LYSINE, METHIONINE AND CYSTINE REQUIREMENTS
OF SEMI-HEAVY LAYERS

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avec la collaboration technique de S. BERTRAND et de J. SALVERT

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Two different strains of commercial semi-heavy layers received natural diets containing
2 700 kcal metabolisable energy per kg.

The following levels of essential amino acids were obtained by adding DL-méthionine or/and
L-lysine :

<table>
<thead>
<tr>
<th>Amino Acid</th>
<th>Methionine</th>
<th>Methionine + Cystine</th>
<th>Lysine</th>
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<tbody>
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<td></td>
<td>0.23, 0.33, 0.39 p. 100 of the feed</td>
<td>0.48, 0.58, 0.64 p. 100</td>
<td>0.59, 0.70 p. 100</td>
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These experimental feeds were given ad libitum to the birds kept in individual cages during
40 weeks' laying. Individual controls of production and feed consumption were carried out every
four weeks. For each level of supplementation, there were 48 replicates for one strain and 60 for
the other of a single hen.

The results were considered over the total laying period.

- A significant effect has been noted between the two lower levels of methionine (5 p. 100
difference in feed conversion).

- The daily methionine requirement of layers has been estimated to be ranged between
360 and 390 mg.

- No difference has been recorded in the performances of birds receiving :
  0.58 p. 100 or 0.64 p. 100 of total sulphur amino acids,
  0.59 p. 100 or 0.70 p. 100 of lysine.

This trial confirms our previous works. A semi-heavy layer is largely satisfied by a feed
containing :

- 2 700 kcal metabolisable energy/kg,
- 0.30 p. 100 methionine,
- 0.54 p. 100 total sulphur amino acids (T. S. A. A.),
- 0.59 p. 100 lysine.

But it is quite necessary to control not only the T. S. A. A. content of commercial feeds but
also their methionine content.