Technical Services In The Future

THE SUPPORT AFFORDED to the poultry industry by its technical services may be divided into several disciplines—Genetics, Nutrition, Veterinary, Husbandry and Engineering.

These are incomplete sub-divisions which both overlap with, and complement, each other. The developing poultry industry over the past few decades eventually reached today's standards as a result of the technical input of a succession of individuals and co-operating teams. As resistance to further progress is met, and problems have arisen, solutions have become apparent in a greater or lesser time.

The future can only be guessed at but the implications behind the title of this article seems to be that we have reached the limits of our ideas or abilities. This can be debated. What cannot be debated is that we have reached the limits of our problems. Certainly the challenge is still there.

Not least of these aspects is the collection and handling of data. At the level of commercial production we are producing a wealth of valuable data which may not be handled well enough to be available. It could be used to measure what is happening in our production programmes and for predicting the future. I believe it will be akin to technical stagnation even if we continue to progress as at present.

This is:

- Genetically to select for growth rate and egg production or variations on this.
- Nutritionally to seek least cost mixes which nevertheless allows the birds to grow to predicted weights.
- Diagnostically to isolate new organisms against which to produce effective vaccines and/or effect an eradication.
- Environmentally to improve house insulation.
- Mechanically to reduce labour costs.
- In addition to improve handling methods for slaughter birds.
- Pharmacologically to produce another anti-coccidial or other antibiotic.

The technical innovation I suggest we should be seeking would be centred on a computer-based chicken model. This model would be compiled from the data we already have and would be used to predict the results of any chosen programme. Progress will be made in defining the bird environment, being programmed to control automatically levels of air humidity, ammonia, and solid matter as well as temperature. We will know in defined terms how levels of these affect performance. It can be done with lettuces, why not with chickens?

Heat will be conserved by greatly improved insulation and by controlled ventilation. Re-use of filtered air is a possibility. Use of solar power is a distinct consideration, as is deep earth heat in the larger growing complexes. I believe the greatest strides must be made in the disciplines of Husbandry and Engineering to define the birds environment at least cost. This, done correctly, will be long last eliminate the disease problems associated with environmental inadequacies. This will be the real innovation for disease control.

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Shed turnaround will have to improve. The younger the age at kill, the greater is the percentage of the year that the shed is empty. Automated cleaning and the defined environment will halve this period and multiaged sites will return. Litter will be pelleted or cubed for industrial fuel.

Nutritionally, progress will be limited due to the inability to change the bulk of raw ingredients without adding cost. Ration densities will increase and levels of limiting elements will be more defined. Will a valuable feedstuff be created by the chemical treatment of wood or mushroom compost or chicken litter, or human sewage?

Genetically, items already being considered will be to the fore. Selection for food conversion efficiency is inevitable. Other thoughts may be numerous. For example, rate of bone development, carcase quality and even meat flavour.

In recognition of our sponsors, what of the technical future of prophylactics and therapeutics? A nonspecific antiviral agent would be useful. Not necessarily Interferon, something else would do. An enhancer of immune response, perhaps. A prophylactic effective specifically against Salmonella and/or E. coli would be my choice.

Perhaps we can receive some indication on what will be available shortly. In the veterinary field, we will merely watch for the results from the activities of the other disciplines and offer occasional guidance.

In conclusion I might say that, given people continue to eat chicken in volume, there will have to be technical innovation.

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World Poultry On The Increase

Despite sharply higher feed costs in 1981, it appears that world poultry production, will, once again, expand. However, the increase this year is not likely to match the estimated 5% upswing for 1980. Higher levels of output are expected in the United States, Canada, Mexico, South America, Japan and throughout Western Europe.

Poultry output in the USSR during 1980 was greater than in the previous year, despite feed shortages and a reduction in the production of other meats.

As the USSR is putting considerable emphasis on poultry production, some further expansion in output may occur this year, though should a shortage of feed supplies develop, then production could decline.