MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION
Federal State-Financed Scientific Institution
Russian National Research Institute of Agrochemistry named after D.N. Pryanishnikov

Confidential

Approved by:
Director of the Federal State-Financed Scientific Institution
Russian National Research Institute of Agrochemistry
S.I. Shkurkin
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dated 25 февраля 2025

EXPERT OPINION

on the materials provided by Kaliningradskiy Kaliy LLC on establishing biological efficiency and regulations for the use of Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N

Moscow 2025

1. Product (trade mark).

Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N.

2. Applicant (name, registered address, telephone, fax, e-mail).

Kaliningradskiy Kaliy Limited Liability Company (Kaliningradskiy Kaliy LLC), 238313 Russia, Kaliningrad region, Gurevsky district, Ushakovo settlement, Shkolnaya street, 13, tel.: +79632953051, E-mail: kaliningradskiy.kaliy@mail.ru

3. Manufacturer (name, registered address, telephone, fax, e-mail).

Kaliningradskiy Kaliy Limited Liability Company (Kaliningradskiy Kaliy LLC), 238313 Russia, Kaliningrad region, Gurevsky district, Ushakovo settlement, Shkolnaya street, 13, tel.: +79632953051, E-mail: kaliningradskiy.kaliy@mail.ru

4. Purpose of biological examination (state registration (initial), state registration (update), state registration (application expansion)).

State registration (initial).

Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-2-humate enriched with K, N provided for state registration by Kaliningradskiy Kaliy LLC as an agrochemical substance previously not registered in the "State Catalog of Pesticides and Agrochemicals Approved for Use in the Russian Federation".

5. Submitted documents.

– Information about the agrochemical product;

– Supplement No. 58 to the 2020-2025 Plan for registration Tests of Pesticides and Agrochemicals (issued by the Department of Plant-Growing,

Chemicalization and Plant Protection on October 24, 2023);

– TU 20.15.80-002-73465250-2023;

– Chemical Safety Data Sheet (SDS) (draft document);

– Production Process Flow Chart;

– Information on the product composition;

– Test reports Nos. 200-205 dated December 12, 2023 (Testing laboratory of soils, agrochemicals, feed and agricultural products of the Federal State-Financed Institution — Kaliningrad Agrochemical Service Center);

– Test report No. 23RHA/KK-01 dated April 26, 2024 (Laboratory of radiology and ecological monitoring of V.G. Khlopin Radium Institute JSC);

– Record of measurement No. 24GS/KK-01-I1 dated May 20, 2024 (Laboratory of radiology and ecological monitoring of V.G. Khlopin Radium Institute JSC);

– Record of measurement No. 24GS/KK-02 dated May 20, 2024 (Laboratory of radiology and ecological monitoring of V.G. Khlopin Radium Institute JSC);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-1-humate enriched with K, N manufactured by Polifert LLC, tested on potatoes in the conditions of the Moscow region, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-1-fulvate enriched with K, N, Mg, Fe, S manufactured by Kaliningradskiy Kaliy LLC, tested on spring wheat in the conditions of the Moscow region (I zone) (Federal State-Financed Scientific Institution — Russian National Research Institute of Agrochemistry, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-2-fulvate enriched with K, N, Mg, Fe, S manufactured by Kaliningradskiy Kaliy LLC, tested on currants in the conditions of the Tambov region, Russian Federation (zone II, 2024) (Federal State-Financed

Scientific Institution — Federal Scientific Center named after I.V. Michurin, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-3-humate enriched with K, N manufactured by Kaliningradskiy Kaliy LLC, tested on beetroots in the conditions of the Moscow region, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-3-fulvate enriched with K, N, Mg, Fe, S manufactured by Kaliningradskiy Kaliy LLC, tested on sweet peppers (indoor planting) in the conditions of the Moscow region, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-3-humate enriched with K, N manufactured by Kaliningradskiy Kaliy LLC, tested on cabbages in the conditions of the Moscow region, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-2-fulvate enriched with K, N, Mg, Fe, S manufactured by Kaliningradskiy Kaliy LLC, tested on tomatoes (outdoor planting) in the conditions of the Moscow region, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-2-humate enriched with K, N manufactured by Kaliningradskiy Kaliy LLC, tested on radishes (outdoor planting) in the conditions of the Moscow region, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-1-fulvate enriched with K, N, Mg, Fe, S manufactured by Kaliningradskiy Kaliy LLC, tested on peas in the conditions of the Ryazan region, Russian Federation (zone I, 2024) (Federal State-Finannced

Educational Institution of Higher Education — Ryazan State Agrotechnological University named after P.A. Kostychev, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-2-fulvate enriched with K, N, Mg, Fe, S manufactured by Kaliningradskiy Kaliy LLC, tested on apples in the conditions of the Tambov region, Russian Federation (zone II, 2024) (Federal State-Financed Scientific Institution — Federal Scientific Center named after I.V. Michurin, 2024);

– Report on the registration test results for Agri39 humic fertilizer with peat-based microelements, brand Agri39-2-humate enriched with K, N manufactured by Kaliningradskiy Kaliy LLC, tested on sunflowers in the conditions of the Stavropol Territory, Russian Federation (zone I, 2024) (CENTER OF BIOLOGICAL EXAMINATIONS LLC, 2024);

– Guidelines on transportation, application, storage, disposal, and recycling of agrochemicals;

– Container labels.

6. Specifications.

The product is a humic acid-based fertilizer produced by alkaline and acidic extraction of humic and fulvic acids from peat, followed by the introduction of chemical compounds containing macro- and microelements into the extract.

The manufacturer claims to have used the following main raw materials for production:

– Lowland peat extracted from the Ushakovskoye deposit in the Kaliningrad region;

– Potassium hydroxide (CAS No. 1310-58-3);

– Ammonium nitrate (CAS No. 6484-52-2);

– Magnesium sulfate anhydrous (CAS No. 7487-88-9);

– Hydrochloric acid 35%, technical grade (CAS No. 7647-01-0);

– Iron(II) sulfate heptahydrate (CAS No. 7782-63-0);

– water (CAS No. 7732-18-5).

7. Content of nutrients (quality indicators).

Quality indicator	Agri39-1-fulvate enriched with K, N, Mg, Fe, S	Agri39-2-fulvate enriched with K, N, Mg, Fe, S	Agri39-3-fulvate enriched with K, N, Mg, Fe, S	Agri39-1-humate enriched with K, N	Agri39-2-humate enriched with K, N	Agri39-3-humate enriched with K, N
Min. dry matter, % w/w	18.0	20.0	20.0	18.0	20.0	20.0
Min. organic matter on natural moisture basis, % w/w	10.0	15.0	31.0	12.0	20.0	31.0
Min. content of humic acids on organic matter basis, % w/w	1.0	1.0	1.0	10.0	18.0	29.0
Min. content of fulvic acids on organic matter basis, % w/w	8.0	13.0	30.0	1.0	1.0	1.0
Min. total nitrogen (N) on the natural moisture basis, % w/w	1.0	1.0	1.0	1.0	1.0	1.0
Min. total phosphorus (P_2O_5) on the natural moisture basis, % w/w	0.05	0.05	0.05	0.05	0.05	0.05
Min. potassium (K_2O), % w/w	0.5	0.5	0.5	2.0	2.0	2.0
Min. magnesium (Mg) on natural moisture basis, % w/w	0.3	0.3	0.3	0.01	0.01	0.01
Min. sulfur (S) on natural moisture basis, % w/w	0.5	0.5	0.5	0.5	0.5	0.5
Min. iron (Fe) on natural moisture basis, % w/w	0.5	0.5	0.5	0.05	0.05	0.05
pH level	1.5-3.5	1.5-3.5	1.5-3.5	9-10	9-10	9-10
pH level of 10% aqueous solution	4.0	4.0	4.0	8.5	8.5	8.5
Density, kg/l	1.05-1.35	1.05-1.35	1.05-1.35	1.05-1.35	1.05-1.35	1.05-1.35

8. Appearance

Liquid of yellow, brown, or black color or their shades, odorless or with a weak odor.

9. Scope of Application and Purpose

The product is recommended for use as a humic acid-based fertilizer for pre-sowing (pre-planting) treatment of seeds (planting material) and for foliar application to agricultural crops and ornamental plantings on various types of soil in both indoor and outdoor planting conditions.

10. Recommended Application Rates

Recommendations for transportation, application and storage of Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-2-humate enriched with K, N including its neutralization, utilization, destruction, and disposal have been developed by Kaliningradskiy Kaliy LLC and suggest its use in agricultural production and in farming according to the recommended application rates (see Appendix 1).

– Agri39-1-fulvate enriched with K, N, Mg, Fe, S:

– *grain crops, pulse crops, industrial and forage crops:* 5 l/t for pre-sowing seed treatment, solution application rate: 10-20 l/t;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.5 l/kg to soak seeds before sowing for 24 hours, solution application rate: 10 l/kg;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.5 l/10 l of water to soak planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, and to soak cuttings, roots, or saplings for 14-24 hours;

– *grain crops, pulse crops, industrial crops, fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* 0.15-0.3 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 200-400 l/ha;

– *fruit and berries, grapes:* 1.4-3 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 600-1000 l/ha;

– *vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* 1-2 ml/100 l of nutrient solution for root feeding (in addition to nutrient solution) during the growing season;

– *industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers, ornamental plants:* 2.5-5 l/ha for root feeding during the growing season (application with irrigation water), the solution application rate depends on the irrigation scheme.

– ***Agri39-2-fulvate enriched with K, N, Mg, Fe, S:***

– *grain crops, pulse crops, industrial and forage crops:* 3.5 l/t for pre-sowing seed treatment, solution application rate: 10-20 l/t;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.35 l/kg to soak seeds before sowing for 24 hours, solution application rate: 10 l/kg;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.5 ml/10 l of water to soak planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, and to soak cuttings, roots, or saplings for 14-24 hours;

– *grain crops, pulse crops, industrial crops, fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* 0.14-0.2 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 200-400 l/ha;

– *fruit and berries, grapes:* 1-2 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 600-1000 l/ha;

– *vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* 1.75-3.5 ml/100 l of nutrient solution for root feeding (in addition to nutrient solution) during the growing season;

– *industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers, ornamental plants:* 1.75-3.5 l/ha for root feeding during the growing season (application with irrigation water), the solution application rate depends on the irrigation scheme.

– ***Agri39-3-fulvate enriched with K, N, Mg, Fe, S:***

– *grain crops, pulse crops, industrial and forage crops:* 2.5 l/t for pre-sowing seed treatment, solution application rate: 10-20 l/t;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.25 l/kg to soak seeds before sowing for 24 hours, solution application rate: 10 l/kg;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.25 l/10 l of water to soak planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, and to soak cuttings, roots, or saplings for 14-24 hours;

– *grain crops, pulse crops, industrial crops, fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* 0.1-0.15 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 200-400 l/ha;

– *fruit and berries, grapes:* 0.7-1.5 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 600-1000 l/ha;

– *vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* 0.5-1 ml/100 l of nutrient solution for root feeding (in addition to nutrient solution) during the growing season;

– *industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers, ornamental plants:* 1.25-2.5 l/ha for root feeding during the growing season (application with irrigation water), the solution application rate depends on the irrigation schedule.

– Agri39-1-humate enriched with K, N:

– *grain crops, pulse crops, industrial and forage crops:* 5 l/t for pre-sowing seed treatment, solution application rate: 10-20 l/t;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.5 l/kg to soak seeds before sowing for 24 hours, solution application rate: 10 l/kg;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.5 l/10 l of water to soak planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, and to soak cuttings, roots, or saplings for 14-24 hours;

– *grain crops, pulse crops, industrial crops, fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* 0.2-0.3 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 200-400 l/ha;

– *fruit and berries, grapes:* 1.6-2.5 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 600-1000 l/ha;

– *vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* 1-2 ml/100 l of nutrient solution for root feeding (in addition to nutrient solution) during the growing season;

– *industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers, ornamental plants:* 3-5 l/ha for root feeding during the growing season (application with irrigation water), the solution application rate depends on the irrigation schedule.

– Agri39-2-humate enriched with K, N:

– *grain crops, pulse crops, industrial and forage crops:* 3.5 l/t for pre-sowing seed treatment, solution application rate: 10-20 l/t;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.35 l/kg to soak seeds before sowing for 24 hours, solution application rate: 10 l/kg;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.35 l/10 l of water to soak planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, and to soak cuttings, roots, or saplings for 14-24 hours;

– *grain crops, pulse crops, industrial crops, fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* 0.14-0.2 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 200-400 l/ha;

– *fruit and berries, grapes:* 1.1-1.4 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 600-1000 l/ha;

– *vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* 1.75-3.5 ml/100 l of nutrient solution for root feeding (in addition to nutrient solution) during the growing season;

– *industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers, ornamental plants:* 1.75-3.5 l/ha for root feeding during the growing season (application with irrigation water), the solution application rate depends on the irrigation scheme.

– Agri39-3-humate enriched with K, N

– *grain crops, pulse crops, industrial and forage crops:* 2.5 l/t for pre-sowing seed treatment, solution application rate: 10-20 l/t;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.25 l/kg to soak seeds before sowing for 24 hours, solution application rate: 10 l/kg;

– *vegetables, flowers, ornamental plants, fruit and berries:* 0.25 l/10 l of water to soak planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, and to soak cuttings, roots, or saplings for 14-24 hours;

– *grain crops, pulse crops, industrial crops, fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* 0.1-0.15 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 200-400 l/ha;

– *fruit and berries, grapes:* 0.08-1.3 l/ha for foliar feeding 2-6 times during the growing season, solution application rate: 600-1000 l/ha;

– *vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* 0.5-1 ml/100 l of nutrient solution for root feeding (in addition to nutrient solution) during the growing season;

– *industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers, ornamental plants:* 1.5-2.5 l/ha for root feeding during the growing season (application with irrigation water), the solution application rate depends on the irrigation scheme.

It is recommended to adjust the suitable application scheme, application frequency and rate in each specific case depending on the crop type, its cultivation techniques, planned yield, leaf diagnostics analysis and soil parameters.

Recommended application rates for Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N *in farming and household plots:*

– *vegetables, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, use 25-50 ml/l of water to soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.

– *vegetables, potatoes, flowers and ornamental plants, strawberries:* 25-50 ml/10 l of water for foliar feeding 2-6 times at intervals of 10-15 days during the growing season, solution application rate: 1-1.5 l/10 m^2;

– *fruit and berries, ornamental plants, grapes:* 25-50 ml/10 l of water for foliar feeding 2-6 times with an interval of 10-15 days during the growing season, solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l/plant for shrubs; 7-10 l/plant for trees;

– *vegetables, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* 25-50 ml/10 l of water for soil application 1-6 times at intervals of 10-15 days during the growing season, solution application rate: 1-4-10 l/10 m^2;

11. Application Technique

The application technique for Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N involves the use of standard and special agricultural equipment and includes safety measures (including the use of personal protective equipment).

In agricultural production, we recommend to use seed mixer models PSSh-5, PS-10A, PS-10AM, PS-22, PS-20K-4, PS-20D, PS-30, Mobitoks-super, KPS-10, KPS-20, KPS-40, PSK-15, PUM-30, UMOP-30, UMOP-20, PK-20-02 Super, PS-5M, PS-5, PS-20 Maestro, PNSh-3 Farmer, PKM-140, PKS-20 for pre-sowing treatment of seeds of cereals, pulse plants, industrial and fodder crops. Besides, the seeds can be sprayed with the solution and dried well. Manual treatment: scatter the seeds on the waterproof material (e.g. tarpaulin),

spray them with an aqueous solution of the product, mix with wooden shovels until they are evenly moistened.

Seeds and planting material of vegetables, flowers, ornamental plants, fruit and berries must be soaked in an aqueous solution of the product before sowing (planting). Use glass, enamel-lined, polyethylene containers, or containers made of stainless steel.

For foliar feeding, it is recommended to use any available commercial-grade sprayers such as OPM-2001, OPSH-2000, OPU 1/18-200, OMP-601, OP-2.0/18, OPG-2500-18-05F, OPG-2500-24-05F, SLV-2000 R, OPV-1200, OP-2000, OVH-28, OZG-400, OP Zarya, SZM Tuman-2, OPM-2001, OPSH-2000, OPU 1/18-200, OPG-2500-18-05F, John Deere 4630, John Deere 4730, John Deere 4830, John Deere 4940, RoGator1936, HardiAlpha4100 Twin Force, DT2000 H Plus Highlander, US 1205, UR 3000, Demarol - 400, Demarol – 600, OSP1500/SAD TAJFUN, OSP 2000/SAD TAJFUN, UNIA SLEZA 1000, TecnomaVectis, RALL -2000C, Lusna, AGP 500 EN Agromehanika, etc., as well as low-volume knapsack sprayers.

We recommend to use various irrigation systems (drip irrigation systems or sprinkler systems such as DF-120 DNEPR, DDN-70), drum sprinkler systems and hose systems, and machine equipment such as PZHU-4000, PZHU-5000, PZHU-5000-10 for soil application.

To prepare a solution, pour some water into the tank of the seed mixer, sprayer, or irrigation system, approximately to 2/3 of the volume, start the mixing process, add the required amount of the product, add water to the required volume, mix the solution well, and treat the seeds or apply it to the plants.

Foliar feeding is not recommended in hot sunny weather.

The product can be used independently, as well as with single-component and complex mineral macro- and microfertilizers, after checking the components of the tank mixture for compatibility.

In private farms, use glass, enamel-lined, polyethylene or stainless steel containers containers to treat and soak the seeds and planting material of vegetables,

fruit, berries, flowers, ornamental plants. Spraying techniques followed by proper drying of the seeds are also quite effective. It is recommended to fertilize plants using any spraying/watering equipment, such as drip irrigation systems, watering cans, sprayers, atomizers or other hand tools.

To prepare a product solution, pour water into a watering can (spray tank, etc.) to approximately 2/3 of its volume, add the required amount of the product, top up with water to the calculated volume, mix the solution well and apply it in accordance with your application plan.

Foliar feeding is not recommended in hot sunny weather and during the flowering period.

The most effective technique is a combination of spraying and watering, especially in the early stages of plant development. To prevent the product from washing into the lower soil layers, apply it after the main watering.

12. Phytotoxicity

The product is not phytotoxic if used at recommended doses.

13. Effectiveness

Humic fertilizers have a fairly high biological activity, promote more intensive development of the root system of plants, accelerate their growth and development, and increase their yields. The effectiveness of humic fertilizers has been studied in long-term agrochemical tests on agricultural crops and ornamental plants. The test results have proved the positive effect of such fertilizers on increasing crop yields and improving the product quality.

Registration tests of the Agri39-1-fulvate enriched with K, N, Mg, Fe, S prove that the use of the product in the conditions of the Moscow region for presowing seed treatment and foliar feeding of spring wheat of the Daria variety contributed to the crop structure and quality improvement. The number of productive stems increased by 8.1-10.0%, the length of the ear – by 5.2-8.6%, the number of spikelets in the ear – by 8.6-13.3%, the grain content of the ear – by 3.0-5.3% compared to the control samples. The yield of spring wheat increased by 0.31-0.53 t/ha (8.6-15.0%), while the yield in the control group was 3.61 t/ha. The protein content in grain increased by 0.4-0.5%. The best results were obtained when using

the agrochemical for pre-sowing seed treatment at a dose of 5 l/t + foliar feeding at a dose of 0.3 l/ha) (Federal State Budgetary Scientific Institution — Russian National Research Institute of Agrochemistry, 2024).

In the conditions of the Stavropol Territory, foliar feeding of the Kubansky 930 sunflower hybrid was used with Agri39-2-humate enriched with K, N. Eventually, the diameter of the basket increased by 8.8-16.9%, the weight of the basket increased by 5.0-8.9%, the weight of seeds in the basket – by 8.7-15.9%, the weight of 1000 seeds – by 19.3-27.8%. The increase in seed yield was 0.6-1.0 t/ha or 15.0-25.0%, while the yield in the control group was about 4.0 t/ha. The application of the product had a positive effect on the crop quality: the oil content in the seeds increased by 0.1-0.7%. The highest effectiveness was observed when using the product at a dose of 0.2 l/ha (Center of Biological Examinations LLC, 2024).

In the conditions of the Ryazan region, Agri39-1-fulvate enriched with K, N, Mg, Fe, S was applied to the peas (Rocket variety) using foliar feeding technique, which increased the crop yield significantly. The plant height exceeded the control indicator by 6.5-13.7%, the number of peas per plant – by 4.8-8.1%, and the number of seeds in a bean – by 8.2-14.3%. The increase in the seed yield was 2.8-4.0 c/ha (9.9-14.1%), while the yield in the control group was 28.3 c/ha. The protein content in the seeds increased by 0.4-0.7%. The most effective application rate of the product was 0.3 l/ha (Federal State-Finannced Educational Institution of Higher Education — Ryazan State Agrotechnological University named after P.A. Kostychev, 2024).

In the conditions of the Moscow region, Agri39-1-humate enriched with K, N was applied to potatoes (Utro variety). The treatment of planting tubers combined with foliar feeding contributed to the quality improvement and increased the crop yield. The number of tubers per bush increased by 3.7-7.4%, while the average tuber weight increased by 2.9-4.5%. The potato yield increased by 0.9-2.3 t/ha (5.5-14.1%), while the yield in the control group was 16.3 t/ha. The maximum yield increase was obtained with the application rate of 5.0 l/t (tubers) + 0.3 l/ha (plants). The application of the product contributed to the increase in the biochemical composition of potato tubers compared to the control samples: the mass frac-

tion of dry matter increased by 0.4-0.8%, starch content increased by 0.2-0.4%, and vitamin C – by 0.1-0.3%. The nitrate content did not exceed the MAC in all experiments. The tasting assessment score was 5 points in the experimental group (4 points in the control samples) (Center of Biological Examinations LLC, 2024).

In the conditions of the Moscow region, Agri39-3-humate enriched with K, N provided by KALININGRADSKIY KALIY LLC was used for foliar feeding of beetroots (Bordo 237 variety). As a result, the significant improvement of the yield structure indicators was observed. As the fertilizer dose increased, the root length increased by 9.2-13.9%, the root diameter increased by 3.9-7.8%, and the weight of the root crop – by 6.8-8.8%. The yield of commercial-grade root crops increased by 15.7-17.1 t/ha (36.9-40.2%), while the yield in the control group was 42.5 t/ha. The sugar content in the roots increased by 0.4-0.8%, while the content of vitamin C increased by 0.5-0.6 mg/100 g. The content of nitrate nitrogen never exceeded the MAC values (1,400 mg/kg wet weight). The best results were obtained with the application rate of 0.15 l/ha (Center of Biological Examinations LLC, 2024).

The use of Agri39-3-fulvate enriched with K, N, Mg, Fe, S for root feeding of sweet pepper (Atlant variety) in indoor planting conditions of the Moscow region contributed to the improvement of the crop structure indicators. The average fruit length increased by 29.6-64.2%, the fruit diameter increased by 8.9-19.7% and its weight — by 10.0-14.6%. The pepper yield increased by 4.8-9.8 t/ha (2.8-46.5%), while the control group yield was 21.1 t/ha. The greatest increase in yield was obtained at the application rate of 2.5 l/ha. The use of Agri39-3-fulvate enriched with K, N, Mg, Fe, S had a positive effect on the biochemical composition of sweet pepper fruits in comparison with the control samples: the content of vitamin C increased by 4.4-17.9%, while the sugar content increased by 0.9-1.4%. The nitrate content was within the MAC limits in all variants of application. The tasting assessment score of all tested fruits was 5 points, while the control samples had only 4 points (Center of Biological Examinations LLC, 2024).

In the conditions of the Moscow region, Agri39-3-humate enriched with K, N was applied to the soil under the white cabbages (Semko Yubileiny F1 hybrid),

which resulted in a larger yield and increased the quality indicators. The height of the cabbage head increased by 1.4-1.7%, its diameter increased by 7.3-15.6%, and its weight — by 8.3-17.2%. Cabbage yield increased by 96-17.21 t/ha (15.5-33.5%). The greatest increase in yield was observed at the application rate of 2.5 l/ha. Moreover, the soil application of the product contributed to an increase in dry matter in tested cabbages by 0.1-0.3%, sugars —by 0.3-0.6%, and vitamin C — by 2.5-4.6 mg%. The content of nitrate nitrogen in all experimental variants never exceeded the MAC (Center of Biological Examinations LLC, 2024).

In the conditions of the Moscow region, Agri39-2-fulvate enriched with K, N, Mg, Fe, S was used for foliar feeding of tomatoes (Big Beef F1 hybrid) in the outdoor planting conditions, which had a significant positive effect on the product quality and yield. The fruit size increased by 23.1-34.6%, while its weight increased by 8.4-14.8%, and the number of fruits per plant — by 16.7-21.8%. The yield increase was 5.8-6.2 kg/m^2 (32.6-34.8%), while the yield in the control group was 17.8 kg/m^2. The content of vitamin C in tomato fruits increased by 1.2-2.4 % and the sugar content — by 0.7-1.0%. The content of nitrate nitrogen in fruits did not exceed the MAC in all tests (150 mg/kg). The highest results were achieved at the application rate of 0.2 l/ha (Center of Biological Examinations LLC, 2024).

In the outdoor planting conditions of the Moscow region, Agri39-2-humate enriched with K, N was applied to radishes (Millom F1 variety), using the soil dressing technique, which resulted in the significant increase of the product quality and yield. The root crop diameter increased by 16.7-36.7%, and the average root crop weight increased by 19.3-24.8%. The radish yield exceeded the control indicator, which is 4.3 kg/m^2, by 0.7-1.7 kg/m^2 (16.3-39.5%). The content of vitamin C increased by 1.7-4.3 mg/100 g in the roots. The highest results were achieved at the application rate of 3.5 l/ha. The content of nitrate nitrogen in all experimental variants never exceeded the MAC (1500 mg/kg) (Center of Biological Examinations LLC, 2024).

In the conditions of the Tambov region, Agri39-2-fulvate enriched with K, N, Mg, Fe, S was applied to black currants (Tamerlan variety) using the soil dressing technique, which had a significant positive effect on the product quality and yield.

The number of clusters on the plant and the number of berries in the cluster increased insignificantly if compared to the control samples. However, the average berry weight exceeded the control indicator by 30.0-40.0% and the average cluster weight — by 23.8-50%. The currant yield increased by 0.4-1.4 t/ha (12.1-42.4%), while the control group yield remained about 3.3 t/ha. The most significant yield increase was obtained at the product application rate of 2.5 l/ha and 3.5 l/ha. Moreover, the berries had better quality indicators with such application rate. The content of vitamin C in berries was higher by 7-14 mg/100 g compared to the control samples, and the sugar content increased by 0.2-0.6% (Federal State-Financed Scientific Institution — Federal Scientific Center named after I.V. Michurin, 2024).

In the conditions of the Tambov region, Agri39-2-fulvate enriched with K, N, Mg, Fe, S was used for foliar feeding of apple trees (Vishnevaya variety) with a significant positive effect on the vegetative and generative productivity of trees. The average growth of annual shoots in the experimental group increased by 1.8-49.9% compared to the control samples, while the total growth increased by 2.2-50.3%. The number of fruits on the tested trees did not exceed the control indicator, but the average fruit weight increased by 15.0-23.7%. The fruit yield increased by 0.3-0.6 t/ha (7.5-15.0%), while the yield in the control group was 4.0 t/ha. The biological and chemical parameters of the fruits did not change. The most significant effect was obtained at the product application rate of 2.5 l/ha (Federal State-Financed Scientific Institution — Federal Scientific Center named after I.V. Michurin, 2024).

The experts also took into account the results of using products with similar nutrient ratios and state of aggregation, included in the State Catalog of Pesticides and Agrochemicals Permitted for Use in the Russian Federation. E.g., they examined liquid humic fertilizer Peter Peat — Zhivaya Sila (state reg. No. 393-18-2412-1) manufactured by PETER PEAT LLC, humic fertilizer ROST (state reg. No. 556-18-2288-1), manufactured by RostProduktAgro LLC; and Gumostat (state reg. No. 891-18-4247-1)manufactured by a private proprietor A. A. Krasnoshchekov; peat-based humic fertilizer Rostodar: A - liquid, B - gel (state reg. No. 728-18-3208-1) manufactured by ROSTODAR LLC; humic peat soil fertility regulator Gumogel (state reg. No. 719-18-3196-1) manufactured by ORGANIC FERTILIZERS LLC; Liquid complex peat-based humic fertilize First Aid series, brands:

Universal, For Cacti and Succulents, For Palms, For Bulbous Flowers, For Strawberries, For Indoor Flowers, For Currants, For Seedlings, For Conifers, For Ornamental Foliage Plants (state reg. No. 722-18-1533-1) manufactured by North-West Peat Company LLC; liquid peat-based humic fertilizer Gumavit (state reg. No. 721 (723) -18-3200-1) manufactured by RADIOTEKHNIKA LLC, SANTEL LLC; ZSS (ZSB)-U (state reg. No. 507-18-2006-1) manufactured a private proprietor Lidiya Venediktovna Dyleva; Geoton (state reg. No. 458-18-1632-1) manufactured by NPP AGROEKOTEKH LLC; Organic liquid humic fertilizer GUMAT Platoniy (state reg. No. 443-18-1520-1) manufactured by KUBAN-AGRO-HUMATE LLC, etc.

14. Expert Opinion

On biological efficiency and regulations for the product usage: Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N provided by Kaliningradskiy Kaliy LLC.

The biological efficiency of Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N was assessed on the basis of the registration test results and information on agrochemicals that have a similar composition and properties, published in scientific, technical and reference literature. The applicant has developed recommendations on the product application rates, timing and techniques both for agricultural production facilities and private farms, taking into account the biological characteristics of the cultivated crops. The authors recommend to use standard and special technical equipment for handling aquatic media. They also established personnel safety measures (including the use of personal protective equipment).

We recommend to register Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N manufactured by Kaliningradskiy Kaliy LLC as a humic fertilizer for use in agricultural production **and** in **personal farms** for a period of 10 years.

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Appendix 1

to the Expert Opinion of the Federal State-Financed Scientific Institution — Russian Research Institute of Agrochemistry named after D.N. Pryanishnikov on establishing the biological efficiency and regulations for the use of **Agri39 Humic Fertilizer with peat-based microelements, brands: Agri39-1-fulvate enriched with K, N, Mg, Fe, S; Agri39-2-fulvate enriched with K, N, Mg, Fe, S; Agri39-3-fulvate enriched with K, N, Mg, Fe, S; Agri39-1-humate enriched with K, N; Agri39-2-humate enriched with K, N; Agri39-3-humate enriched with K, N (Kaliningradskiy Kaliy)**

Recommended Application Rates

A. Application in agriculture

No.	Brand	Application rate	Crops, time period, useful tips
1	2	3	4
1	Agri39-1-fulvate enriched with K, N, Mg, Fe, S	5 l/t Solution application rate: 10-20 l/t	*Grain crops, pulse crops, industrial and fodder crops:* pre-sowing seed treatment
		0.5 l/kg Solution application rate: 10 l/kg	*Vegetables, flowers, ornamental plants, fruit and berries:* pre-sowing seed soaking for 24 hours
		0.5 l/10 l of water	*Vegetables, flowers, ornamental plants, fruit and berries:* soaking of planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, soaking of cuttings, roots, or saplings for 14-24 hours;
		0.15-0.3 l/ha Solution application rate: 200-400 l/ha	*Grain crops, pulse crops, industrial and fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* foliar feeding 2-6 times the growing season
		1.4-3 l/ha Solution application rate: 600-1,000 l/ha	*Fruit and berries, grapes:* foliar feeding 2-6 times during the growing season

Continued

1	2	3	4
		1-2 ml/100 l of nutrient solution	*Vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* soil application (the product must be added to the nutrient solution) during the growing season
		2.5-5 l/ha Solution application rate depends on the watering schedule.	*Industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers and ornamental plants:* soil application with irrigation water during the growing season
2	Agri39-2-fulvate enriched with K, N, Mg, Fe, S	3.5 l/t Solution application rate: 10-20 l/t	*Grain crops, pulse crops, industrial and fodder crops:* pre-sowing seed treatment
		0.35 l/kg Solution application rate: 10 l/kg	*Vegetables, flowers, ornamental plants, fruit and berries:* pre-sowing seed soaking for 24 hours
		0.5 ml/10 l of water	*Vegetables, flowers, ornamental plants, fruit and berries:* soaking of planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, soaking of cuttings, roots, or saplings for 14-24 hours;
		0.14-0.2 l/ha Solution application rate: 200-400 l/ha	*Grain crops, pulse crops, industrial and fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* foliar feeding 2-6 times the growing season
		1-2 l/ha Solution application rate: 600-1,000 l/ha	*Fruit and berries, grapes:* foliar feeding 2-6 times during the growing season

Continued

1	2	3	4
		0.7-1.4 ml/100 l of nutrient solution	*Vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* soil application (the product must be added to the nutrient solution) during the growing season
		1.75-3.5 l/ha Solution application rate depends on the watering schedule.	*Industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers and ornamental plants:* soil application with irrigation water during the growing season
3	Agri39-3-fulvate enriched with K, N, Mg, Fe, S	2.5 l/t Solution application rate: 10-20 l/t	*Grain crops, pulse crops, industrial and fodder crops:* pre-sowing seed treatment
		0.25 l/kg Solution application rate: 10 l/kg	*Vegetables, flowers, ornamental plants, fruit and berries:* pre-sowing seed soaking for 24 hours
		0.25 l/10 l of water	*Vegetables, flowers, ornamental plants, fruit and berries:* soaking of planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, soaking of cuttings, roots, or saplings for 14-24 hours;
		0.1-0.15 l/ha Solution application rate: 200-400 l/ha	*Grain crops, pulse crops, industrial and fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* foliar feeding 2-6 times the growing season
		0.7-1.5 l/ha Solution application rate: 600-1,000 l/ha	*Fruit and berries, grapes:* foliar feeding 2-6 times during the growing season

Continued

1	2	3	4
		0.5-1 ml/100 l of nutrient solution	*Vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* soil application (the product must be added to the nutrient solution) during the growing season
		1.25-2.5 l/ha Solution application rate depends on the watering schedule.	*Industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers and ornamental plants:* soil application with irrigation water during the growing season
4	Agri39-1-humate enriched with K, N	5 l/t Solution application rate: 10-20 l/t	*Grain crops, pulse crops, industrial and fodder crops:* pre-sowing seed treatment
		0.5 l/kg Solution application rate: 10 l/kg	*Vegetables, flowers, ornamental plants, fruit and berries:* pre-sowing seed soaking for 24 hours
		0.5 l/10 l of water	*Vegetables, flowers, ornamental plants, fruit and berries:* soaking of planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, soaking of cuttings, roots, or saplings for 14-24 hours;
		0.2-0.3 l/ha Solution application rate: 200-400 l/ha	*Grain crops, pulse crops, industrial and fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* foliar feeding 2-6 times the growing season
		1.6-2.5 l/ha Solution application rate: 600-1,000 l/ha	*Fruit and berries, grapes:* foliar feeding 2-6 times during the growing season

Continued

1	2	3	4
		1-2 ml/100 l of nutrient solution	*Vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* soil application (the product must be added to the nutrient solution) during the growing season
		3-5 l/ha Solution application rate depends on the watering schedule.	*Industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers and ornamental plants:* soil application with irrigation water during the growing season
5	Agri39-2-humate enriched with K, N	3.5 l/t Solution application rate: 10-20 l/t	*Grain crops, pulse crops, industrial and fodder crops:* pre-sowing seed treatment
		0.35 l/kg Solution application rate: 10 l/kg	*Vegetables, flowers, ornamental plants, fruit and berries:* pre-sowing seed soaking for 24 hours
		0.35 l/10 l of water	*Vegetables, flowers, ornamental plants, fruit and berries:* soaking of planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, soaking of cuttings, roots, or saplings for 14-24 hours;
		0.14-0.2 l/ha Solution application rate: 200-400 l/ha	*Grain crops, pulse crops, industrial and fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* foliar feeding 2-6 times the growing season
		1.1-1.4 l/ha Solution application rate: 600-1,000 l/ha	*Fruit and berries, grapes:* foliar feeding 2-6 times during the growing season

Continued

1	2	3	4
		0.7-1.4 ml/100 l of nutrient solution	*Vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* soil application (the product must be added to the nutrient solution) during the growing season
		1.75-3.5 l/ha Solution application rate depends on the watering schedule.	*Industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers and ornamental plants:* soil application with irrigation water during the growing season
6	Agri39-3-humate enriched with K, N	2.5 l/t Solution application rate: 10-20 l/t	*Grain crops, pulse crops, industrial and fodder crops:* pre-sowing seed treatment
		0.25 l/kg Solution application rate: 10 l/kg	*Vegetables, flowers, ornamental plants, fruit and berries:* pre-sowing seed soaking for 24 hours
		0.25 l/10 l of water	*Vegetables, flowers, ornamental plants, fruit and berries:* soaking of planting material (tubers, rhizomes, bulbs, corms) for 2-4 hours, soaking of cuttings, roots, or saplings for 14-24 hours;
		0.1-0.15 l/ha Solution application rate: 200-400 l/ha	*Grain crops, pulse crops, industrial and fodder crops, vegetables, melons and gourds, flowers and ornamental plants:* foliar feeding 2-6 times the growing season
		0.08-1.3 l/ha Solution application rate: 600-1,000 l/ha	*Fruit and berries, grapes:* foliar feeding 2-6 times during the growing season

Continued

1	2	3	4
		0.5-1 ml/100 l of nutrient solution	*Vegetables, leaf vegetables, flowers, ornamental plants (hydroponic growing technique):* soil application (the product must be added to the nutrient solution) during the growing season
		1.5-2.5 l/ha Solution application rate depends on the watering schedule.	*Industrial and fodder crops, vegetables, potatoes, melons and gourds, fruit and berries, flowers and ornamental plants:* soil application with irrigation water during the growing season

B. Private farming facilities:

No.	Brand	Application rate	Crops, time period, useful tips
1	2	3	4
1	Agri39-1-fulvate enriched with K, N, Mg, Fe, S	25-50 ml/l of water	*Vegetable crops, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.
		25-50 ml/10 l of water Solution application rate: 1-1.5 l/10 m^2	*Vegetable crops, potatoes, ornamental plants, strawberries:* foliar feeding 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l per plant for shrubs; 7-10 l/plant for trees	*Fruit and berries, ornamental plants, grapes:* foliar feeding of plants 2-6 times with an interval of 10-15 days during the growing season

Continued

1	2	3	4
		25-50 ml/10 l of water Solution application rate: 4-10 l/m^2	*Vegetable crops, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* root feeding 1-6 times with an interval of 10-15 days during the growing season
2	Agri39-2-fulvate enriched with K, N, Mg, Fe, S	25-50 ml/l of water	*Vegetable crops, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.
		25-50 ml/10 l of water Solution application rate: 1-1.5 l/10 m^2	*Vegetable crops, potatoes, ornamental plants, strawberries:* foliar feeding 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l per plant for shrubs; 7-10 l/plant for trees	*Fruit and berries, ornamental plants, grapes:* foliar feeding of plants 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 4-10 l/m^2	*Vegetable crops, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* root feeding 1-6 times with an interval of 10-15 days during the growing season

Continued

1	2	3	4
3	Agri39-3-fulvate enriched with K, N, Mg, Fe, S	25-50 ml/l of water	*Vegetable crops, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.
		25-50 ml/10 l of water Solution application rate: 1-1.5 l/10 m^2	*Vegetable crops, potatoes, ornamental plants, strawberries:* foliar feeding 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l per plant for shrubs; 7-10 l/plant for trees	*Fruit and berries, ornamental plants, grapes:* foliar feeding of plants 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 4-10 l/m^2	*Vegetable crops, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* root feeding 1-6 times with an interval of 10-15 days during the growing season
4	Agri39-1-humate enriched with K, N	25-50 ml/l of water	*Vegetable crops, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.
		25-50 ml/10 l of water Solution application rate: 1-1.5 l/10 m^2	*Vegetable crops, potatoes, ornamental plants, strawberries:* foliar feeding 2-6 times with an interval of 10-15 days during the growing season

Continued

1	2	3	4
		25-50 ml/10 l of water Solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l per plant for shrubs; 7-10 l/plant for trees	*Fruit and berries, ornamental plants, grapes:* foliar feeding of plants 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 4-10 l/m^2	*Vegetable crops, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* root feeding 1-6 times with an interval of 10-15 days during the growing season
5	Agri39-2-humate enriched with K, N	25-50 ml/l of water	*Vegetable crops, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.
		25-50 ml/10 l of water Solution application rate: 1-1.5 l/10 m^2	*Vegetable crops, potatoes, ornamental plants, strawberries:* foliar feeding 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l per plant for shrubs; 7-10 l/plant for trees	*Fruit and berries, ornamental plants, grapes:* foliar feeding of plants 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 4-10 l/m^2	*Vegetable crops, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* root feeding 1-6 times with an interval of 10-15 days during the growing season

Continued

1	2	3	4
6	Agri39-3-humate enriched with K, N	25-50 ml/l of water	*Vegetable crops, potatoes, flowers and ornamental plants, fruit and berries:* before sowing, soak the seeds for 24 hours, tubers and bulbs for 2-4 hours, cuttings and roots for 14-24 hours.
		25-50 ml/10 l of water Solution application rate: 1-1.5 l/10 m^2	*Vegetable crops, potatoes, ornamental plants, strawberries:* foliar feeding 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 1.5-2 l/10 m^2 or 1.5-2 l per plant for shrubs; 7-10 l/plant for trees	*Fruit and berries, ornamental plants, grapes:* foliar feeding of plants 2-6 times with an interval of 10-15 days during the growing season
		25-50 ml/10 l of water Solution application rate: 4-10 l/m^2	*Vegetable crops, potatoes, fruit and berries, flowers and ornamental plants, grapes, strawberries:* root feeding 1-6 times with an interval of 10-15 days during the growing season

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