraine;
– The Academician L.I. Medved's State Enterprise "Ukrainian Research Center of Preventive Toxicology" of the Ministry of Health of Ukraine (Kyiv);
– The Ukrainian Laboratory of Quality and Safety of Agricultural Products (Chabany);
– The National Scientific Center "Institute of Agriculture of the National Academy of Agrarian Sciences of Ukraine" (Chabany).

Key Benefits of PAROSTOK® Organic Fertilizer

- Prolonged comprehensive action.
  Provides long-term restoration and maintenance of soil fertility thanks to its balanced content of macro- and microelements, biologically active substances, and a symbiotic consortium of effective microorganisms.
  Versatile application.
- Available in various formulations adapted to different soil types, plant crops, and cultivation technologies.
- Consistent increase in yields and the biological quality of produce.
- Improvement of the soil's physicochemical properties.
- Enhances organic carbon content, improves soil structure and aeration, and contributes to greater water retention capacity.

Key Benefits of PAROSTOK® Organic Fertilizer

- Environmental safety.
  Contains no toxic components, reduces anthropogenic impact, helps decrease greenhouse gas emissions, and improves the carbon balance. Remediation and reclamation of degraded lands. Enhanced plant resilience.
- Economic efficiency.
- Reduces the costs of mineral fertilizers and irrigation thanks to its prolonged action and optimized plant nutrition.
  Social and climate significance.
- Improves food security, enhances farming conditions,
- and contributes to the development of resilient agro-landscapes.

The Impact of PAROSTOK® Organic Fertilizer on Soil

PAROSTOK® has a positive, highly effective, and multifaceted impact on key agrochemical, physical-mechanical, and biological properties of the soil, as well as on its air and water regimes.

The high buffering capacity of this organic fertilizer prevents salt accumulation in the soil solution, which is typical when high doses of mineral fertilizers are applied.

The content of humic acids and bioactive elements helps restore the normal structure of the microbial community and promotes the formation of an agronomically valuable soil structure.

Nutrients are present in an organic form, resistant to leaching, and serve as a source of prolonged nutrition with a synchronized effect for plants.

The fertilizer acts as a biological activator of vital processes in the soil.

The complex of macro- and microelements regulates plant growth and development, enhancing their resistance to adverse environmental factors.

The Impact of PAROSTOK® Organic Fertilizer on Soil

PAROSTOK® does not contain toxic substances, does not exhibit harmful properties, and is not subject to regulation in natural environmental objects.

Additionally:

– Improves the phytosanitary condition of the soil and reduces pathogenic microflora;

– Enhances water-use efficiency and resource conservation;

– Promotes the accumulation of organic carbon and improves the carbon balance;

– Suitable for use in conventional farming, as well as in organic agriculture and environmentally certified production systems.

Agrochemical and Biological Properties of PAROSTOK® Organic Fertilizer

Contains macro- and microelements, humic and fulvic acids, biologically active substances, and a symbiotic consortium of microorganisms.

Index	loose	granular	liquid	gel-like	granulated concentrate
	Content				
Macroelements, not less than	%	%	%	%	%
Nitrogen(N)	2,0	7,5	2,0	16,6	26,6
Phosphorus(P_2O_5)	1,7	5,5	2,2	17,3	27,3
Potassium (K_2O)	1,7	5,5	2,5	19,3	29,3
Calcium (Ca)	2,1	7,0	1,0	4,1	8,0
Magnesium (Mg)	0,2	1,5	0,04	0,5	0,5
Microelements, not less than	ppm	ppm	ppm	ppm	ppm
Iron (Fe)	60	90	12	80	500
Cobalt (Co)	12	26	3	30	150
Copper (Cu)	38	65	7,5	65	320
Zinc (Zn)	20	33	1,5	25	120
Manganese (Mn)	24	47	5,5	45	220
Boron (B)	17	29	3,5	30	155
Sulfur (SO_3)	20	36	4,3	37	65
Humic acids,%, not less than	20	60	60	60	60
Fulvic acids,%, not less than	5	16	22	22	22
pH	6,5 – 7,2	6,5-7,2	7,0-8,0	7,2-8,0	7,2-8,0
Moisture contents	45-55	6-8	98-98,5	40-45	6-8
Organic matter content,C_{org}	17,92	36,4	2,8-4,2	22,5-25,2	33,7-36,5
Dry matter content,%	45	92	1,5	55-60	25
Ash content,%	12 – 35	24-70	1,2-1,5	7-15	12-25
C:N	14-18:1	14-18:1	2,5-3,5:1	20-22,5:1	25:1
Humification factor,%	30 – 40	37-45	3-5	20	30
Bacterial flora, billion CFU in 1g of OF	25 – 27	32-35	-	-	-

Purpose and functions of PAROSTOK® organic fertilizer:

– Restoration and enhancement of soil fertility;
– Increase in crop yields and product quality;
– Reclamation of degraded and arid lands;
– Reduction of anthropogenic impact on the environment.

Usage Recommendations for PAROSTOK® Organic Fertilizer

The recommendations for the application of PAROSTOK® organic fertilizer have been developed by Uniflor Group specialists in collaboration with scientists, based on practical experience and scientifically validated approaches.

Crop	Application rate		
	crumble form, t/ha	granulated form, t/ha	liquid form, l/ha
Cereal	2-2,5	0,6-0,65	4
Technical crops	3-4	0,75-0,80	6
Vegetables	2-3,5	0,6-0,75	6
Cucurbits crops	2,5-3	0,6-0,7	6
Fruits	2-4	0,6-0,8	6
Berries	2-3,5	0,6-0,75	14
Decorative floricultural crops	2-4	0,6-0,8	14
Lawn	3-4	0,75-0,80	4

The application rates of the gel-like and concentrated granular formulations are also determined individually, based on the results of agrochemical and biological soil analyses, crop rotation specifics, and the physiological needs of agricultural crops. Thanks to the positive impact of the fertilizer on the soil, the application rates of PAROSTOK® decrease each year while maintaining high effectiveness.

Production

Production

Production

Aerator-loosener used in the technological production process of PAROSTOK® organic fertilizer.

Liquid formulation of PAROSTOK® organic fertilizer

The liquid formulation of PAROSTOK® organic fertilizer is presented as a dark brown, odorless liquid with a neutral solution reaction (pH 6.5–7.2). This fertilizer is produced on the basis of the loose formulation of PAROSTOK® and contains, in dissolved form:

macro- and microelements,
biologically active substances,
humic and fulvic acids,
natural phytohormones,
a symbiotic consortium of effective microorganisms.

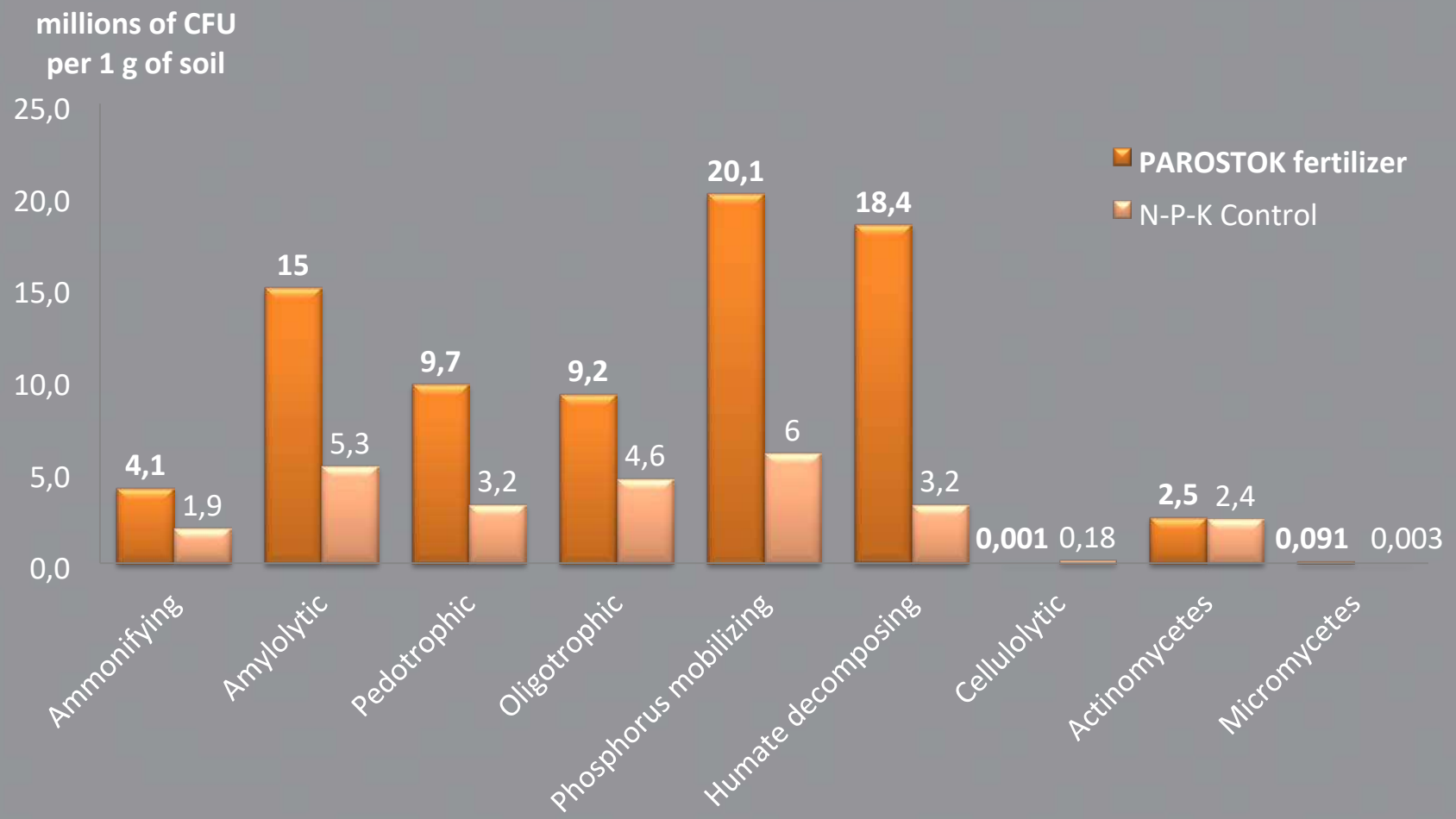
Preparation of Seed and Planting Material

Crops			Application rate	Concentration (capacity, l)	Method of application
Cereal	Winter, summer		4,0 l/t	1:10	Seed treatment with liquid PAROSTOK® fertilizer. Storage life of treated seeds is up to 3 days.
Legume	Peas, soybean,vetch		4,0 l/t	1:10	
Technical	Row-crop	Corn	4,0 l/t	1:10	
	Oil	Sunflower	8,0 l/t	1:10	
	Oil	Flax	4,0 l/t	1:10	Semi-dry treatment
	Oil	Rapeseed	4,0 l/t	1:10	Semi-dry treatment
	Row-crop	Potatoes	8,0 l/t	1:30	Planting material need to be sprayed and covered with polyethylene film. Storage life of treated material is up to 3 days.
	Row-crop	Sugar beet	0,2 l/kg	1:2,5	Seeds need to be soaked for 2-3 days. Storage life of treated seeds is up to 3 days.
	Row-crop	Tobacco			
Feeder greens	Perennial and annual				
Vegetables	Cucumbers, tomatoes, peppers,eggplants, marrows		0,02 l/kg	1:2,0	Seeds need to be soaked for 2-3 days. Storage life of treated seeds is up to 3 days.
	Garlic, seed onions		5,0 l/t	1:10	Soaking for 5-8 hours.
	Carrots, onions, cabbage, radish, salads, red beet		0,02 l/kg	1:2,0	Seeds need to be soaked for 8-12 hours. Storage life of treated seeds is up to 3 days.
Cucurbits	Watermelon, melon		0,02 l/kg	1:2,0	Seeds need to be soaked for 16-18 hours. Storage life of treated seeds is up to 3 days.
Floricultural (decorative)	Acerose, deciduous, flower		10,0 l/ per 100 rhizomes	1:10	Soaking roots, seedlings, transplants for a day.
Fruits, berries	Drupaceous, bushes, pomiferous		10,0 l/per 100 rhizomes	1:10	Soaking roots, seedlings, transplants for a day.

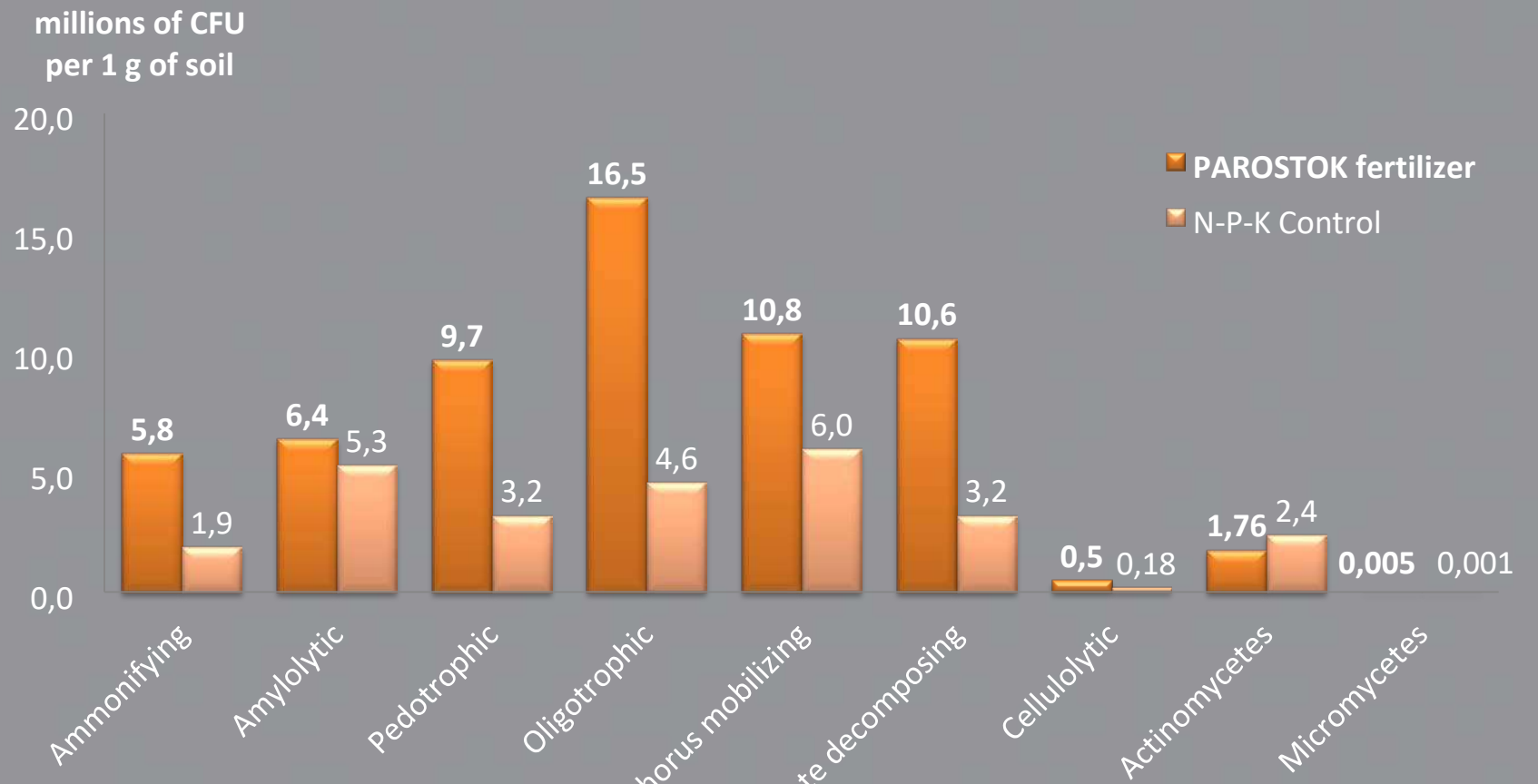
Foliar Feeding of Plants During the Growing Season

Crops			1st foliar fertilizing		2nd foliar fertilizing	
			stage of application	application rate l/ha	stage of application	application rate l/ha
Cereal	Winter, summer		end of tillering, early shooting	2,0	earing	2,0
Legume	Peas, soybean,vetch		3rd-5th leaf	2,0	9-11th leaves	2,0
Technical	Tilled	Corn	5-7th leaf	2,0	early budding	2,0
	Oil	Sunflower	2-3 couple of leaves	2,0	anthodium formation	2,0
	Oil	Flax	herringbone stage	2,0	budding	2,0
	Oil	Rape	4 real leaves	2,0	budding	2,0
	Tilled	Potatoes	after sprouting	2,0	budding	2,0
	Tilled	Sugar beet	2-3 couple of real leaves	2,0	early row closure	2,0
	Tilled	Tobacco	auricles stage	2,0	10-14 days after sowing seedling	2,0
Feeder greens	Perennial and annual		3-4 couple of leaves	2,0	every 10-14 days after the first fertilization	2,0
Vegetables	Cucumbers, tomatoes, peppers, eggplants, marrows		3-4 leaves	2,0	budding, every 10-14 days	2,0
	Garlic, seed onions		after sprouting	2,0	after 10-14 days	2,0
	Carrots, onions, cabbage, radish, salads, red beet		after sprouting	2,0	after 10-14 days	2,0
Cucurbits	Watermelon, melon		3rd-5th leaf	2,0	prebloom	2,0
Floricultural (decorative)	Acerose, deciduous, flower		prebloom	6,0	set formation	8,0
Fruits, berries	Drupaceous, bushes, pomiferous		prebloom	6,0	set formation	8,0

Impact of liquid form of **PAROSTOK®** organic fertilizer on microbial cenosis of typical black soil.



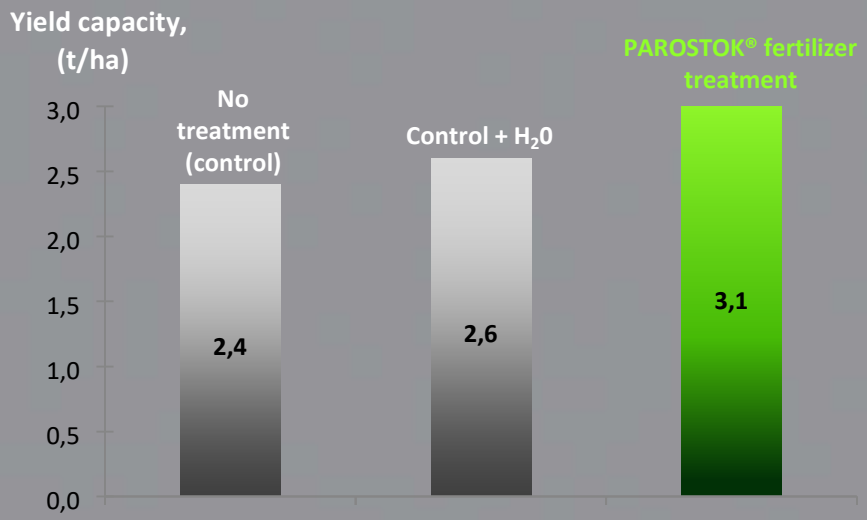
Impact of paste form of **PAROSTOK®** organic fertilizer on microbial cenosis of typical black soil.



Impact of organic fertilizer **PAROSTOK® on** crop yielding capacity and quality

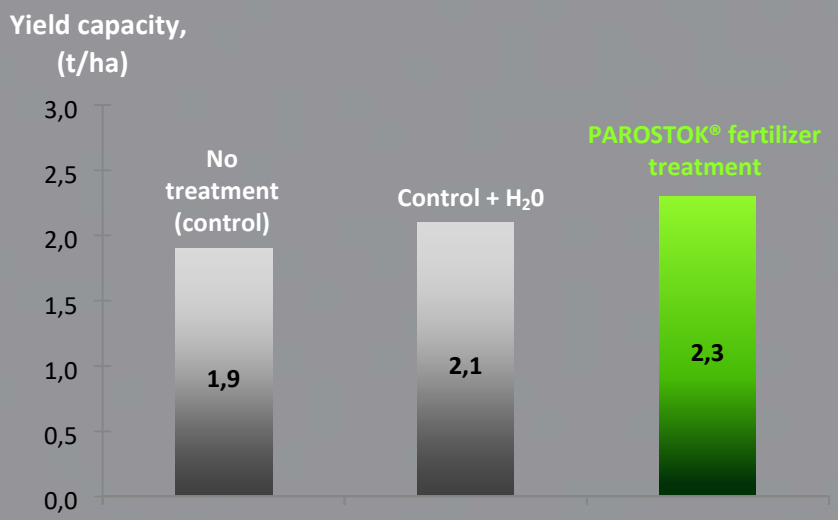
Based on testing results from the Ukrainian Laboratory of Quality and Safety of Agricultural Products.

Wheat



Variants	Increase		Crude protein content, %	Gluten quality, group
	t/ha	%		
No treatment (control)			11,0	93,8
Control+H_2O	0,2	8,3	12,0	95,5
PAROSTOK® fertilizer treatment	0,7	29,2	13,5	98,6

Barley

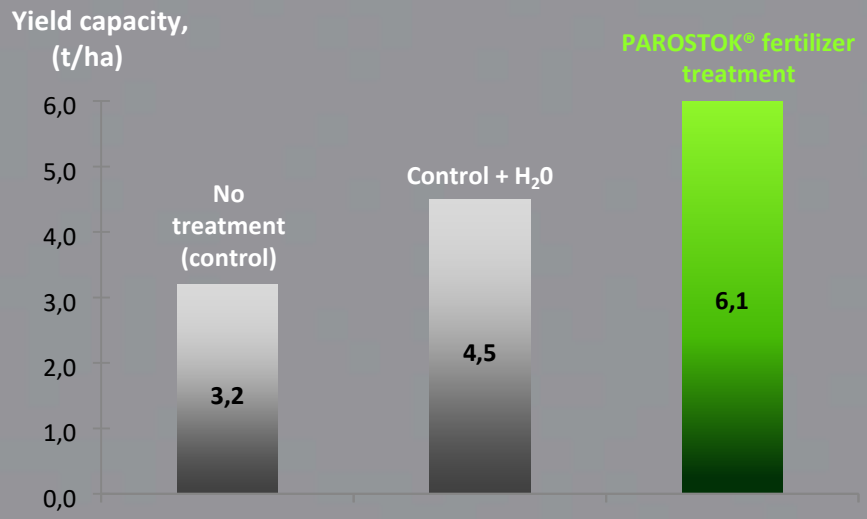


Variants	Increase		Crude protein content, %
	t/ha	%	
No treatment (control)			10,4
Control+H_2O	0,2	10,5	10,5
PAROSTOK® fertilizer treatment	0,4	21,1	10,7

Impact of organic fertilizer **PAROSTOK® on** crop yielding capacity and quality

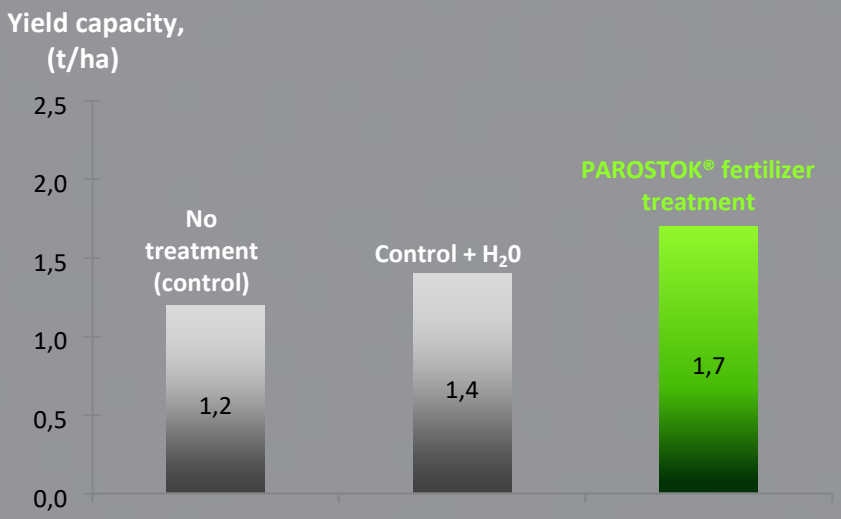
Based on testing results from the Ukrainian Laboratory of Quality and Safety of Agricultural Products.

Corn



Variants	Increase		Crude protein content, %	Fat weight ratio, %
	t/ha	%		
No treatment (control)			9,0	6,0
Control+H_20	1,3	40,6	10,0	6,1
PAROSTOK® fertilizer treatment	2,9	90,6	12,5	6,8

Sunflowers

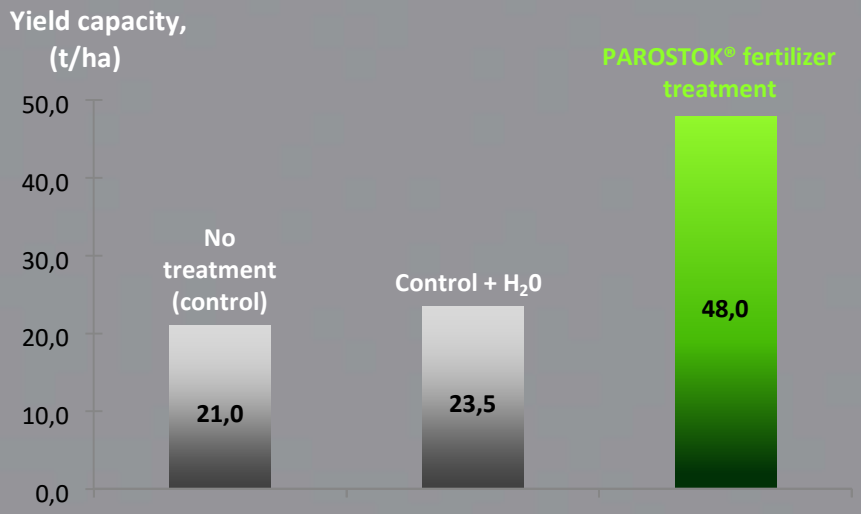


Variants	Increase		Oil content, %	Oil yield, k/ha
	t/ha	%		
No treatment (control)			44,0	567,8
Control+H_20	0,2	16,7	46,0	595,3
PAROSTOK® fertilizer treatment	0,5	41,7	48,0	840,4

Impact of organic fertilizer **PAROSTOK® on** crop yielding capacity and quality

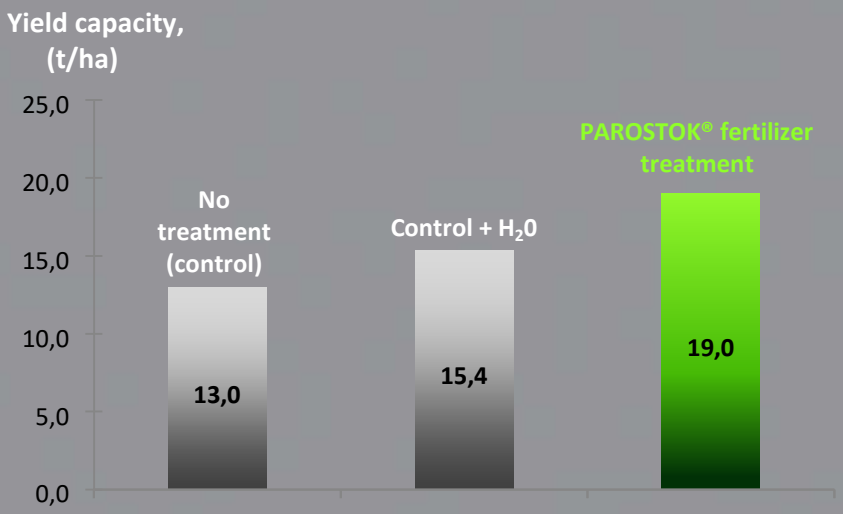
Based on testing results from the Ukrainian Laboratory of Quality and Safety of Agricultural Products.

Sugar Beets



Variants	Increase		Sugar recovery, %	Sugar yield, k/ha
	t/ha	%		
No treatment (control)			13,6	3,1
Control+H_20	2,5	11,9	13,8	4,3
PAROSTOK® fertilizer treatment	27,0	128,5	17,2	5,8

Cucumbers

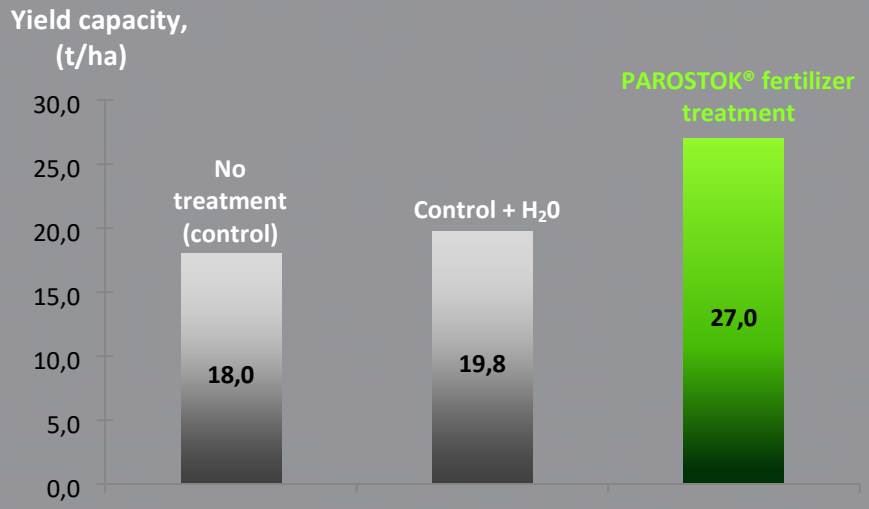


Variants	Increase		Dry residue, g/l	N - NO_3, mg/kg of crude weight ratio
	t/ha	%		
No treatment (control)			3,9	93,5
Control+H_20	2,4	18,5	4,2	95,4
PAROSTOK® fertilizer treatment	6,0	46,2	4,6	100,8

Impact of organic fertilizer **PAROSTOK® on** crop yielding capacity and quality

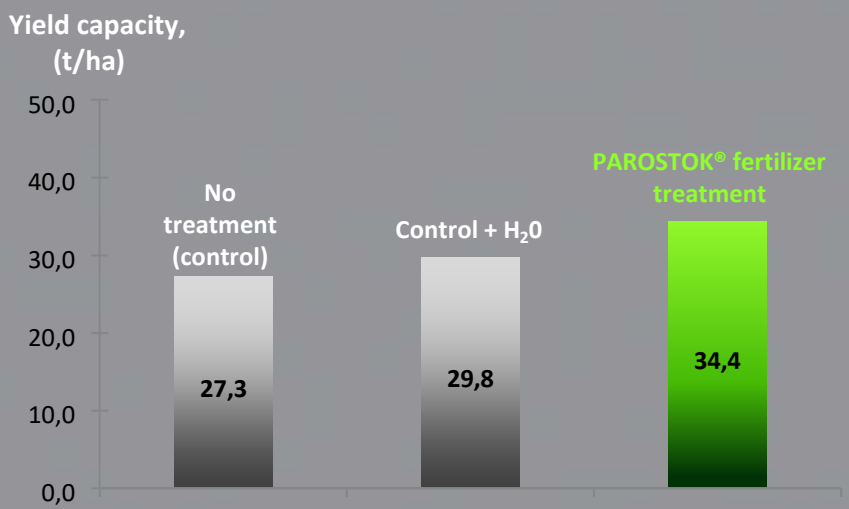
Based on testing results from the Ukrainian Laboratory of Quality and Safety of Agricultural Products.

Tomatoes



Variants	Increase		Dry residue, g/l	N - NO3, mg/kg of crude weight ratio
	t/ha	%		
No treatment (control)			5,1	41,6
Control+H_2O	1,8	10,0	5,6	43,8
PAROSTOK® fertilizer treatment	9,0	50,0	6,7	50,3

Cabbages

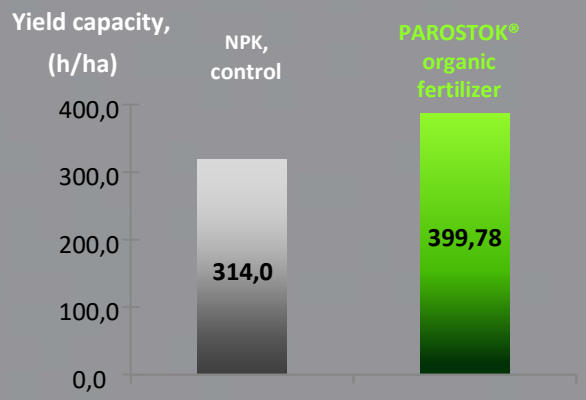


Variants	Increase		Vitamin C content, mg	N - NO_3, mg/kg of crude weight ratio
	t/ha	%		
No treatment (control)			3,9	93,5
Control+H_2O	2,4	18,5	4,2	95,4
PAROSTOK® fertilizer treatment	6,0	46,2	4,6	100,8

Effect of organic fertilizer PAROSTOK®

on productivity, quality and profitability of potato cultivation
as a result of industrial use on the premiseervice Center" Kartoflevodstvo".
Analytical studies of soil and crop quality indicators held Ukrainian laboratory of quality and safety of agricultural products

Potatoes

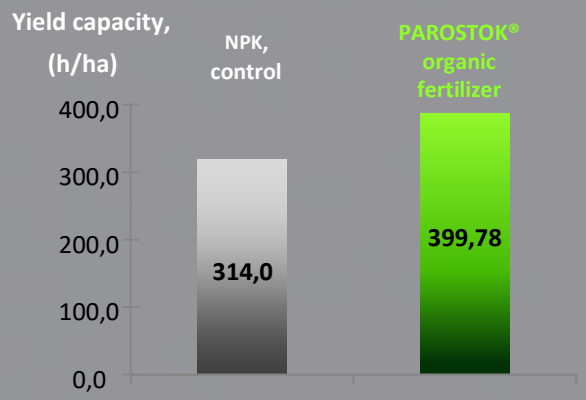


Cultures	Variants	Plony		Total sugar, %	Dry matter, %	Profitability +/- to control, %
		h / ha	+/- to control, h/ha			
Potatoes	NPK, control	314,0	-	12,51	25,59	-
	PAROSTOK® organic fertilizer	398,78	+84,78	17,85	25,69	+34

Effect of organic fertilizer PAROSTOK®

on productivity, quality and profitability of potato cultivation
as a result of industrial use on the premises
LLC "Service Center" Kartoflevodstvo".
Analytical studies of soil and crop quality indicators held Ukrainian laboratory of quality and safety of agricultural products

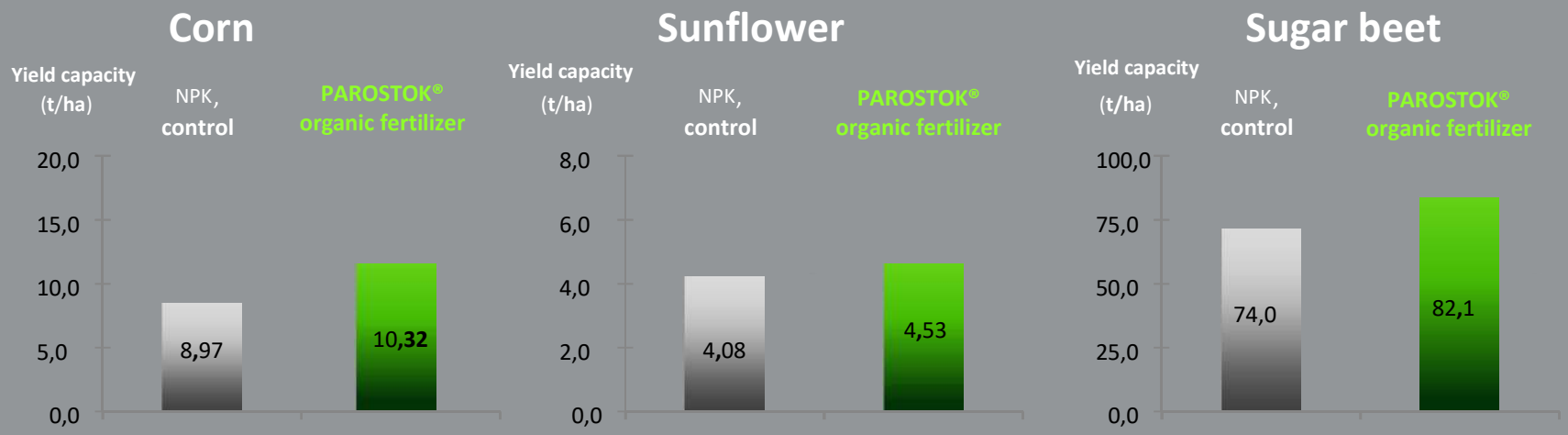
Potatoes



Cultures	Variants	Plony		Total sugar, %	Dry matter, %	Profitability +/- to control, %
		h / ha	+/- to control, h/ha			
Potatoes	NPK, control	314,0	-	12,51	25,59	-
	PAROSTOK® organic fertilizer	398,78	+84,78	17,85	25,69	+34

Application (Loose and Liquid Formulations)

Effect of organic fertilizer PAROSTOK® on yield and profitability of cultivation of corn, sunflower, sugar beet as a result of industrial use on the premises of "Agrorus." Analytical studies of soil and crop quality indicators held Ukrainian laboratory of quality and safety of agricultural products

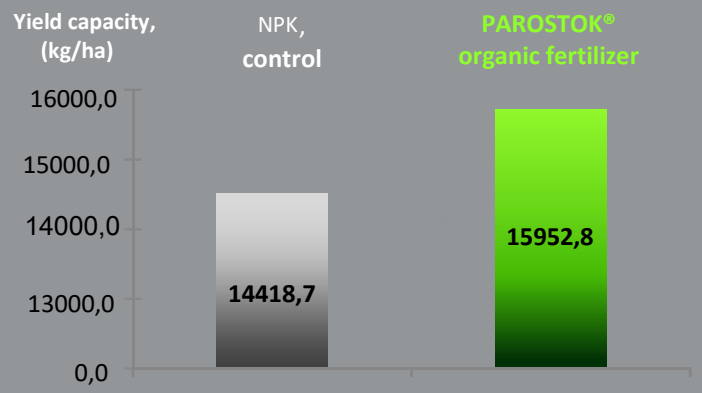


Cultures	Variants	Profitability		Profitability +/- to control, %
		h/ha	+/- to control, h/ha	
corn	NPK,control	89,7	-	-
	PAROSTOK® organic fertilizer	103,2	+10,8	+39
sunflower	NPK ,control	40,8	-	-
	PAROSTOK® organic fertilizer	45,3	+4,5	+10
sugar beet	NPK, control	740	-	-
	PAROSTOK® organic fertilizer	821	+ 81	+21

Effect of organic fertilizer Parostok®

Indoors on productivity, quality and profitability
parthenocarpic cucumber cultivation type type Goldcrest F1
as a result of industrial use on the premises of "Tehnova".
Analytical studies of soil and crop quality indicators held Ukrainian
Laboratory Quality and Safety of Agricultural Products

Cucumber



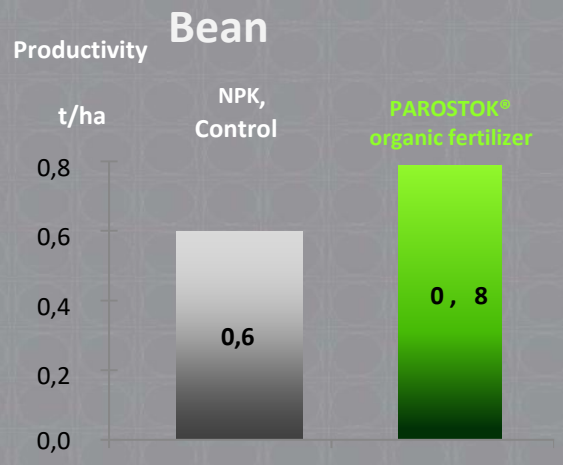
Cultures	Variants	Profitability		Total sugar, %	Dry matter, %	Profitability +/- to control %
		kg/ha	+/- to control, kg/ha			
Parthenocarpic cucumber type	NPK,control	14418,7	-	0,9	3,8	-
	PAROSTOK® organic fertilizer	15952,8	+1534,1	1,32	4,0	+77

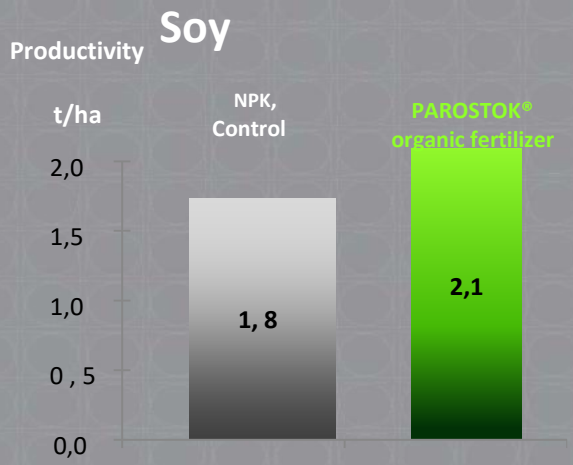
Application, (loose preparative form)

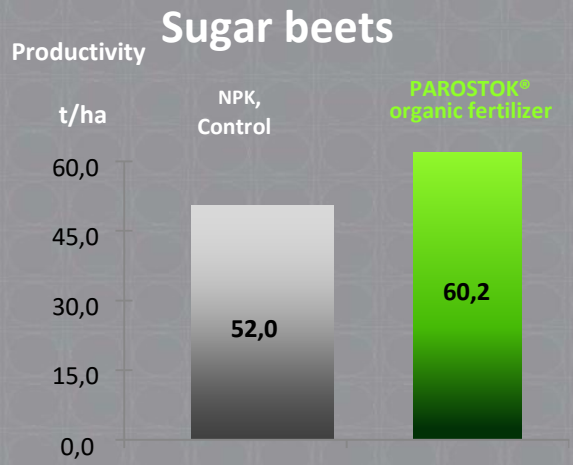
The effect of organic fertilizer PAROSTOK® on yield and economic efficiency of cultivation beans, soybeans, sugar beets

based on the results of industrial applications in the areas of production Corporation "Svarog West Group" - the Leader of the agrarian market in Ukraine (http://forbes.net.ua/company/2444)

Analytical studies of the soil and qualitative indicators of harvest provided by the Ukrainian laboratory of quality and safety of agricultural products, NSC "Institute of Agriculture of the NAAS of Ukraine"







Crops	Variants	Yields		Cost Effective +/- control,%
		h / ha	+/- control, h/ha	
Bean	NPK, Control	0,6	-	-
	PAROSTOK® organic fertilizer	0,8	+0,2	+33,3
Soy	NPK, Control	1,8	-	-
	PAROSTOK® organic fertilizer	2,1	+0,3	+16,7
Sugar beets	NPK, Control	52	-	-
	PAROSTOK® organic fertilizer	60,2	+8,2	+15,8

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