

I. — PIG FEEDING

**Further contribution to the study of requirements
for maintenance in the pig**

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Using the abundant amount of data supplied by the 424th « Beretning fra Statens Husdyrbrugsforsøg » published in Denmark in 1975, we verified the accuracy of the conclusions formulated in our own paper published almost at the same time in the « Annales de Zootechnie » of I.N.R.A. According to this, the requirements of pigs for maintenance can be slightly changed when the diets offered to the animals are particularly rich in poorly digestible feeds. Under these conditions, it is advisable to determine the energy requirements of the animals according to a method based on net energy and not on metabolisable energy as preconised by some authors. During the course of our study, emphasis has been laid on the large differences that might exist between animals having been subjected to a long and severe selection, with respect to the rhythm of daily protein and fat gain during the growing period.

**Partial or total replacement of maize by milo corn
in pigs subjected to restricted and isoproteic feeding**

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In the present trial, maize was partially or totally replaced by milo corn (25, 50 and 79 p. 100 of the diet) in pigs subjected to restricted feeding with diets containing 16-17 p. 100 crude protein.

The palatability of the diets containing milo corn was confirmed as well as the good behaviour of the pigs in all groups since no statistically significant difference was observed with respect to performances and body composition of the animals during the whole experimental period (25-103 kg). However, pigs fed with milo corn exhibited a slightly higher food conversion ratio than those fed exclusively with maize.

This reduction of feed efficiency when using milo corn was particularly marked during the growing period, but was entirely compensated for during the finishing period.

The results indicate that milo corn should be used moderately during the growing period, whereas its exclusive use is possible during the whole fattening period. The method of substitution adopted (milo corn equivalent to 92 p. 100 of the digestible energy value of maize) led to definitely better results than in our previous trial. It seems possible to use this method at least at the present time, until the list of tannin contents of our varieties has been further developed and the balance studies on pigs have been started.

Effects of micronizing of maize and wheat on the performances of *ad libitum* fed pigs

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According to a common programme established by U.F.A.C. (Union of Compound Feed Producers) and I.T.C.F. (Technical Institute for Cereals and Forages), a series of experiments was conducted simultaneously at Vigny and at Areines (S.E.A.P.) on 192 and 160 pigs, respectively, in order to examine the effect of micronizing of wheat and maize on the performances of *ad libitum* fed animals.

The results clearly show that the value of the feeds was further improved when the latter had been subjected to two technological treatments (micronization of the cereal followed by granulation of the feed). The effect was particularly marked on growth in the case of wheat (+ 11.4 p. 100) and on feed efficiency in the case of maize (7.7 p. 100).

In addition, the technological effects seemed to be cumulative since the addition of simple effects led to obtention of the level of improvement allowed by their cumulation.

However, it was noted that granulation alone accounted for the greatest part of the improvement recorded: from 56 to 89 p. 100 for growth and from 67 to 70 p. 100 for feed efficiency, the highest values being obtained with wheat.

From an economic point of view, micronization of wheat or maize intended to be used in *ad libitum* pig feeding is not interesting since granulation alone allows to obtain almost similar results at definitely lower costs.
