

## LYSINE, METHIONINE AND CYSTINE REQUIREMENTS OF SEMI-HEAVY LAYERS

M. PICARD

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

*Service zootechnique, A. E. C.,  
03600 Commentry*

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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 :

Methionine .....	0.23,	0.33,	0.39 p. 100 of the feed
Methionine + Cystine.....	0.48,	0.58,	0.64 p. 100 —
Lysine .....	0.59,	0.70	p. 100 —

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.

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