

Drug Residues Studied

➤ **ANTIBIOTICS** can be dangerous to man when used in animal feeds.

Discovery of hazardous residues of penicillin and other antibiotics in meat, poultry and fish more than a year ago triggered an investigation of the dangers to humans by a committee appointed by the U.S. Food and Drug Administration. The committee's report is now in.

At least 16 antibiotics have been approved for veterinary and nonmedical use for 10 to 15 years. Nevertheless, the possible dangers to man from use of the drugs in animal feed have now prompted FDA to call together representatives of the U.S. Department of Agriculture, the Public Health Service, the Department of Interior and interested non-government researchers to study the problem.

"We believe we will have come to some conclusions by the end of six months," Dr. William W. Wright, deputy director of FDA's division of antibiotics and insulin certification, and executive secretary of the committee, told *SCIENCE SERVICE*. "At least we will know what to do about labeling of these products."

The problem of "transferable resistance factors" will be studied at greater length, as will the danger of allergy to penicillin encountered in food.

"The cooking time of fish and scallops containing antibiotics is too short to kill the drugs," Dr. Wright explained. He said more study is needed to find out if poultry and red meat are cooked sufficiently long to overcome the danger.

The Department of Agriculture has been working closely with the FDA, Dr. R. J. Anderson, deputy administrator of the Agricultural Research Service told *SCIENCE SERVICE*.

"Research is already going on in the areas FDA has outlined," he said. "We have never approved the use of antibiotics for the preservation of meat and meat products of red-meat animals. The drugs have been used in poultry, fish and scallops."

Dr. Wright, however, said that farmers themselves have treated sick red-meat animals with antibiotics obtained from pharmacists or veterinarians.

FDA Commissioner James L. Goddard has approved a number of the committee's recommendations. He said "antibiotics recently certified for safety and effectiveness have been accompanied by data about their persistence in meat, milk and eggs of animals in which they are used. We are going to ask the manufacturers for additional data on the drugs we are in doubt about before they are approved for continued veterinary use."

An order proposing to rescind tolerances of residues previously approved in raw poultry, fish and shellfish is published in the Federal Register. Persons adversely affected by the order were given 30 days to file comment.

BIOLOGY

First Baby Bat Rays Doing Well in Captivity

See Front Cover

➤ **BABY** bat rays have been born in the 540,000-gallon fish tank at Marineland of the Pacific, Palos Verdes Peninsula, Calif.

The five perfectly formed babies, about twice the size of a man's hand, are believed to be the first bred and born in captivity, according to John Prescott, Marineland curator.

"Others have been born in captivity before," Prescott said, "but never full term, and they haven't lived. So far, these are doing very well." Rays and sharks, and even some species of fishes, give birth to live young, like mammals, Prescott said.

The gestation period for rays is unknown. Bat rays, so called because of their resemblance to bats, are triangular in shape with wing-like fins and long tails. At the base of the spine is a venomous stinger. Fully grown, these creatures can weigh 150 pounds and can attain a length of four feet from wing-tip to wing-tip. At birth they weighed less than a pound.

Once the babies are born, they are on their own. And this fact, in itself, creates a problem in the big fish bowl.

Some 3,500 fishes of 100 species inhabit the 22-foot-deep tank, including five giant black sea bass which could very well devour the young bat rays. Three of the babies have been removed to the laboratory, where they will be fed and cared for.

(Cover photograph by Marineland of the Pacific).

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