



FOR POULTRY
EGG DIRECTION



TASKS

Obtaining high-quality products at a low production costs providing an acceptable level of profit.

In egg poultry farming, each farmer strives to sell as many high-quality commercial eggs as possible at a low cost price for a certain productive period from the poultry stock.



CHALLENGES

For The Growing Period (0-17 Weeks)



Feed conversion

Achieve uniform growth during the period 4-16 weeks against the background of optimal development of the digestive tract



Weight gain

Gain normal weight by 4 weeks of age to ensure skeletal development



Safety

The survival rate of egg-laying chickens during the growing period should not be less than 98% of the planted number of day-old chickens



Uniformity

To produce a uniform herd with alive weight corresponding to a certain age and level of sexual maturity. Herd uniformity at 17 weeks of age >90%

CHALLENGES

For The Period Of Egg Production Of Laying Hens



Feed costs

Minimum feed costs for 10 eggs in value terms



Eggs quantity

The number of eggs per initial layer during the production period from 18 to 90 weeks is not less than 410pcs



Egg quality

Biological integrity and ecological purity



Safety

The survival rate of laying hens during the productive period (18-90weeks) should not be less than 94%.

CHALLENGES

For The Period Of Egg Production Of Laying Hens



Egg mass

Egg weight per initial laying hen during the period of productivity from 18 to 90 weeks—not less than 25.6kg



Live weight

The live weight of the laying hen should correspond to the cross recommendations during the period of 5% egg laying, peak productivity and during certain periods of egg production



Shell strength

The survival rate of laying hens during the productive period (18–90weeks) should not be less than 94%.



FACTORS AFFECTING PRODUCTIVITY

Proportional growth and development of the skeleton, internal organs, muscle mass and reproductive organs (oviduct and ovaries)

Formation of the immune system or resistance of the bird to adverse environmental factors (stress, microbes, viruses)

Reducing the immunotoxic effect of mycotoxins on the bird's body

Digestive activation





FACTORS AFFECTING PRODUCTIVITY

Regulation of the composition of intestinal microflora (reduction of the content of pathological microorganisms that form toxins and serve as competitors of normal physiological microflora)

Activation of the functional activity of the digestive organs and hormonal system

Efficient metabolism (high digestibility and assimilation of feed nutrients)

Protection of the liver from damage, strong antioxidant activity, protection of cells from lipid peroxidation and the synthesis of toxic free radicals



INTESTINAL DISORDERS

ONE OF THE MOST IMPORTANT REASONS FOR THE DECREASE IN PRODUCTIVITY OF EGG BIRDS

The digestive tract accounts for up to 70% of the body's immune responses, making it a critical player in maintaining self-regulation and the health of the bird

Long-term inflammation leads to decreased productivity of the flock, changes in feed intake, digestion, absorption and utilization of nutrients by the bird

Up to 30% of the bird's energy reserves are spent on processes occurring in the organism affected by enteritis. Losses are characterized by reduced feed consumption, low sorption capacity and weight loss. In the case of the most sensitive individuals, this can lead to death



EFFECTS OF ECO HUMATE WHEN INTRODUCED INTO THE DIET

01

Positive therapeutic effect on poultry

04

Immunomodulatory action

02

Activation of the bird's vital forces

05

Growth-promoting action

03

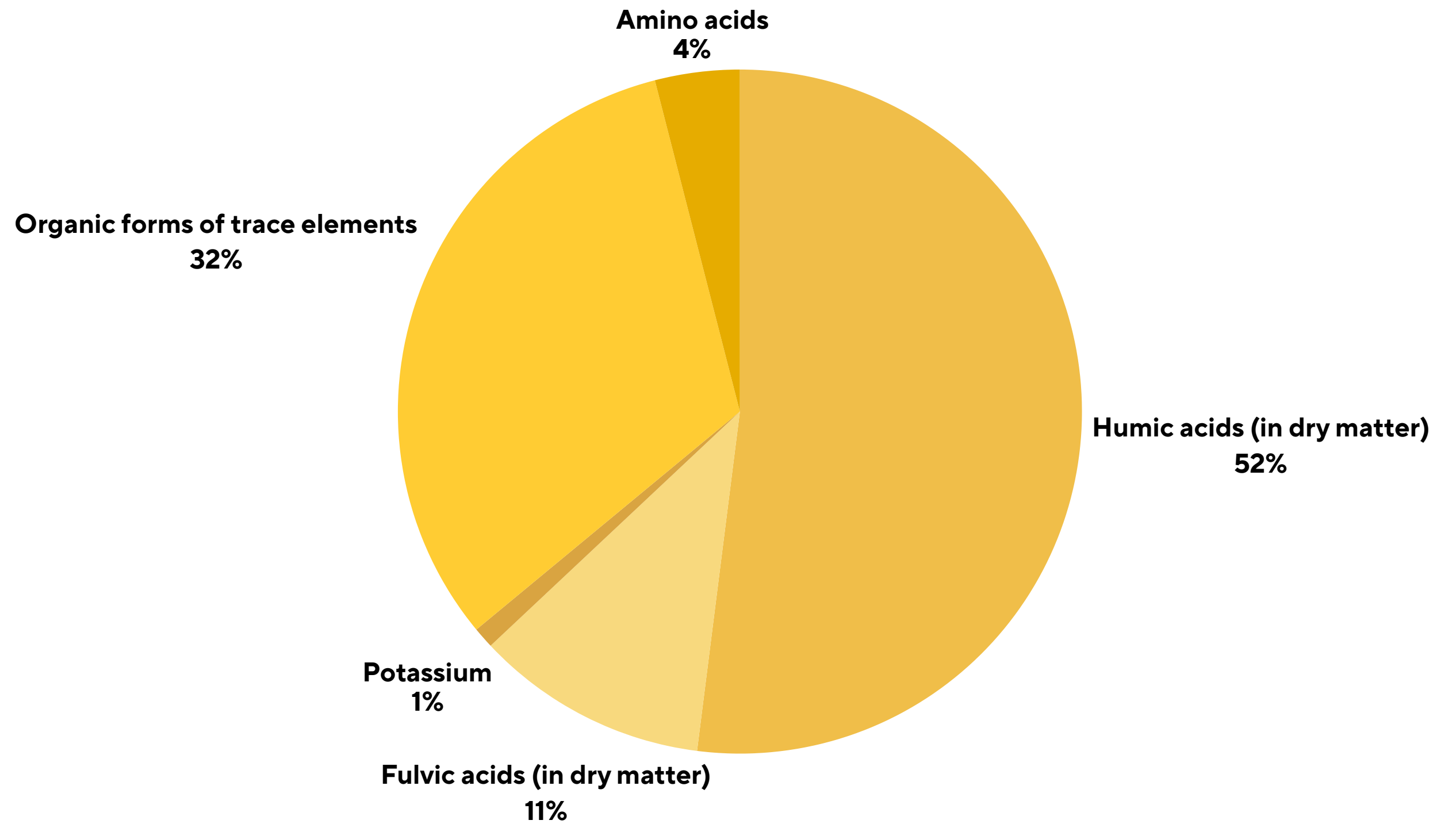
Rapid adaptation of birds to changing environmental conditions

06

Acceleration of feed fermentation due to the development of beneficial microflora in the gastrointestinal tract



**COMPOSITION OF
FEED
ADDITIVE
"ECO HUMATE"**



HUMIC AND FULVIC ACIDS



The essence of the interaction of epithelial cells with humic acids is that intact molecules of humic acids are localized on the cell walls of enterocytes and epithelial cells of the small intestinal mucosa or in the layer directly adjacent to the cytoplasmic membrane.



As a result, a semblance of an active filter appears on the surface of the cells, which binds heavy metal ions into stable chelate-type complexes, intercepts molecules of pesticides and organic xenobiotics, binds free radicals formed in the cytoplasmic membrane as a result of lipid peroxidation.



This interaction is accompanied by the release of energy, which, instead of being spent on compensating for the adverse effects of the external environment, is used by the cell itself for growth and reproduction, which ultimately leads to an increase in its competitiveness and the organism as a whole.



HUMIC AND FULVIC ACIDS

They have all the main properties of colloidal surface-active compounds:

- ✓ They have the ability to dissolve substances in soluble in water (solubilization), which ensures the transport of various substances through the circulatory system between different parts of the body
- ✓ They are produced for the “own needs” of living organisms and play an important role in biological processes
- ✓ They increase the efficiency of transporting nutrients through membrane walls



HUMIC AND FULVIC ACIDS



Cancer prevention

Being a powerful natural electrolyte they restore the electro chemical balance and the immune system of the body, increase immunity, have anti-cancer properties, and prevent the growth of cancer cells

Protection

Protect the mucous membrane of the gastrointestinal tract, prevent the formation of ulcers

Restoration

They restore damaged blood cells and body tissues

Regulation

They regulate the acid-base balance of the body

HUMIC AND FULVIC ACIDS

They contribute to:

- a)** Growth of red blood cells and transfer of oxygen through red blood cells
- b)** Removal of end products of decay from the blood, improvement of blood circulation, and reduction of blood viscosity
- c)** Metabolism of liver tissue

They support liver function and enhances its detoxification

They eliminate toxic heavy metals such as lead, mercury and chromium

They are a catalyst for the absorption of micro elements and supplement the body with chelated forms of microelements

They increase the bioavailability of amino acids



HUMIC AND FULVIC ACIDS

01

They are capable of forming a protective film on the mucous epithelium of the gastrointestinal tract, which protects against infections and toxins.

02

The macrocolloidal structure of humic acids exhibits an astringent effect, which acts as a protective agent for the mucous membrane of the gastrointestinal tract.

03

They have the ability to influence the metabolism of proteins and carbohydrates of microorganisms. This leads to the direct destruction of bacterial cells or viral particles.

04

They adsorb and remove heavy metals, nitrates, fluorides, organic phosphates, and insecticides from the body.

05

They lead to inhibition of inflammation.

06

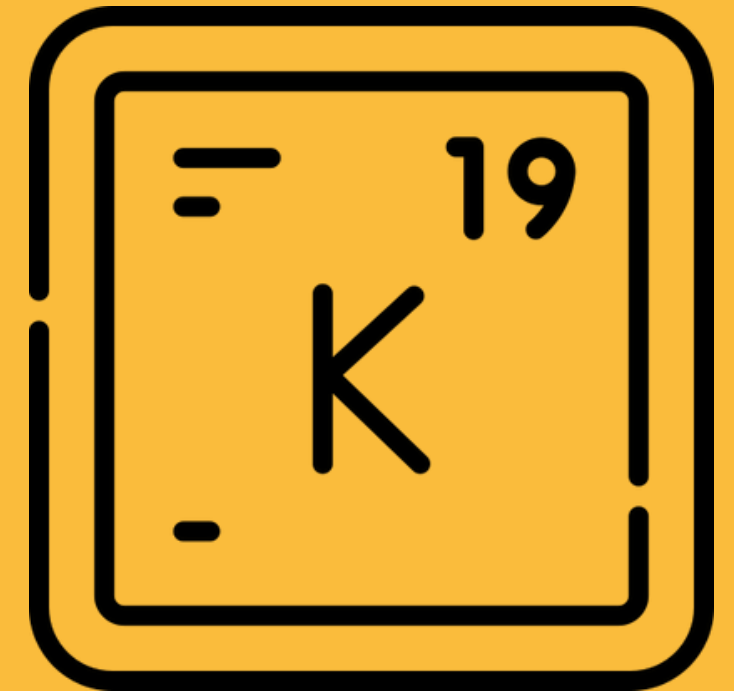
They stimulate immune system receptors in the intestinal mucosa to protect against pathogens.



potassium and sodium

Play an important role in:

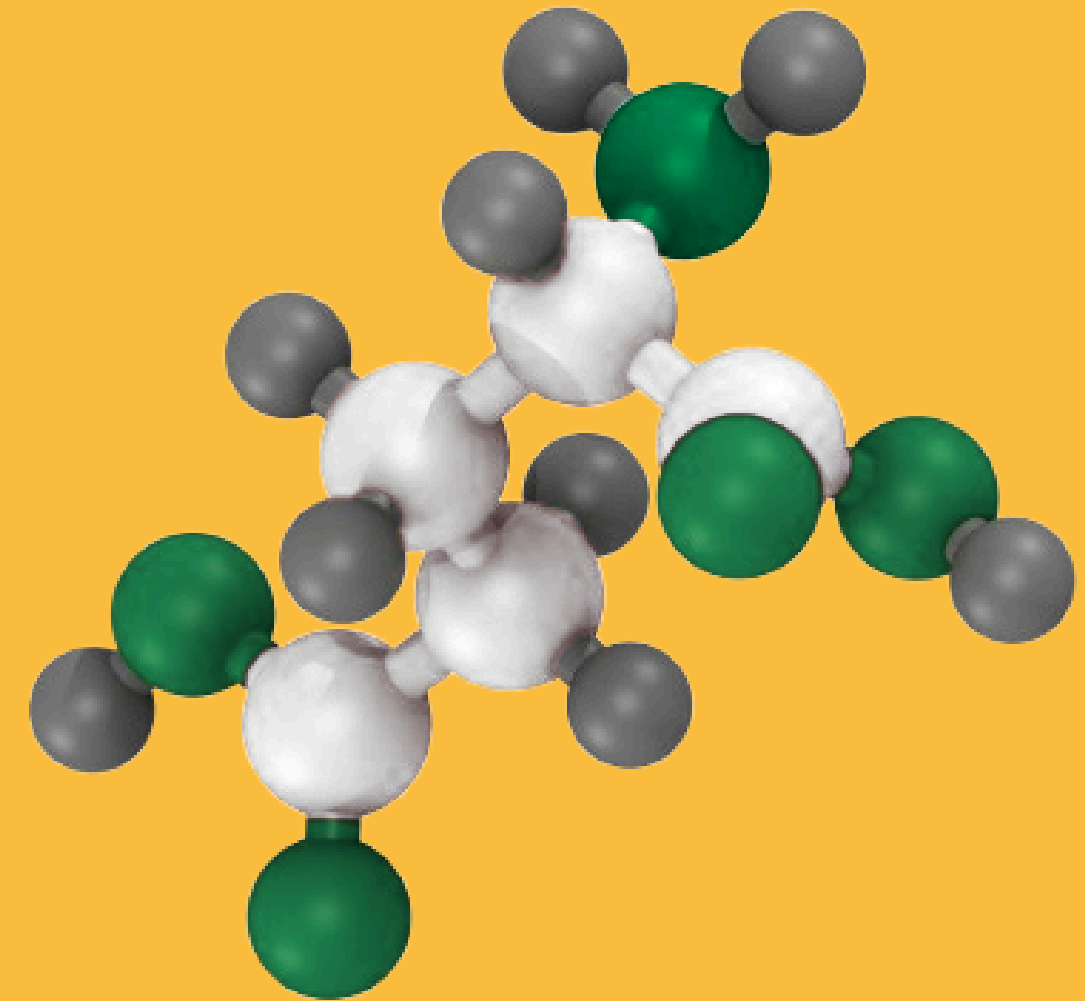
- ✓ Bone tissue
- ✓ Nervous system
- ✓ Muscle function
- ✓ Heart functions
- ✓ Electrolyte balance and metabolism



amino acids

Play an important role in:

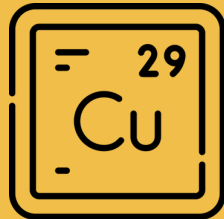
- ✓ Protein synthesis
- ✓ Hormone release
- ✓ Immune response
- ✓ Tissue nitrogen balance
- ✓ Feed conversions
- ✓ Energy production



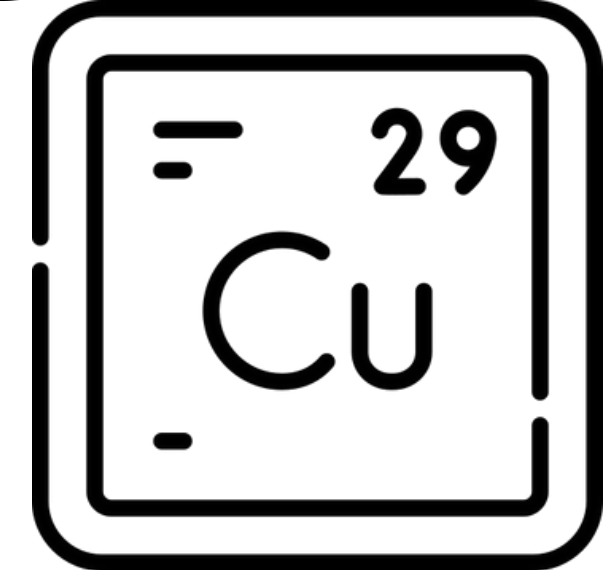
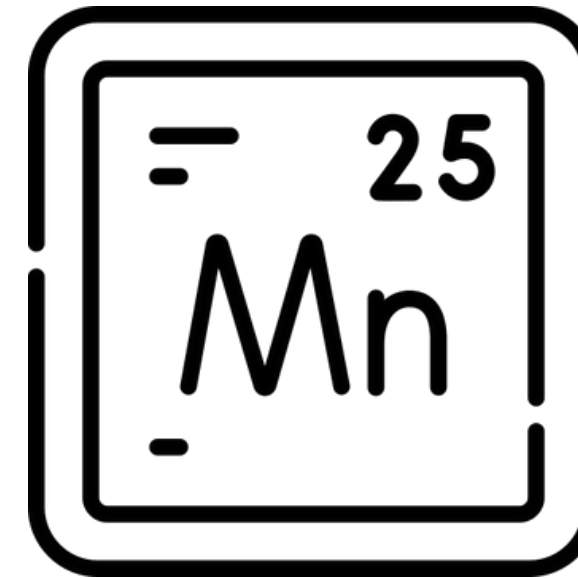
Copper and manganese



- ✓ It improves the development of strong bone tissue
- ✓ It needs for high reproduction rate
- ✓ It is a key micronutrient for achieving record egg production and incubation rates



- ✓ It improves reproduction
- ✓ It increases resistance to various diseases
- ✓ It fights diarrhea



RESULT OF USING ECO HUMATE FEED ADDITIVE

01

Poultry safety
increases

02

Egg mass
increases

03

The required live body
weight and herd
uniformity are achieved

04

Shell strength
improves

05

Egg production
increases

06

The quality of marketable
eggs improves

07

Feed conversion
decreases

08

The digestion
process activates

09

Inflammation in the
gastrointestinal tract
eliminates



RESULT OF USING ECO HUMATE FEED ADDITIVE

10

Metabolism in the body improves

11

Negative effects of mycotoxicosis are reduced

12

The bird's immune response to vaccinations develops better

13

The poultry's body's resistance to adverse environmental influences and stress increases

14

The economic efficiency of commercial egg production increases



Eco Humate is absolutely safe

for farm poultry, people and environment

Eco Humate is an environmentally friendly natural feed supplement for young egg-laying birds and laying hens

It has been found no carcinogenic, allergenic, anaphylactoid, teratogenic or embryotoxic properties

This allows the preparation to be attributed to harmless one for animals and humans. It gives significant advantages in comparison with traditional medicines



Eco Humate influence

ON THE PRODUCTIVITY OF YOUNG EGG POULTRY

Input throughout the growing period or with a break:

- 1-7 weeks and 15-17 weeks with input of Eco Humate
- 8-14 weeks without input of Eco Humate

Parameter	Value
Feed protein digestibility	2.0 - 2.5 %
Fat digestibility	1.00%
Lysine availability	0.50%
Methionine availability	1.50%
Calcium usage	3.5 - 4.0 %
Phosphorus usage	3.50%
Safety	1 - 3 %
Daily average weight gain	3 - 4 %
Feed conversion (kg feed/kg weight gain)	2 - 4 %



Eco Humate influence

ON THE PRODUCTIVITY OF YOUNG EGG POULTRY

Input depending on the situation:

- Throughout the entire productive period
- Before reaching peak productivity and in the second half of the productive period

Parameter	Value
Safety	1 - 2 %
Egg lay	2 - 3 %
Egg mass	2 - 3 %
Shell thickness	1.0 - 1.5 %
Feed conversion (kg feed/kg weight gain)	4 - 6 %





Eco Humate Input Dose

The feed additive is used for laying hens aged 8 months and older at doses of 4.0-5.0 kg per ton of feed.

ECONOMIC EFFICIENCY

Eco Humate use calculation from 45 to 72 weeks of life during the productive period of laying hens

	Safety %	Average number of poultry heads	Egg production per average laying hen, pcs.	Average egg weight, g.	Egg mass per laying hen, kg.	Eggs with damaged shell, %	Eggs sold per average laying hen, pcs.	The average egg mass sold per laying hen, kg.	Feed conversion per 10 sold eggs, kg.	Feed conversion rate for sold egg mass, kg.	Egg Production Efficiency Index
Without FA	96	980	155	63.5	9.84	3	150	9.54	1.57	2.46	125.3
With FA	97	985	(+2%) 158	(+2%) 64.8	10.24	1	156	10.14	1.51	2.32	129.1

DATA USED FOR CALCULATIONS:

Number—1000 heads
 Duration of the productive period —196 days
 Feed consumption per head.—23,5 kg
 Feed as a share of egg cost —72 %