

VETERINARY MEDICINE

Foot-and-Mouth Debate

Two sides of the problem of combating aftosa are being hotly argued by Mexicans who must decide between sanitary rifle and vaccination needle.

► MEXICAN OFFICIALS are wrestling with their consciences over whether to stop using total slaughter as a means of combating dreaded foot-and-mouth disease of cattle.

The weight of popular opinion in Mexico seems to be against using the "sanitary rifle" to kill all infected herds, and popular opinion soon becomes political pressure. But the scientists and agriculture experts know that any steps short of total eradication of infected animals will lead to the permanent establishment of foot-and-mouth, or aftosa, in Mexico.

Negotiations now underway between Mexican and U. S. officials of the bi-national Anti-Aftosa Commission are in a "delicate" state, the U. S. holding out for the sanitary rifle, while the Mexicans look longingly at the less awesome—but less effective—vaccination needle.

The latest outbreak of aftosa in Mexico began last May in the state of Vera Cruz, near the village of Gutierrez Zamora, after more than a year of freedom from the disease. Moving with great speed, the Anti-Aftosa Commission put to death about 500 head of cattle in the area by the sanitary rifle.

However, reaction to this drastic, though absolutely necessary, treatment followed quickly and feeling began to run high against slaughter. A prominent Mexico City newspaper carried banned headlines proclaiming that "new methods" for combating aftosa were to be adopted, while the sanitary rifle would be put away.

The hope of the "optimists" that foot-and-mouth disease can be eradicated in Mexico without slaughter is based on vaccines, such as are used in Europe and the Near East against this plague. But the difference between the Mexican and the Old World situation with aftosa is vast.

The disease in Europe and the Near East is widespread, permanent, endemic. Slaughter could not possibly wipe out the disease—unless all the split-hooved animals, domestic and wild, were destroyed, an unlikely solution. There, vaccination is about the only remedy that can be offered to cut down on livestock losses to aftosa.

Foot-and-mouth disease in Mexico, though, is a stranger, an unwanted alien. Because it is not permanently established and spread throughout the country, immediate and total slaughter of any infected herds discovered can mean that the disease will never become endemic there. And with effective quarantine at the nation's borders, the destructive disease can be forever kept out of Mexican herds.

The Mexicans have a tough decision to make. If they succumb to the temptation of putting up the sanitary rifle, they may win votes, gain popularity, perhaps save some money in the immediate future—although they will probably lose the United States as a market for their meat.

But if they follow the advice of scientists

MEDICINE

Hospital Not a Hospital

► A HOSPITAL that is not a hospital has opened in Bethesda, Md.

It is a 14-story, red brick, \$60,000,000 structure with beds for 500 patients, but the patients will not be admitted just because they are sick people who need medical and surgical care.

Their ticket of admission will be a precise diagnosis according to a standard established for a particular disease study.

The hospital is not even called a hospital.

who have weighed the facts, that anything less than slaughter is an invitation for the disease to become a perpetual and malignant drain on the Mexican economy, then the long-term interests of their people will be best served.

There is room for hope that the sanitary rifle will stay around for a long time. Many of the officials of the Mexican half of the Anti-Aftosa Joint Commission took part in the campaign against aftosa in the 1940's in Mexico, and have seen the good work of the sanitary rifle.

These men and officials in the Ministry of Agriculture and Livestock are competent scientists and trained agriculturists. Scientific fact will probably win over popular emotion.

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Its name is The Clinical Center, and it is a "research resource" of the Public Health Service of the Department of Health, Education and Welfare.

Although there are beds for 500 patients, a dining room and solarium on every floor, and a theater, library and chapel, this hospital that is not a hospital has twice as much space for laboratories as for patient care.

The reason is that the Clinical Center is to be a research center for the study of the



SUNNING SPOT—The sun deck on the 14th floor of the new Clinical Center of the National Institutes of Health gives patients a view of neighboring buildings, including the Naval Medical Center across from the Institute.



NEW-TYPE PATIENTS' ROOM—*This spacious home-like room at the Clinical Center of the National Institutes of Health is actually a hospital room. The beds are easily made ready for sleeping and the colorful decoration makes it seem less like a hospital.*

major health problems of the nation: brain and nervous and mental diseases, cancer, arthritis, heart and blood vessel diseases.

To be sure, there are in the nation other hospitals where research is carried out on these diseases. But most of the great medical research centers of the nation and of the world admit patients primarily because they are sick people needing medical attention. While they are being treated, they may also be subjects of study in the staff scientists' search for better ways to conquer disease.

At the Clinical Center, however, the study will be primary, care of the patients secondary in a sense, although this care will be the best that can be given. But the patients will be admitted because they all have the same disease—whatever one the scientists have decided to study. And they will all have the same stage of the disease. They must all be as nearly alike as possible in age, weight, sex and other physical characteristics.

Since it will take time to find 500 such almost peas-in-a-pod patients all suffering from the same stage of the same disease, many of the Clinical Center's 500 beds will be empty for some time to come. No more than 15 or 20 patients were expected in Bethesda by July 6.

Those 15 or 20 and the ones to follow will become members of a research team working under unique conditions which, it is hoped, will speed discovery of cures or preventives of diseases that afflict millions.

The dedication speech was delivered by Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare, of which the Public Health Service is a division. The center, she said, will house "the widest array of specialists and technicians" that has been assembled to work in pure and applied science.

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ORNITHOLOGY

Clever Cuckoos Cage Meals From Bossy

► BY LETTING a cow do the work, cuckoos in El Salvador feed on three grasshoppers where one was caught before, reports Dr. Austin L. Rand, curator of birds at the Chicago Natural History Museum.

Watching a group of indolent but clever cuckoos feed at the feet of cows stirring up insects as they grazed, Dr. Rand came up with the following statistics:

During the dry season, it took an average of two minutes for a bird to find an insect without the aid of a cow. With bossy, however, the bird could average three entrees in the same period of time.

During the lush wet season, pickings were better. An alert bird could catch three or four insects a minute unaided. But, again with bossy, the score mounted to five or six a minute.

Owls are not the only wise birds, statistics seem to show.

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AERONAUTICS

Pilots Can Hang Onto This New Supersonic Hat

See Front Cover

► A NEW helmet, shown on the cover of this week's SCIENCE NEWS LETTER, has been created for Air Force pilots who some day may have to bail out of supersonic planes.

The helmet, custom built to fit each wearer, was designed by Douglas Aircraft engineers, Santa Monica, Calif., to stay on the pilot's head during bailouts. Present-day helmets tend to blow off, tests revealed. This strips the pilot of head protection and it snatches away his oxygen.

By cutting slots into the new helmet behind the forehead portion, designers were able to make the helmet stick to its job. The slots create a small vacuum which holds the helmet firmly in place. They also permit air to escape from inside the helmet. With present-day helmets, this is a problem. During bailouts at supersonic speeds, air pressure tends to build up inside the helmet. Eventually the pressure is so great that it literally blows the helmet off the pilot's head.

The new helmets recently proved successful in outdoor wind tunnel tests at simulated speeds up to Mach 1.04. This speed is slightly above the speed of sound.

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TECHNOLOGY

Newly Developed Rice Oil Helps Cooks, Industry

► CHEMISTS HAVE learned to extract a new oil from rice bran which is usually wasted in the milling of rice. The oil promises to be a boon to housewives and to manufacturers of cosmetics, soaps and anti-rust compounds.

Pioneered by the American Rice Growers' Cooperative Association, Houston, Texas, the new industrial extraction process yields a clear, light-colored oil having a bland flavor and odor. It resembles peanut oil in physical properties, but is more resistant to becoming rancid than other vegetable oils.

The ARGC, reporting to the Southern Association of Science and Industry in Atlanta, Ga., revealed that rice oil when used in cooking does not pick up flavors and odors of foods fried in it. Thus the housewife can fry fish, potatoes, onions, chicken and oysters in it without the problem of carry-over flavor. Foods fried in rice oil also contain less fat than when they are fried in other oils.

Further experiments have shown that the oil also is a good industrial lubricant because of its high penetration ability. A by-product of the oil is rice-bran wax which has a melting point as high as carnauba wax. Carnauba wax now goes into candles and varnish among other things.

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