Altogether 28 contributed papers have been announced for this Symposium, but only 21 reached the moderator in full text. Two fitted better into other Symposia and were consequently transferred, so that 19 papers from 12 countries were left, i.e. 6 West-European, 4 Asian, 1 African and North American.

As these papers covered a very wide range of subjects, I have chosen to sort them under the following four subheadings:

1. Selection Criteria and Responses
   9 papers of 5 countries

2. Gene Markers, Biochemical and Immunological Traits
   4 papers of 4 countries

3. Evaluation of Breeds and Crosses
   5 papers of 4 countries

4. Breeding Management
   1 paper from W.-Germany

Since all 19 papers are printed in full text and as abstract as well, I will in this summary concentrate on a few only, which appear to be most concerned with the main theme of this Congress: "Genetics applied to Livestock Production".

To (1): Two British papers by WHITTEMORE et al. and LAIRD et al. are concerned with the effect of feeding regime and voluntary feed intake on selection responses for lean growth and fat content in the carcass. They conclude that dissected lean and lipid growth responses to increasing feed intake were more curvi-linear (plateauing) than protein growth responses and that conventionally
index-selected lines showed greater increments in protein growth at all levels of feed intake than controls; but differences were clearer at high feed intake levels. In a gilt field selection experiment over 11 generations on an index of gain, feed efficiency and backfat thickness no correlated reduction in voluntary feed intake was found. E. MÜLLER et al. reporting a selection experiment of 5 generations on activity of NADPH-generating enzymes in backfat, found high differences of insulin secretion and in plasma levels of T₃ and urea between up and down selected lines. BICHARD's paper deals with the very interesting question of improving sow fertility in a commercial breeding programme by bringing back the genes of the best 1.7% multiplier sows in prolificacy over 4 litters into the nucleus. WILLEKE and PIRCHNER show that selection on 5α-Androstenone, the main source of boar taint, was effective in both directions and APPEL and KALM present an optimum selection criterion for meat colour and pH-values, which discriminates for both extremes and favours intermediate optima.

To (2): In the search for helpful marker loci FRIES et al. analysed blood group- and protein polymorphisms with induced chromosomal markers (centric fusions, translocations and inversions), suggesting a linkage group PHI-HAL-S-H-6PGD on chromosome 15. RENARD et al. analyse the histo-compatibility complex SLA in pigs of four French breeds and found homozygote deficiencies in one and a relationship to backfat thickness in another haplotype. RAPACZ identified 9 allotypes of immunoglobulin, determined by autosomal co-dominant genes at four closely linked loci and suggests that the allo-antigens may be markers of four IgG subclasses. Finally PALLUDAN et al. looked at individual variability of ascorbic acid and some trace elements in Danish Landrace litters and detected significant individual (genetic?) differences.
To (3): Most interesting are phenotypic parameters of five and genetic parameter estimates of two native Chinese breeds by WU and ZHANG, showing familiar magnitudes. A good crossbreeding experiment with five American breeds is reported from Korea by PARK and KIM; it could have been a nice diallel with little changes in design and analysis. In Nigeria ADEBAMBO has evaluated an indigenous pig as purebred and as crossbred sow with Large White in comparison to imported Large Whites, Hampshires, Durocs and their crosses. With larger size this experiment could be considered as a suitable model for other developing countries. Finally MARTIN demands conservation of the well adapted indigenous Canary Black Pig for ecological reasons and DOBAO et al. study the sex ratio of four Iberian pig populations with three theoretically interesting statistical methods.

To (4): GRDENEVELD demonstrates the structure and versatile utility of his MAHIS data bank system for complete control of herdbook breeding programmes, which may find immediate practical application in many pig breeding programmes.

If the papers in this thematically fairly open Symposium were representative for research activities in pig breeding and genetics, one would conclude that the traditional population genetic approaches to selection and breeding are still very much dominating. They seem to be increasingly accompanied by biochemical, serological and molecular genetic analyses, searching for direct and correlated effects of individual genes on quantitative characters, which are often still in the phase of basic research without easily conceivable applications. Very obvious, however, are the practical consequences of modern computer techniques, particularly data bank systems, for integrated pig breeding and production programmes.