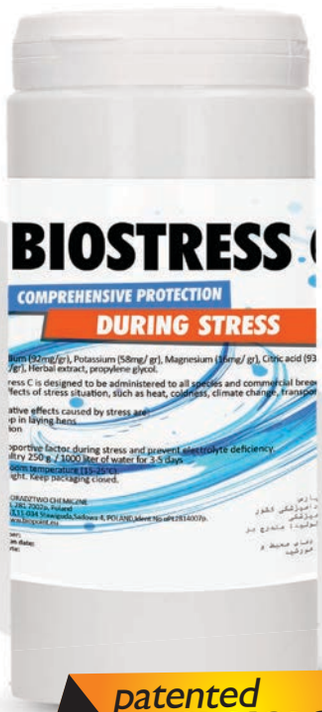
BIOSTRESS C

Full-scale stress protection



patented TECHNOLOGY

- Improves condition of the flock
- Stimulates digestive tract
- Supports immunity

BIOSTRESS C

is a full-scale product intended for the birds exposed to negative effects of thermal and environmental stress. A perfectly balanced formula of vitamin and electrolytes, supplemented with a high dose of vitamin C, aniseed oil and citric acid preserve the proper homeostasis of the organism affected by high temperatures and negative environmental conditions. Vitamin C enables easy adaptation of the birds to high temperatures. A balanced composition of electrolytes (magnesium sulphate, sodium sulphate, potassium chloride, sodium chloride) controls water balance and supplementation of deficiencies occurring as a result of high air temperatures. Aniseed oil stimulates the digestive system. Citric acid supports digestion process, stimulates appetite and has a cooling effect on the body. Application of BIOSTRESS C supports proper condition, productiveness and daily growth irrespectively of the stress factors.

INDICATIONS

BIOSTRESS C is intended for each production type or group of poultry in case of:

1. poor general condition resulting from thermal or environmental stress,
2. poor laying performance resulting from thermal or environmental stress,
3. impeded growth resulting from thermal or environmental stress,
4. poor appetite resulting from thermal or environmental stress,
5. deficiency of electrolytes incorporated in the formula of the product
6. necessity for support during the period of thermal or environmental stress.

APPLICATION

250 g	1000 l drinking water	continuous application	3-5 days

COMPOSITION:

Sodium, potassium, magnesium, citric acid, vitamin C, herbal extract, propylene glycol

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I. Aim of research: The aim of the experiment was to determine the effect of BIOSTRESS C on the condition of broiler chickens during periods of high temperatures (outside air temperature above 28° C).

II. Experimental birds: The experiment was conducted on 29,000 Ross 308 broiler chickens divided into 2 groups of 14,500 chicks. The birds were kept in a poultry house measuring 140 m x 12 m (the area of the poultry house: 1,680 m2), which is divided into two parts. Each part of the poultry house had a separate drinking line. The experiment was performed in two identical repetitions. The experiment was performed in August 2015; outside temperatures above 28 ° C occurred from 10th to 25th day of chickens life.

III. Experimental design

The preparation was administered on the following days of fattening:	Control group	Test group
10, ll, 12, 13, 14	did not receive any preparation	BIOSTRES C 250 ml/1000l of drinking water, non-stop
20, 21, 22, 23, 24	did not receive any preparation	BIOSTRES C 250 ml/1000l of drinking water, non-stop

IV. Feed: TMR feeding following the recommendations of the broiler chicks supplier.

V. Tested characteristics:

• number of deaths • average body weight of birds at the end of each week (30 birds from each group were weighted)

• water intake • feed intake • heterophils to lymphocytes ratio (H:L)

VI. Results: Table 1 The number of bird deaths in individual weeks of fattening (number of chicks).

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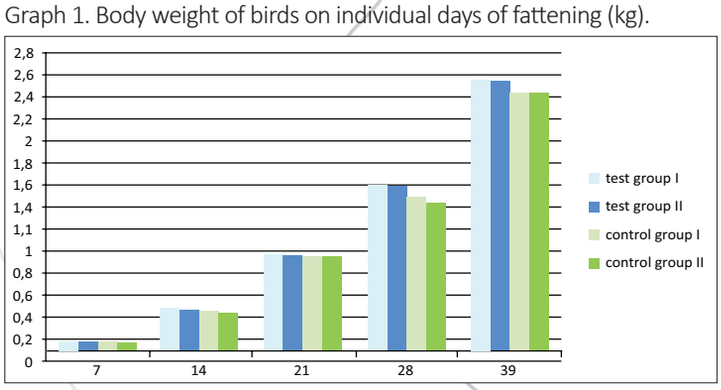
FATTENING WEEK	TEST GROUP		CONTROL GROUP	
	I	II	I	II
1	70	55	65	70
2	58	54	80	90
3	41	45	62	70
4	54	50	69	65
5	45	45	61	59
6	40	46	42	41
Total	307	295	380	395
Average mortality rate in weeks 2, 3 and 4 in both groups (the period of the highest temperatures)	151	<67 chicks	218	

Graph 1. Body weight of birds on individual days of fattening (kg).



Graph 2. Water intake between the 4th and the 30th day (average of the control groups and test groups) (L).

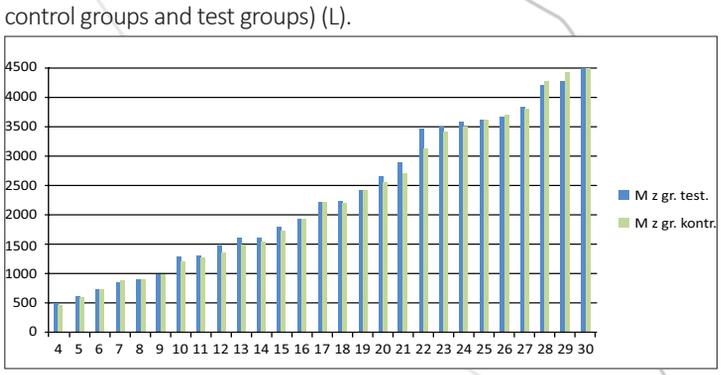


Table 2 The heterophils to lymphocytes ratio (H: L) on the 10th and the 25th day of birds' life n, n=10. M-arithmetic average

DAY OF BIRDS' LIFE	TEST GROUP	TEST GROUP
10	0,41	0,39
25	0,53	0,62

Summary and Conclusions

1. During the period of the highest temperatures a lower number of deaths was recorded in the test group (67 chicks) than in the control group.

2. The body weight of birds in the test group during hot weather and at the ena of the phase was greater than in the control group, which may be due to the beneficial effect of BIOSTRESS C: vitamin C and electrolytes which offset the negative effects of high temperatures (e.g. respiratory alkalosis) and facilitate the adaptation of the organism under the influence of heat stress.

3. In the period of heat, the water and feed intake was greater in the test group than in the control group, which may be the result of aniseed oil contained in the preparation, which stimulates the digestive system as well as the result of citric acid, which improves feed and water intake of birds.

4. During the period of high temperatures, the H:L ratio, which is treated as an indicator of stress in birds, changed in both groups of birds. In the test group the ratio increased by 0.12 while in the control group by 0.23.

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