The Role of Zinc Sulfate in improving the blood proteins and immune response to Newcastle disease in broiler under heat stress

Abstract
The study aimed to determine the effect of zinc sulfate supplementation in different levels on blood proteins and immune status in broilers, (120) broiler chicks one day old were used with (38) gr. Initial weight divided randomly into (5) treatment groups (24 chick/each) with 3 replicates (8 chick/each). The dietary treatment groups were:

T1: ordinary diet (control)
T2: ordinary diet +30 mg/kg Zinc sulfate
T3: ordinary diet +45 mg/kg Zinc sulfate, T4: ordinary diet +60 mg/kg Zinc sulfate, T5: ordinary diet +75 mg/kg Zinc sulfate.

The blood samples were collected at 5, 15, 25, 42 day of study for detecting the post albumin compared with the rest treatments. Hence the study showed that the zinc sulfate is important for improving immune status and disease resistance in broiler under heat stress.

Key words: Zinc Sulfate, blood proteins, ND abs titration, heat stress, broiler

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 Arabic text is already in natural format. No need for any conversion.
التحليل الإحصائي:

استعمل تصميم الأشجار الكائلا Complete random Design CRD لقياس التأثير المتبت على المعلمات المختلفة في الصفات المدرسة ونشرت الفرق العشوائية بين المجموعات باختبار اقل معنوي P≤0.05 [13].

جدول (4): تأثير الأفكار المختلفة في مختلفة الأنواع على تركيز الكولوبينويا والكولوبينويا المناعي والألبومين المائي. البديل في فروج اللحم المبري تحت ظروف الاجهاض الجماعي.

<table>
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<th>Post album</th>
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<th>المعلمة</th>
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<td>7.01±0.51</td>
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<tr>
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<td>45.83±2.63</td>
<td>17.78±1.092</td>
<td>50.108±2.067</td>
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<tr>
<td>18.27±2.49b</td>
<td>50.86±3.69</td>
<td>17.266±1.107</td>
<td>46.682±1.947</td>
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</tr>
<tr>
<td>28.80±2.58b</td>
<td>61.46±4.73b</td>
<td>16.796±2.006</td>
<td>36.951±2.021</td>
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<tr>
<td>29.44±3.06b</td>
<td>60.63±3.97b</td>
<td>7.130±1.009</td>
<td>34.580±1.983</td>
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</table>

(بي:0.05)

القيمة المئوية في فروج اللحم المبري تحت ظروف الاجهاض الجماعي．

جدول (5): تأثير الأفكار المختلفة في مختلفة الأنواع على تركيز الكولوبينويا والكولوبينويا المناعي والألبومين المائي في فروج اللحم المبري تحت ظروف الاجهاض الجماعي.

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<td>15</td>
<td>T3</td>
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<tr>
<td>5</td>
<td>T4</td>
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</tbody>
</table>

(بي:0.05)

لتحقيق الأفكار السهلة والتأثيرات المختلفة في المصرية تطور الوضع الهدوء، [22].


