EXTENDED DURATION OF IMMUNITY IN A NEW LIVE COCCIDIOSIS VACCINE (EVALON®) FOR BREEDERS AND LAYERS WITH THE USE OF AN ADJUVANTED SOLVENT (HIPRAMUNE® T)

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Introduction

• Duration of immunity of Evalon® was studied under laboratory conditions in facilities that impaired the introduction of external Eimeria oocysts and that do not favour reinfections. The DOI was evaluated during 60 weeks.

• At 14, 28, 40 and 60 weeks post-vaccination a group of vaccinated and control birds were inoculated with separate Eimeria challenges using heterologous reference challenge strains;

<table>
<thead>
<tr>
<th>Eimeria species</th>
<th>Strain</th>
<th>Dose (esp. ooc/bird)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.acervulina</td>
<td>Houghton</td>
<td>500,000</td>
</tr>
<tr>
<td>E.brunetti</td>
<td>Houghton</td>
<td>50,000</td>
</tr>
<tr>
<td>E.maxima</td>
<td>Weybridge</td>
<td>100,000</td>
</tr>
<tr>
<td>E.necatrix</td>
<td>Houghton</td>
<td>50,000</td>
</tr>
<tr>
<td>E.tenella</td>
<td>Houghton</td>
<td>50,000</td>
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</tbody>
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Materials and method

• The live attenuated vaccine Evalon® (*E.acervulina* 003, *E.brunetti* 034, *E.maxima* 013, *E.necatrix* 033 and *E.tenella* 004) was applied via coarse-spray together with the adjuvanted solvent Hipramune® T to 1-day-old chicks. A control group was inoculated with PBS.

• Parameters studied included; clinical signs, faeces aspect, mortality, OPG from fresh and litter faeces (see below), weight evolution, lesion scoring post-challenge, elimination of oocysts post-challenge.
Results Lesion Scoring post-challenge

**E.acervulina**  
***  ***  ***  ***

**E.brunetti**  
***  ***  ***

**E.maxima**  
***  ***  **

**E.necatrix**  
***  ***

**E.tenella**  
***  ***

* p<0.05  
** p<0.01  
*** p<0.001
Conclusion/ Discussion

• For all the challenges performed, vaccinated groups showed a reduction in lesion scores, oocyst excretion and clinical signs compared to control groups. Weight evolution post-challenge was not affected in vaccinated animals.

• The duration of immunity of the vaccine Evalon® for all *Eimeria* species included in the vaccine was confirmed to be until the end of the production cycle (60 weeks).

• It is hypothesized that this extended duration of immunity in conditions that do not favour reinfections is due to the coadministration of Evalon® with the adjuvanted solvent Hipramune® T.