



No
accumulation
in tissues
No waiting period
necessary

MERIDOL

Natural productivity stimulator

The natural productivity stimulators were developed by the research team of the LNB Research and Development Centre. MERIDOL stimulators are complex products containing several phytoncide groups, thanks to which they demonstrate a very wide spectrum of effect on animal organism. Phytoncides are a powerful agent modifying the composition of the microflora of the alimentary tract. Phytoncides do not inhibit the immune system but, quite the contrary, they frequently have an immune stimulating effect. Moreover, it has been found that bacteria rarely develop resistance to phytoncides.

The herbs used in our products have been used in animal fattening since ancient times. Our products contain a combination of a scientifically documented traditional herbal mix and modern forms of stabilised herbal macerates and oils with enzymes and organic acids that have a stabilising and enhancing effect on the active ingredients contained in the herbs, including natural polygalacturonates, pectins, polymer polysaccharides, phytosterines, alkaloids, bitter principles stimulating the alimentary tract, flavonoids, phenol acids, terpenes and glycosides.

Stabilised phytoncides included in the products modify the quantitative and qualitative composition of the alimentary tract microflora, inhibiting the growth and development of pathogenic microbes.

For animal feed mixes, depending on their intended application, we recommend various types of natural growth stimulators, including:

Meridol D_s for starter-type poultry feed mixes

The supplement demonstrates a systemic and local effect in the alimentary tract, increasing the reserve of energy-rich compounds (ATP, phosphocreatines, GTP, UDP), coenzymes and proenzymes that ensure correct growth and development of a young animal. The preparation enhances growth processes of cartilage and bone tissue, stimulates the endocrine system and, consequently, boosts the secretion of growth hormones.

Meridol D_G for grower and finisher poultry feed mixes

The supplement has a predominantly local effect in the alimentary tract, changing the quantitative and qualitative composition of the microflora. It stimulates effectively the processes of feed digestion and the absorption of nutrients from the intestines into the blood. Polygalacturonates, fructans, inulin and fibrous cellulose are a matrix for the growth and development of symbiotic bacteria.

animal- and
environmentally
friendly





The changing consumer market constantly poses new challenges to the food industry and, as we are increasingly able to see nowadays, to all other industry branches participating in the so-called food chain. Also, legal regulations are changed under the growing pressure of the society with a view to ensuring maximum safety of consumers of animal products.

The obligation to abolish the use of antibiotic-based feed additives inform the growth stimulators group as of 1st January 2006 has prompted a number of animal feed manufacturers to seek solutions based on natural and frequently underestimated components, including herbs, spices or vegetables. However, the great multitude of such plants calls for a thorough investigation of their properties and a knowledge of active substances, so as to be able not only to select plants that best meet our needs, but also to know in what combinations and in what form they can be effectively used. The LNB Research and Development Centre (R&D Centre) has been systematically creating, developing and improving a variety of natural products that can not only replace antibiotic-based stimulators and coccidiostats, but also be very valuable dietary supplements for all animal species.

The R&D Centre team is made up of outstanding experts in biology, medicine and herbalism. In cooperation with an experienced group of technologists specialising in the nutrition of different farm animals, it was possible to develop effective and economical products based on skilfully combined natural plant components enriched with acidifiers, vitamins, microelements and absorbents. Products thus prepared make it possible to maintain good productivity levels, keep the animals healthy and obtain high-quality animal products. In this way our Customers are sure to be fully satisfied.



The selection of an appropriate type (or concentration) of product is dependent on your feed mixing practices, technical facilities and your raw materials base.

All products included in our offer contain:

- Natural compositions of herbs and spices useful in the production of feed mixes free from antibiotic-based growth stimulators (AGS) and containing substances that are natural stabilisers of the alimentary tract microflora, enhancing the secretion of gall and digestive enzymes and stimulating the immune system;
- Phytase – an enzyme releasing phytic phosphorus from plant components;
- Enzymatic preparations including enzymes (chiefly xylanase and beta-glucanase) that break down non-starch polysaccharides contained in cereals and other plant-based ingredients.

Framework diagram of products included in the offer for turkey broilers

Product type (concentration)	Contains	Can be supplemented by
Flexi supplementary animal feed mixes and premixes 1.25%	synthetic amino acids, macroelements – sodium, microelements, vitamins and other additives, including natural components, coccidiostats, cereal enzymes, phytase, etc.	<ul style="list-style-type: none"> • chalk and feed phosphate • extracted meal • fish meal (if used) • cereal-based components
Top-Mix supplementary animal feed mixes and premixes 4%	synthetic amino acids, macroelements – sodium and phosphorus, microelements, vitamins and other additives, including natural components, coccidiostats, cereal enzymes, phytase, etc..	<ul style="list-style-type: none"> • chalk in starter and grower feeds • extracted meal • fish meal (if used) • cereal-based components



Parameters of supplementary feed mixes and premixes 1.25% for broiler turkeys

Components	Measurement unit in 1 kg	Starter	Grower 1	Grower 2	Finisher
Share in feed		1,25%	1,25%	1,25%	1,25%
Total protein	%	33,3	32,9	28,9	27,2
Metabolic energy	kcal	1 647	1 629	1 350	1 302
Salt	%	13,0	14,6	16,0	12,9
Sodium	%	8,5	8,8	9,5	8,2
Calcium	%	2,5	3,1	7,5	10,0
Absorbable phosphorus	%	6,4	6,4	6,4	6,4
Lysine	%	14,2	15,1	15,5	15,2
Methionine	%	20,6	18,1	12,8	11,4
Methionine with cystine	%	20,6	18,1	12,8	11,4
Treonine	%	3,5	3,2	2,7	1,9
Vitamin A	j.m.	1 200 000	1 056 000	960 000	864 000
Vitamin D ₃	j.m.	320 000	281 600	256 000	230 400
Vitamin E	mg	4 000	3 520	3 200	2 880
Vitamin K ₃	mg	320	282	256	230
Vitamin B ₁	mg	200	176	160	144
Vitamin B ₂	mg	600	528	480	432
Nicotinic acid	mg	7 000	6 000	4 800	4 320
Pantothenic acid	mg	1 200	1 056	960	864
Vitamin B ₆	mg	400	352	320	288
Vitamin B ₁₂	mcg	2 000	1 760	1 600	1 440
Biotin	mcg	32 000	20 000	16 000	14 400
Choline chloride	mg	56 000	48 000	40 000	32 000
Folic acid	mg	150	132	120	108
Iron	mg	7 000	6 440	5 600	5 040
Manganese	mg	11 000	10 120	8 800	7 920
Copper	mg	2 000	2 000	2 000	2 000
Zinc	mg	8 000	7 360	6 400	5 760
Iodine	mg	120	110	96	86
Cobalt	mg	32	30	26	23
Selenium	mg	28	28	28	28
Antioxidant		+	+	+	+
Meridol D _s *		+	-	-	-
Meridol D _e *		-	+	+	+
Cocciostata		+	+	-	-
Phytase		+	+	+	+
Cereal enzymes		+	+	+	+

* Meridol D_s and Meridol D_e – LNB Poland products – natural growth stimulators.

NOWOŚĆ **Flexi** *to be supplemented with chalk and phosphorus*

SUPPLEMENTARY FEED MIXES AND PREMIXES 1.25% FOR BROILER TURKEYS

ADVANTAGES OF THE PRODUCTS

- Well-balanced amino acid and mineral composition
- Contain treonine
- Highly concentrated – low overall share in the feed mix

BENEFITS OF USE

- Flexibility in feed mix balancing
- Low cost of feed mix
- Dynamic growth and good feed conversion

Sample full-ration mixes for broiler turkeys

Components	Measurement unit in kg	Starter 1 0-2 weeks	Starter 2 3-5 weeks	Grower 1 6-9 weeks	Grower 2 10-12 weeks	Grower 3 13-15 weeks	Finisher 1 16-18 weeks	Finisher 2 19-22 weeks							
Wheat	kg	240	458	255	522	305	573	336	590	350	666	427	741	406	780
Maize	kg	215	250	250	250	250	250	250	250	250	250	300	300	350	350
Soy extracted meal 46%	kg	440	434	397	381	361	343	303	275	232	200	157	124	124	96
Rape oil cake 10% fat.	kg							30	40	40	50	50	60	60	
Sunflower extracted meal 37%	kg							47	50	50	60	60	60	57	
Fish meal 64%	kg	40	40	30	30	10	10								
Soy oil	kg	21	24	24	24	33,5	33	41,5	49	42,5	49	36,5	44,5	33	40
Chalk	kg	17	17	17	16	15	15	15	15	12	12	9	10	8	8
Monocalcium phosphate	kg	14,5	14,5	14,5	14,5	13	13,5	12	11,5	11	10,5	8	8	6,5	6,5
1,25% Start	kg	12,5	12,5	12,5	12,5										
1,25% Grower 1	kg					12,5	12,5	12,5	12,5						
1,25% Grower 2	kg									12,5	12,5				
1,25% Finisher	kg											12,5	12,5	12,5	12,5
TOTAL	kg	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Nutritive value of mixes															
Total protein	%	27,71	28,02	25,4	25,51	23,19	23,19	21,20	21,35	18,79	18,79	16,51	16,49	15,51	15,52
Metabolic energy	kcal/kg	2 784	2 790	2 848	2 848	2 946	2 945	3 029	3 032	3 112	3 114	3 164	3 159	3 183	3 181
Sodium	%	0,16	0,15	0,16	0,16	0,14	0,14	0,14	0,13	0,15	0,14	0,13	0,13	0,14	0,13
Calcium	%	1,30	1,31	1,21	1,18	1,03	1,05	0,97	0,96	0,91	0,96	0,73	0,76	0,68	0,65
Absorbable phosphorus	%	0,68	0,68	0,61	0,61	0,55	0,55	0,49	0,49	0,46	0,46	0,39	0,39	0,35	0,35
Lysine	%	1,76	1,76	1,59	1,56	1,43	1,40	1,28	1,22	1,11	1,03	0,94	0,85	0,87	0,78
Methionine	%	0,69	0,69	0,66	0,65	0,58	0,57	0,55	0,55	0,45	0,45	0,41	0,41	0,41	0,39
Methionine with cystine	%	1,12	1,12	1,06	1,06	0,95	0,95	0,91	0,91	0,79	0,78	0,72	0,71	0,70	0,69
Treonine	%	1,08	1,07	0,98	0,96	0,89	0,86	0,81	0,79	0,72	0,67	0,61	0,57	0,56	0,54

to be supplemented
with chalk

TopMix

SUPPLEMENTARY FEED MIXES AND PREMIXES 4% FOR BROILER TURKEYS

ADVANTAGES OF THE PRODUCTS

- ✓ High amino acid content
- ✓ Successful compromise between flexibility and convenience of feed mix balancing

BENEFITS OF USE

- ⬆ High productivity

Parameters of supplementary feed mixes and premixes 4% for broiler turkeys

Components	Measurement unit in kg	Starter	Grower 1	Grower2	Finisher
Share in feed		4%	4%	4%	4%
Total protein	%	11	10,7	10,5	12
Metabolic energy	kcal	582	560,4	585	830
Salt	%	4	4,9	4,8	4,3
Sodium	%	2,69	2,9	3	2,74
Calcium	%	16,89	17,34	19,53	16,89
Total phosphorus	%	109	9,89	7,14	4,9
Absorbable phosphorus	%	11,8	11,58	8,42	6,17
Lysine	%	4,46	4,75	4,9	4,89
Methionine	%	6,45	5,66	4	3,62
Methionine with cystine	%	6,46	5,67	4	3,7
Treonine	%	1,11	1,0	1,13	0,7
Vitamin A	j.m.	375 000	330 000	300 000	270 000
Vitamin D ₃	j.m.	100 000	88 000	80 000	72 000
Vitamin E	mg	1 250	1 100	1 000	900
Vitamin K ₃	mg	100	88	80	72
Vitamin B ₁	mg	62,5	55	50	45
Vitamin B ₂	mg	187,5	165	150	135
Nicotinic acid	mg	2 187,5	1 875	1 500	1 350
Pantothenic acid	mg	375	330	300	270
Vitamin B ₆	mg	125	110	100	90
Vitamin B ₁₂	mcg	625	550	500	450
Biotin	mcg	10 000	6 250	5 000	4 500
Choline chloride	mg	17 500	15 000	12 500	10 000
Folic acid	mg	47	41	37,5	34
Iron	mg	2 187	2 013	1 750	1 575
Manganese	mg	3 437	3 163	2 750	2 475
Copper	mg	625	625	625	625
Selenium	mg	2 500	2 300	2 000	1 800
Iodine	mg	37,5	34,5	30,0	27,0
Cobalt	mg	10	9,2	8	7,2
Selenium	mg	8,8	8,8	8,8	8,8
Antioxidant		+	+	+	+
Meridol D ₅ *		+	-	-	-
Meridol D ₆ *		-	+	+	+
Coccidiostat		+	+	-	-
Phytase		+	+	+	+
Cereal enzymes		+	+	+	+

*Meridol D₅ and Meridol D₆ – LNB Poland products – natural growth stimulators.

Sample full-ration mixes for broiler turkeys

Components	Measurement unit in kg	Brojler 1 0-2 weeks		Brojler 2 3-5 weeks		Brojler 3 6-9 weeks		Brojler 4 10-12 weeks		Brojler 5 13-15 weeks		Finisher 1 16-18 weeks		Finisher 2 19-22 weeks	
Wheat	kg	90	476	240	511	290	558	319	581	338	664	415	729	415	760
Maize	kg	350		250		250		250		300		300		300	
Soy extracted meal 46%	kg	446	404	404	383	364	347	307	278	222	207	157	124	150	95
Rape oil cake 10% fat.	kg							30				50		50	
Sunflower extracted meal 37%	kg							41	50	40		60		60	
Fish meal 64%	kg	40	50	30	30	10	10								
Soy oil	kg	23	20	27	27	37	37	46	52	50	49	38	47	45	45
Chalk	kg	11	10	9	9	9	8	8	8						
4% Starter	kg	40	40	40	40										
4% Grower 1	kg					40	40	40	40						
4% Grower 2	kg									40	40				
4% Finisher	kg											40	40	40	40
TOTAL	kg	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000
Nutritive value of mixes															
Total protein	%	27,49	27,51	25,58	25,50	23,16	23,22	21,21	21,18	18,78	18,79	16,51	16,5	15,5	15,51
Metabolic energy	kcal	2781	2782	2845	2847	2943	2943	3028	3029	3111	3114	3159	3163	3180	3181
Sodium	%	0,16	0,16	0,16	0,15	0,15	0,14	0,14	0,14	0,15	0,14	0,14	0,13	0,15	0,13
Calcium	%	1,45	1,47	1,29	1,29	1,23	1,20	1,14	1,14	0,90	0,91	0,71	0,70	0,70	0,70
Absorbable phosphorus	%	0,75	0,77	0,68	0,68	0,64	0,64	0,61	0,61	0,48	0,47	0,38	0,38	0,39	0,38
Lysine	%	1,76	1,72	1,60	1,57	1,43	1,40	1,28	1,22	1,08	1,05	0,94	0,85	0,82	0,78
Methionine	%	0,69	0,69	0,66	0,65	0,57	0,57	0,55	0,54	0,46	0,45	0,41	0,41	0,42	0,39
Methionine with cystine	%	1,11	1,11	1,07	1,06	0,95	0,95	0,91	0,90	0,79	0,78	0,72	0,71	0,70	0,69
Treonine	%	1,09	1,05	0,99	0,96	0,89	0,87	0,81	0,78	0,71	0,68	0,61	0,57	0,60	0,52



LONOMIXY®

LONOMIXES are mineral and combined mineral and vitamin products supplementing animal feeds with different groups of vitamins and trace elements whose deficiency leads to reduced productivity. Lonomixes can be added directly to animal feed or dissolved in water (concerns some of the preparations).

The vitamin demand rises mainly in stressful situations caused by high temperature, animal care procedures (e.g. vaccinations), weakness following diseases and after antibiotic treatment. In intensive breeding, the physiological load of bred animals is very high, resulting from quick growth or maximised production. Therefore, it is advisable to give the animals vitamin additives so as to prevent production breakdown due to vitamin deficiency.

Regular cooperation with a veterinarian is very valuable for animal breeders, as veterinarians are able to specify which vitamins and minerals are missing in the animals' diet and recommend a matching Lonomix

Lonomix parameters

Components	Measurement unit in 1 kg	1010	1011	1014	1016	1012	1115	1028	1029
		B - komplet	AD ₃ E	AD ₃ EC	H-Pant	Mikro-Min	Ovo-Bon	Anty-Stres	Se-E-C
Calcium	%						8,90		
Sodium	%						9,10		
Vitamin A	jm		35 000 000	24 000 000				1 600 000	
Vitamin D ₃	jm		6 500 000	4 500 000			333 300		
Vitamin E	mg		40 000	40 000				6 400	40 000
Vitamin K ₃	mg								
Vitamin B ₁	mg	1 000							
Vitamin B ₂	mg	3 000							
Vitamin B ₆	mg	1 000							
Vitamin B ₁₂	mcg	6 700							
Vitamin C	mg	13 300		150 000			66 700	48 000	50 000
Pantothenic acid	mg	2 000			6 000				
Nicotinic acid	mg	4 000							
Folic acid	mg	600							
Biotin	mcg	67 000			220 000				
Iron	mg					10 000	6 700	8 000	
Manganese	mg					18 000	20 000		
Copper	mg					2 000	3 300		
Zinc	mg					16 000	10 000	3 300	
Iodine	mg					300			
Cobalt	mg					100	3 300		
Selenium	mg					100		36	250

Lonomix B Komplet – a soluble multivitamin supplement

Intended use: LONOMIX B Komplet is a universal additive for all animal species and technological groups, making up for deficiencies of water-soluble vitamins. The additive prevents reduced weight gain and alimentary tract disorders. Also, it improves egg yield and egg hatching in parent stocks and boosts health of chicken and turkey broilers. It is particularly recommended for poultry.

Administration: the product should be used for a short period (2-3 days) when the vitamin intake from the feed may be insufficient, e.g. during stress, after vaccinations, in the case of poor quality of feed (e.g. due to fungal attack), etc. The product should be dissolved in water in the amount of 50-150g per 100 l or as a feed additive in the amount of 100-300g/100kg.

LONOMIX AD₃E – a soluble multivitamin supplement

Intended use: LONOMIX AD₃E is a multivitamin supplement boosting the immune system by ensuring a correct structure of cell membranes thanks to vitamins A and E. LONOMIX AD₃E also helps prevent night blindness, while vitamin D has an antirachitic effect, regulating the calcium and phosphorus balance. The product is recommended for young animals in the phase of intensive skeletal development and laying hens during intensive egg production.

Administration: The product should be used for 2-4 days in highly stressful situations in the case of high production rate, change of feed or after pharmacological treatment and in the case of production disturbances, reduced weight gain, etc. The product should be dissolved in water in the amount of 8-15g per 100 l or as a feed additive in the amount of 15-30g/100kg.

**LONOMIX AD₃EC – a soluble multivitamin supplement**

Intended use: LONOMIX AD₃EC is a multivitamin supplement supporting the immune system. Vitamin C increases the biological effect of vitamin E. Vitamin A helps prevent night blindness and thanks to vitamin D₃ the supplement has an antirachitic effect, regulating the calcium and phosphorus balance. The product is recommended for young animals in the phase of intensive skeletal development and laying hens during intensive egg production.

Administration: The product should be used for 2-4 days in highly stressful situations in the case of high production rate, change of feed, reproduction disorders or after pharmacological treatment. The product should be dissolved in water in the amount of 10-25g per 100 l.

LONOMIX H-Pant – a soluble multivitamin supplement

Intended use: LONOMIX H-Pant is a supplement containing biotin and pantothenic acid. Deficiencies of these vitamins occur most frequently in breeding stocks of hens, geese and turkeys and in intensive fattening of chicken and turkey broilers.

Administration: The product should be dissolved in water in the amount of 15-25g per 100 l or mixed with feed according to the following scheme: chicken broilers, laying hens in the rearing phase 30-50 g per 100 kg of feed, turkey broilers 40-80 g per 100 kg of feed, parent stock 50-100 g per 100 kg of feed.

LONOMIX Mikro-Min – a soluble mineral supplement

Intended use: LONOMIX Mikro-Min is a universal mineral supplement containing a set of basic microelements in the form of highly absorbable water-soluble compounds. The supplement makes it possible to make up for deficiencies of trace elements playing a key role in enzymatic reactions. Also, it supports reproductive processes, the development of epithelial tissues and the skeletal system and stimulates correct muscle work.

Administration: the product can be mixed with feed in the amount of 100-150 g per 100 kg of feed as supplementation and in the amount of 250-350 g per 100 kg of feed as a basic preparation.

LONOMIX Ovo-Bon – additive for loose feed

Intended use: LONOMIX Ovo-Bon is a mineral and vitamin feed additive regulating calcium and phosphorus balance in laying hens and chicken and turkey broilers in their intensive growth phase. The product has a beneficial effect on eggshells and the skeletal system.

Administration: the product should be administered if eggshell resistance is found to be reduced, i.e. in the case of an increased number of broken eggs from laying hens and increased bone fragility in growing poultry. The product should be mixed with feed in the amount of 1-1.5 kg per 1 tonne of feed.

LONOMIX Anty-Stres – a soluble vitamin and mineral supplement

Intended use: LONOMIX Anty-Stres is a vitamin supplement used in the nutrition of laying hens and poultry parent stocks. Thanks to a special combination of vitamins and trace elements developed by LNB Poland, the supplement is exceptionally effective in the elimination of consequences of the so-called "stock fatigue" caused by stress factors (high temperature, vaccinations, intensive production).

Administration: the supplement should be administered for 10-14 days if the overall condition of the animals is found to be worse than usual, in the case of appetite loss, reduced egg yield and hatching efficiency. After 10-14 days, the product should be discontinued for 50-60 days. The supplement should be dissolved in water in the amount of 200-250 g per 100 l or as a feed additive in the amount of 400-500 g per 100 kg of feed.



LONOMIX Se-E-C – a soluble vitamin and mineral supplement

Intended use: LONOMIX Se-E-C is an additive supporting the immune system. Also, it prevents death resulting from heart muscle dysfunctions in quickly growing birds. A synergic effect of vitamin E and selenium, supported by an antioxidant action of vitamin C, protects cellular structures and ensures correct muscle work.

Use: The product should be used for 4-5 days in periods when birds are under a particularly heavy load due to intensive growth (in chicken broilers the period usually begins after the 4th week of fattening). The product should be dissolved in water in the amount of 50-100g per 100 l.

LONOMIX Lonacid-Drób - a feed acidifier for poultry

Intended use: Lonacid is an acidifying additive for loose poultry feed mixes. By reducing the pH of the contents of the alimentary tract, the product demonstrates a stabilizing effect on the composition of the bacterial flora. In this way, adverse effects of raw materials with strong buffer properties can be reduced. Organic acids contained in the product (propionic acid, formic acid) and their salts inhibit fungal growth, thus reducing the possibility of mycotoxin secretion. Lonacid also has a conservation effect on feeds and feed components. In this case, dosage depends on a number of factors that should be taken into account when using the product. These factors include the conditions and duration of feed components storage and their humidity. Lonacid is a mixture of organic acids. Mixtures of acids and their salts have a synergic effect and their proper combinations produce a better effect in poultry nutrition than the use of one acid only, even in very high doses. The product enhances the use of feed components, stabilizes the bacterial flora of the alimentary tract, increases weight gain dynamics, prevents the growth of pathogenic bacteria and is an additional source of energy in feed. Moreover, it makes it possible to effectively control the Salmonella levels in feeds and feed components without adverse effects on other feed components.

Composition: mixture of organic acids and their salts and a carrier (aluminosilicates).

Administration: Lonacid is recommended in the nutrition of all poultry species and technological groups after mixing with feed. The dosage is as follows:

Chicken and turkey broilers:	2-3 kg/t of a full-portion feed mix
Laying hens:	2 kg/t of a full-portion feed mix

LONOMIX Lonozym – a universal enzymatic premix

Intended use: LONOMIX Lonozym is a multienzymatic premix used to enrich the composition of pig and poultry feeds. The product contains two enzymes, xylanase and beta-glucanase with basic activity and some quantity of cellulase. The enzymatic composition ensures a high decomposition efficiency of the so-called non-starch polysaccharides commonly present in local cereals and classified as anti-nutritive substances. The most important of these are arabinoxylanes (wheat, triticale, rye) and beta-glucanes (barley and oats). These compounds are not decomposed in animal alimentary tracts, where they increase the viscosity of the intestinal contents, hinder the digestion of feed ingredients and water resorption. Lonozym makes it possible to decompose these polysaccharides and facilitates their digestion, thanks to which feed usability is greatly improved. Lonozym allows for a correct balancing of feed mixes, increased energy value of feed, improved utilization of nutrients (proteins and amino acids) in the feed, enhanced effectiveness of stimulators, coccidiostats and dyes added to feed and improved hygiene conditions in livestock buildings.

Administration: LONOMIX Lonozym can be used in feed mixes for all poultry technological groups. Depending on the maize content and contents of other cereals in the mix, the recommended dose is 0.8-1.2 kg/t of mix.

LONOMIX Lonozym P – an enzymatic preparation containing phytase

Intended use: LONOMIX Lonozym P is an enzymatic preparation that makes it possible to markedly increase the digestibility and utilisation of plant-contained total phosphorus. Thanks to this, the dose of inorganic phosphorus added to feed can be reduced without adverse effects on animal productivity or bone mineralization. In addition to improved utilization of phosphorus, Lonozym P also increases the digestibility of calcium, magnesium and microelements, improves the digestibility of proteins and increases the energy value of feed. Phytase activity in the product – min. 375 000 FTU/kg.

Administration: a recommended dose is 0.8-1,2 kg/t of a feed mix.

**LONOMIX Bioantyseptox – a bactericidal, fungicidal and virucidal preparation**

Product description: since the product contains thymol, guaiac resin, menthol and cinnamic aldehyde, it prevents the growth of pathogenic parasites; inhibits the development of protozoa (including amoebas, coccidia and infusorians), bacteria, viruses, fungi and parasitic arthropods; destroys mould and deactivates fungal toxins. Montmorillonite, tannin, natural silica, layered aluminosilicate and calcinated cellulose effectively absorb excess humidity from the bedding. The product disinfects litter in animal-keeping facilities, repels flies, biting lice, mites, fleas and mosquitoes. Volatile components of the product clean, refresh and disinfect the air up to a height of 150 cm from the ground. Also, the preparation has a high absorbing capacity and absorbs microtoxins, bacterial toxins, aerosol allergens, liquid excretions and secretions of animals. LONOMIX Bioantyseptox directly and effectively eliminates biological and chemical pathogenic factors before they produce disease symptoms and ensures animal-keeping in hygienic conditions. Silicic Acid, sodium bicarbonate, formates, tannin and essential oil components efficiently damage insect and mite larvae, thus preventing their development.

Intended use: to disinfect and dry animal bedding, disinfect and refresh air in animal-keeping facilities, neutralize unpleasant odours and sanitise animal excretions, repel flying insects and destroy invertebrates living in the bedding.

Administration: Spread the product evenly on the surface to be disinfected, e.g. bedding or floor once per 2-4 weeks. Depending on the level of bedding humidity and impurity, the product should be used in the amount of 50-100 g/m².

LONOMIX Neutromix – a product neutralizing bacterial and fungal toxins

Product description: plant components containing thymol, eugenol and tannins, sorbic acid, propionates and formates display a preserving and absorbing action, neutralizing toxins produced by mould fungi and bacteria and excretions and secretions produced by insects and mites. Thanks to the presence of tannin, eugenol and essential oils, the product helps to bind unpleasant odours and hinder the decomposition of proteins and fats included in the feed. Silica, bentonite and aluminosilicates with an appropriate physical and chemical structure prevent feed lumping. Plant-based components induce the secretion of digestive enzymes, thus improving the utilization of feed.

Intended use: to improve the hygiene and wholesomeness of animals feeds, preserve and stabilize feed components, neutralise bacterial and fungal toxins that may be present in feeds.

Administration: 2-5 kg/t of feed, depending on the degree of feed infestation with fungi and bacteria.