LETTER FROM LONDON

Animal antibiotic attack

Britain's plan to restrict drug use in animals is meeting heavy resistance

by David Fishlock

Antibiotics are used to treat the diseases of food-producing animals and to improve the growth of meat stock. The overuse of antibiotic treatment by injectables or by enhancing feed and drinking water is known to cause resistant strains of bacteria.

The combination of these factors may have led to a mass outbreak of Salmonella infections in Britain two years ago when young calves were administered a number of antibiotics; later, resistant Salmonella bacteria were detected in 4,000 human cases resulting in 23 deaths. The suspicion was that the bacteria strain developed in the calves and was transmitted to humans through the food chain.

Responding to a public outcry, the British Ministry of Health appointed a committee to investigate the use of antibiotics in the normal practice of animal husbandry. The committee's recent report has raised a storm of protest.

Although the committee, headed by Prof. M. M. Swann, vice chancellor of the University of Edinburgh, found no direct evidence that the Salmonella epidemic was caused by antibiotic treatment of animals, it found enough reason to conclude that the use of antibiotics in animal care was a potential hazard.

Therefore, the committee recommended that antibiotics not be used to promote animal growth, but that they be used only in the treatment of sick animals. Veterinarians would restrict levels of antibiotic use to only enough to treat individual cases.

If the Swann report recommendations are adopted—and the British Government has endorsed them strongly—it will mean that several antibiotics now well established in farming practice in Britain, penicillin and the tetracyclines among them, will not be available for wide use in the future. Another to be forbidden is chloramphenicol, the zealous promotion of which in the last few years in Britain, as a prophylactic for the broiler chicken industry, was partly responsible for the inquiry. Chloramphenicol has serious side effects, but it is the preferred drug for deadly enteric fevers such as typhoid and Salmonella infections.

The findings were sharply attacked by drug companies and farmers.

Drug firms rejected the theory that the use of antibiotics results in the transfer and subsequent growth of virulent bacteria strains. No proof has been advanced to show that resistant strains actually survive in human hosts, they say.

If the Ministry of Health elects to adopt the Swann proposals, the sick-animal-only policy may work against the establishment of adequate food-quality standards, argues Dr. J. S. Kiser of the American Cyanamid Company. He points out that therapeutic uses of antibiotics may work in cases of larger animals but would be useless to poultry farmers working with populations of 100,000 or more.

The shortage of veterinarians in Britain would provide only a minimum of regulation, he says.

Other critics point out that imported meats are not taken into account by the committee. Since a large part of the meat consumed in Britain is imported, the lack of imported meat standards would nullify the committee's recommendations. Britain may have to establish restrictive trade measures accepting meat products only from countries complying with British policy.

In the United States, the Food and Drug Administration takes another approach to the danger of overusing antibiotics, one the manufacturers would like to see Britain adopt.

Three years ago, as drug firms were introducing a flood of new products to serve a growing industry, the FDA set a requirement forcing companies to submit tissue studies as evidence that their products would not endanger food-quality standards. Once meeting that standard, drug products would be allowed on the market for use in food animals.

Instead of applying blanket restriction on the use of antibiotics, the FDA guards against antibiotic contamination with rigorous inspection of animal tissue before the slaughter of animals and passage of meat to market.

Some antibiotics are restricted, depending on the persistence of the drug detected as a residue.

Restrictions include:

- Injectable penicillin and streptomycin in combination and streptomycin alone: a 30-day withdrawal period prior to slaughter.
- Oral use of penicillin and penicillin-streptomycin: a withdrawal period of up to four days.
- Injectable penicillin in oil, certain synthetic penicillins, chlortetracyclines and bacitracin: not allowed for use in the t r e a t m e n t of food-producing animals.
- Chloramphenicol, injected or oral: also banned.