

## Natural remedy substitutes for antibiotics

Launch of the first registered natural product that could substitute antibiotics and growth stimulants

The product could best be described as a natural performance promoter to enhance feed efficiency and mass increase. It also combats mortality associated with dormant infections.

### Background

At this stage, a huge problem exists in the broiler industry. During the past year, the broiler and ostrich industries have come under pressure due to increasing mortalities and also reduced slaughter mass at the abattoir. The first mortalities peak from day 3 to day 7, then stabilise and again progressively escalate from day 31 with maximum mortality between day 37 and 41. This tendency then forces the farmer to slaughter his broilers as soon as possible after day 31 to ensure a 'harvest', with a typical slaughter weight of 1.3 kg. Broilers dying in the later phase of the cycle have a maximum impact on the feed inputs because the most feed is digested in the last few days, which means a total loss for the farmer. In order to curb these mortalities antibiotic growth stimulants are typically added to the feed as a matter of routine.

### Pathogenesis

New research has indicated vertical transfer of pathogenetic organisms from the parent pairs to the new eggs being laid. This also explains the weak chicks delivered to the industry. This dormant infection occurs particularly in the macrophage phagocytic cells of the marrow bones, the so-called DMII (Dormant macrophage infestation index), as it has been determined in one-day old chickens. In the chickens, these dormant pathogens are activated during episodes of heightened stress. The result is a direct, suppressing effect on the whole immune system and this hampers any response to the elimination of the underlying as well as new infections that from time to time could occur during the growth phase. These organisms have a tendency to bind with red blood cell (RBC) cytoplasmic membrane, which eventually leads to faster destruction of RBC.

Furthermore, it has been indicated that the use of antibiotics as a routine growth stimulant or as acute treatment will suppress the immune system even more. The reason why the 31-day stage is such a critical time in the growth of the broiler, when mortality starts to escalate, is because the average life span of the chicken RBC is only 28-32 days. At this critical stage, all energy is channelled to the bone marrow for optimal assistance of the physiological process of new red blood cell production.

Fatty infiltration takes place both in the liver and in the marrow. This infiltration causes acute energy needed for RBC production, of which the largest source comes from the liver in the form of glycogen, to now be replaced by the fatty infiltration. In other words, the energy pool is now severely handicapped. The result of the displacement of the major RBC prototype cells for the manufacturing of new RBCs by infiltration of fat into the bone marrow is important.

Hence, there is a double attack on the broiler, which is eventually pathologically followed by heart failure, evident from rapid breathing, accompanied by a craving for enough oxygen intake as well as abdominal fluid and fluid in the pericardium. Due to massive degeneration of RBC, more than the normal amount of gall is produced, which has to be stored in the gall bladder. A massive gall bladder packed to the brim with gall is therefore usually evident. Fluid around the heart and from the abdomen usually looks yellow-greenish due to escalated gall secretion in these areas.

Both the fatty infiltration and the chronic infection in the bone marrow in the head of the femur with lowered oxygen tension cause dissolving of the bone in that area, with the result that many broilers at that stage can no longer stand on their legs and eat due to fractures in the femur head areas, as also seen in humans with the geriatric illness osteoporosis. After in-depth research, the important factors playing a role in the undermining growth process in the broiler have therefore indicated the following:

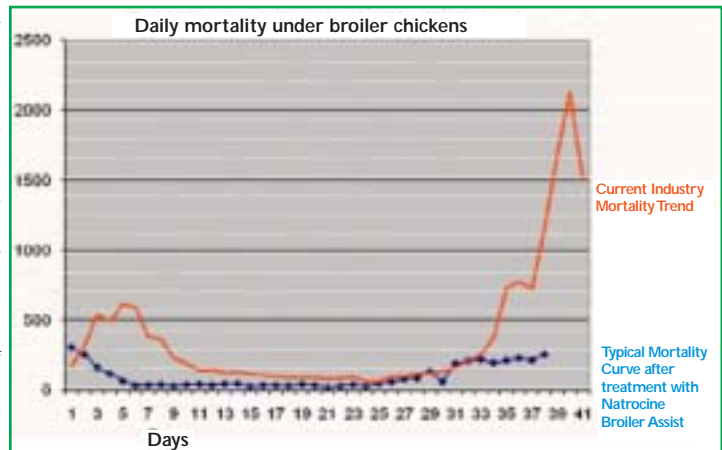


- Dormant transferable infections from the parent pair to new-generation egg produced
- Serious fattening of both the liver and the bone marrow
- Escalation in mortalities in broiler groups, especially from 31 to 41 days.

### Pharmacology

A natural organic remedy has been developed without the use of any antibiotics. This remedy addresses the problem in three areas:

1. Helps macrophage with dormant infections in the bone marrow to eliminate infective agents by directly activating the immune system. The end result is reduced mortalities among the chickens, especially under stressful circumstances, as well as a reduced chance of transfer of zoonotic infections (i.e. infections that can be transferred from animals to humans).
2. Less fatty infiltration in the bone marrow as well as in the liver by mobilising of fatty tissue and changing it into protein. This results in better feed efficiency by requiring less feed with increased final mass in the chickens. Furthermore, new RBC can be more successfully produced in the bone marrow and glycogen is stored in the liver to satisfy energy needs.
3. The bursa-to-spleen ration is three to four times more in the treated broilers than in the control group, which is direct evidence that the immune system has been actively activated. The chicken can now fight infections to a larger extent on its own by inherent natural mechanisms without the addition of large quantities of antibiotics in acute phases or routinely to feed.



In other words, this is a natural growth promoter without any antibiotics with increased feed efficiency, increase in mass and reduced mortality rate, associated with vertical dominant pathogen infestation in the bone marrow.

Recommended dosage: Use from day 1 straight throughout the cycle by mixing in water or feed at 2 grams per 100 kg live weight. This means a dosage is 250 gram per metric tonne if mixed with feed. The dosage can be doubled for escalated performance improvement. Note that it is not possible to over dose due to the natural components of the product. The product is effective for use in the ostrich and fish industry, i.e. any nucleated red blood cell animal. Natrocine Poultry Assist (Registered as Immune Assist # V20134 RSA Act 36/1947) is a product developed and registered by Welbedagt Research & Development in George, South Africa. The product is sold and distributed by Natrocine (PTY) Ltd as Natrocine Poultry Assist.

Web: [www.natrocine.co.za](http://www.natrocine.co.za)  
E-mail: [enquiries@natrocine.co.za](mailto:enquiries@natrocine.co.za)