SIDE EFFECTS OF LONG-TERM ANTIBIOTIC USE ON THE IMMUNE SYSTEM

ANTIBIOTICS
- CAN CAUSE INTESTINAL MICROBIAL IMBALANCE
- COMPROMISING THE IMMUNE SYSTEM RESPONSE
- INCREASED PATHOGEN RESISTANCE
- HIGHER TREATMENT COST
- PRODUCTIVITY LOSSES

IMW50®
- PROMOTES INTESTINAL MICROBIAL BALANCE
- STRENGTHENING THE IMMUNE RESPONSE
- LOWER TREATMENT COST
- HIGHER PRODUCTIVITY

BROILERS: SHORT-CYCLE AND RAPID GROWTH

IMW50® A NATURAL SOLUTION
- Helps to reduce contamination & to prevent outbreaks

CONSISTENT AGGLUTINATION DATA
- 200+ STRAINS TESTED
- AVERAGING
- 99.6% of agglutination for Salmonella spp.
- 99.4% of agglutination for E. coli.

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- 200+ STRAINS TESTED
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- 99.4% of agglutination for E. coli.

REDUCTION OF PATHOGEN’S CONTAMINATION
- 12.5% reduction of Salmonella Heidelberg in the ceca*
- 50% reduction of Salmonella Heidelberg in the crop*

*Infection by Salmonella Heidelberg at 3 days of age (orally, 3x10⁵ CFU/SH chicken). Trial conducted at University of São Paulo by Dr. Antonio Piantino Fernosa, Brazil.
**IMW50®**

**IMPROVES INTESTINAL INTEGRITY**

*Higher density and length of villi, wider surface area and presence of mucus*

Control

IMW50®

*Arrows indicate the difference in β-glucans concentration of the two cell walls. The darker part in the IMW50® sample indicates a higher density in β-glucans.*

**EFFICACY AGAINST MYCOTOXINS**

**IN VITRO TEST - ALL MYCOTOXINS WERE TESTED AT A CONCENTRATION OF 2PPM**

**EFFICACY AT LOW DOSAGES:**

- **1 LB./TON**

**UNDER CHALLENGES SALMONELLA OUTBREAKS:**

- **2 LB./TON**

**AS MYCOTOXIN BINDER:**

- **UP TO 2 LB./TON**

**CONSISTENT RESULTS**

**IMPROVING BWG AND FCR**

IMW50® resulted in an overall average +0.276 lb. BWG per bird and -0.075 FCR (13 trials) compared to control group (without AGP or feed additives) at 42 days of age.

**ECONOMIC ANALYSIS**

**ROI 15:1**

<table>
<thead>
<tr>
<th>INCREASES PRODUCTIVITY</th>
<th>CONTROL</th>
<th>IMW50®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed intake (lb/lb)</td>
<td>1.801</td>
<td>1.726</td>
</tr>
<tr>
<td>BWG (lb)</td>
<td>5.690</td>
<td>5.966</td>
</tr>
<tr>
<td>Extra BWG (lb)</td>
<td>0</td>
<td>0.276</td>
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<tr>
<td>Carcass yield (70%) (lb)</td>
<td>0</td>
<td>0.193</td>
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<tr>
<td>Gain (USD)</td>
<td>0</td>
<td>0.156</td>
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<tr>
<td>ROI</td>
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</tbody>
</table>

**PROVEN TECHNOLOGY**

PERFORMANCE. HEALTH. FOOD SAFETY.

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is fed to 2.7 billion broilers per year