

USE OF PROMOTOR-L AGAINST HEAT STRESS IN POULTRY

INTRODUCTION:

Birds are very susceptible to heat stress. The heat stress is an issue of great concern to farmers that may result in a relevant economic loss.

THERMAL BALANCE IN POULTRY

The birds are warm blooded animal, which means that they must maintain a constant body temperature. To compensate for fluctuations of temperature and thermal balance, birds have different mechanisms of adaptation, through changes in behavior and physiology. In the case of broilers, when they are fully feathered (over the five weeks of life) is when they are more sensitive to heat stress.

As an approximation, is considered that heat stress may occur when the temperature is over 27 ° C and when the sum of the relative humidity and temperature is greater than 105.

REDUCTION OF FEED INTAKE:

When high temperatures are combined with high humidity, birds lose its ability to dissipate heat. When chickens and hens are affected by heat stress, as it happens in humans, they reduce the feed intake in order to avoid the metabolic heat. This reduction is not linear, but the problem is exacerbated as the temperatures increase. Its accepted that for each degree above 32 - 38 ° C, the bird reduces its feed intake 5%.

In these situations, productive parameters are reduced and farm-level actions must be taken in order to alleviate these effects.

PREVENTION OF HEAT STRESS IN POULTRY:

It must be implemented management measures as well as treatments. A single measure will not solve the problem, we must combine improvements in management, handling, in the diet as well as treatments in the drinking water.

- Avoid any circumstance causing **overcrowding of poultry**.
- In warmer regions is recommended the use of **high energy diets** for laying hens, especially during the initial production phase, because the feed consumption is quite low and could have an energy deficit.
- In warm regions, and in the case of broiler, there's a dilemma on whether **to remove the feed during the hottest hours** of the day, because this action reduces significantly the mortality but there's a lower increase in weight by the birds.
- **Spraying the outside ceilings with water.**
- Use internal **nebulizers**.
- Perform **correct ventilation**, to maintain the relative humidity below 75% avoiding airstreams and areas with faulty ventilation that can cause an excess of ammonia, and will increase them respiratory diseases.
- **Do treatments in drinking water.**

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TREATMENTS IN THE DRINKING WATER TO AVOID HEAT STRESS;

- Treatments in the drinking water are effective in the sense that we assure that, when there are high temperatures, the bird does not decrease the water consumption as it does with the feed. It is considered that the bird increases 4% its water consumption by each 0.5 °C above 21 °C.
- Protein is the nutrient whose digestion generates more heat, so its inclusion in the diet should be reduced, but always covering aminoacids requirements
- PROMOTOR-L is an ideal product to fight against the effects of heat stress, as it provides 19 amino acids, essentials and non-essentials, through drinking water, being all amino acids highly digestible. All amino acids are in levo rotatory form, so the metabolic heat generated is minimal.
- The vitamin content of PROMOTOR-L also helps to stop the effects of heat stress because they act as cofactors in different metabolic pathways.

PROTOCOL OF TREATMENT OF PROMOTOR-L IN BROILER AND HENS

POULTRY	Treatment	Days	PROMOTOR-L dosage (ml/litre of drinking water)
BROILER	1st week	7 days.	1 ml/l
	After vaccination (2 ^a -3 ^a week)	2-3 days.	0,5 ml/l
	Heat stress (5 th week aprox.)	3 days.	0,5 ml/l
GALLINAS	Rearing	1st week <i>Heat stress.</i> 3-5 days .	1 ml/l 1 ml/l
	Laying phase	<i>Reception:</i> 7 days. <i>Heat stress:</i> during 3-5 days. <i>Production:</i> every 15 days: 0,5 ml/l, during 3 days.	0,5 ml/l

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