

PROCEEDINGS OF THE NUTRITION SOCIETY

The Three Hundred and Thirty-eighth Scientific Meeting was held on the occasion of the retirement of Dr R. Braude at the National Institute for Research in Dairying, Shinfield, Reading on 7 December 1979

SYMPOSIUM ON 'FUTURE PERSPECTIVES IN PIG NUTRITION'

Introductory remarks

By J. KIELANOWSKI, *Polish Academy of Sciences, Institute of Animal Physiology and Nutrition, Jabłonna, Warsaw, Poland*

Animal nutritionists gather mostly to report results of their current research, to discuss them, and if possible to sum them up, trying to draw a picture of the present state of knowledge in a chosen field. The gaps in this picture, which usually appear, are taken as goals for future investigations. This time the purpose of our assembling here is different: looking ahead, we shall attempt to reveal perspectives in the broad field of pig nutrition, aiming not only to indicate questions that need investigation, but also venturing to forecast how their solution would help to control animal response to nutrition. The only rational way of foreseeing things to come is to trace a line marked by past happenings and to extrapolate it into the future. The history of pig nutrition of the last few decades would be, therefore, very helpful in our task, and if it has not been included in the programme, it is only because of the scarcity of time and the wealth of historical information. We should be aware, however, that no more than 40 years ago pig feeding was based almost exclusively on rather vague traditional principles. Practically nothing was known about their energy, protein and mineral metabolism, or about growth changes in the chemical composition of their bodies. Requirements for the chemically yet unidentified vitamins were established very roughly, the concept even of feed additives did not exist. Very little was known about actual or potential interactions between the genotype of pigs, their endocrine make up, their nutrition and the outer environment. The assortment of feeds used, particularly protein sources, was small. The progress of knowledge in all these fields caused an amazing improvement in the efficiency of pig production; pigs fed on a constantly reduced level grow faster and faster, their live-weight gains from the same amount of feed had nearly doubled since 1940, their carcasses are considerably leaner.

If an historian wanted to write how the foundations of pig nutrition developed during the last 25 years, his task would be much easier than in the case of any

other species of animals, thanks to the '*Index of Current Research on Pigs*', celebrating this year its twenty-fifth anniversary. This invaluable periodical, used by people concerned with pig production as their first source of information, is known commonly as the 'Braude's Index'. This name is justified not only because the 'Index' has been initiated and all the time so competently compiled by Dr Braude, but it is deserved also for the reason that in the comprehensive bibliography of world literature on pig production listed in the 'Index', Dr Braude appears as the author of scientific papers much more frequently than any other one. There is hardly any important problem in pig nutrition left untouched by his constructive scepticism. In his vast scientific output papers can be found on principles of investigations and design of experiments, on performance of all classes of pigs under various circumstances, on digestion and metabolism, on early weaning and artificial rearing of piglets, on feed evaluation and feeding standards, on new feeds, particularly new sources of feed protein, on health of pigs, on feed additives, including his discovery of the effect of small amounts of copper in the ration. Some papers deal briefly with experimental results, in others wide perspectives are shown, always highly realistic. Thanks to this unique and unmatched position of Dr Braude in pig research, future historians might be tempted to divide the history of pig nutrition into three periods: the pre-Braude era, when so little was known, the Braude era, i.e. the present one, which, as I hope, will still last, marked by his personal contributions, for many years to come, and finally the post-Braude era, which we are now supposed to throw some light on.

In a paper published about 10 years ago ('Pigs-wither?' (1970). *Proc. Nutr. Soc.* 29, 262) Dr Braude tried to estimate the expected progress in pig production during the two decades ahead, and now, at the end of the first decade, his previsions have proved to be very accurate. A sentence from his paper could be taken as a motto for our Symposium. It reads—'If the pig industry is capable and willing to exploit its potential to the utmost, then no other meat-producing animal, or bird and, most probably, none of the synthetic challengers (whenever they come) would be able to dislodge the pig from a dominating position'. The papers to be presented and our discussion will show whether this statement is still valid.