

VETERINARY MEDICINE

African Animal Diseases

► COUNTRIES badly in need of meat dare not import it from Africa because of the risk of disease.

Dr. Fred D. Maurer of the Armed Forces Institute of Pathology in Washington, D. C., said that control and eradication of African animal diseases is vital.

Dr. Maurer, who has done research in Africa on rinderpest and African swine fever, charged that the reluctance of all countries to import African animals is preventing the exchange of food badly needed.

"This is not only critical to the world's food supply," he said, "but it is an important key to improvement of the economies of both agriculture and industrial countries.

"The ever-increasing volume and speed of trade and travel has provided new opportunities for these diseases to spread," he said. "Countries that benefit from modern industrial transportation must face the problem it has created. They should help to eliminate the diseases while they are localized."

Blue tongue in sheep and cattle is transmitted by *Culicoides* flies, which have a world-wide distribution. This highly fatal, viral disease has been in South Africa since sheep were imported before 1800, and has since spread through much of southeast and northeast Africa to the Mediterranean.

In 1952 it was diagnosed in the United States, where it was found in 13 western states. It was found in Japan in 1960 and killed a reported 40,000 sheep.

In South Africa the commercial raising of sheep is dependent on the annual use of 25,000,000 doses of blue tongue vaccine.

Also transmitted by *Culicoides* flies or midges is African horse sickness (AHS), which goes back to 1719. It has continued to be the most destructive of diseases to the equine species in Africa. In 1959 the disease spread to Iran, Afghanistan, West Pakistan and in 1960 to India, Iraq, Syria, Turkey, Cyprus, Lebanon and Jordan, and losses in these countries were estimated at 170,000 head.

African swine fever, similar to hog cholera, for which there is no vaccine and which is usually 100% fatal, recently spread to Portugal and Spain, and has caused losses in Spain alone of more than 100,000 animals. It has cost the Spanish Government \$9,000,00 in control efforts.

Dr. Maurer has been on a U. S. Department of Agriculture committee to review the United States import regulations and facilities for animals. He said the U. S. guards against importation of animals that are diseased and subjects all animals to quarantine before they are admitted. The principal quarantine point is in Clifton, N. J.

• Science News Letter, 79:148 March 11, 1961

AGRICULTURE

Pain From Riding Tractors

► FARMERS ARE ASKING FOR improved design of tractors and other farm machinery because of vibration that produces low-back pain.

Dr. Franklin H. Top, director of the University of Iowa's Institute of Agricultural Medicine, reports in the Archives of Environmental Health, 2:150, 1961, that farm machinery is now being improved but much still needs to be done, and the institute is working on the problem.

Dr. Top states farmers reported that on a tractor there is not sufficient provision for absorbing the vibration and jolts. To stay on a tractor, the farmer stands up, and apparently his legs absorb the vibration.

Farm accidents are sometimes caused by lack of simple equipment that manufacturers are glad to provide when informed, Dr. Top reports.

The injuries of four victims of cornpicker accidents showed that the same type of machine was involved.

"The manufacturer of the cornpicker was supplied with our findings and photographs of his tractor-mounted cornpicker with unshielded gears. Six months later plans had been made to equip all new cornpickers of this manufacturer with shields to protect the operator from the hazard uncovered in Iowa," Dr. Top says.

Arrangements also were made for every

dealer throughout the United States and Canada to receive a supply of the shields, which also can be used on previous models at low cost.

Only three institutes of agricultural medicine exist in the world. Poland was first to establish one ten years ago. Iowa was second, in 1955, and a third was founded in 1958 in connection with the University of Tours in France.

Recently the University of Illinois established a Zoonoses Center which is concerned with animal parasites and diseases that can be transmitted to man from animals.

• Science News Letter, 79:148 March 11, 1961

TECHNOLOGY

New Data Processing System Developed

► A NEW ELECTRONIC data processing system has been developed that utilizes wasted manpower and unused high speeds normally resulting from even the most advanced computer systems.

Developed by Burroughs Corporation in Detroit, Mich., the system, called the B5000, is the first computer designed especially for automatic programming. Programming time and problem-solving

costs long associated with conventional computer systems are drastically cut by the solid state system, it is claimed.

The unit is adapted for solving both business and scientific problems.

The B5000 is a very high-speed data processing system that automatically adjusts to its own environment, schedules and keeps track of its own work load, and tells itself as well as the human operator how it is doing, it was reported.

The B5000 helps reduce programming costs because it accepts both programs written in algebra (for scientific and engineering problems) and English language statements (for business data processing).

• Science News Letter, 79:148 March 11, 1961

SCIENCE NEWS LETTER

VOL. 79 MARCH 11, 1961 NO. 10

Edited by WATSON DAVIS

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., NORTH 7-2255. Cable Address: SCIENSERV.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; ten or more copies in one package to one address, 7½ cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is addressed. Your new address should include postal zone number if you have one.

Copyright © 1961 by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicated services issued by Science Service. Science Service also publishes CHEMISTRY (eight times a year) and THINGS OF SCIENCE (monthly).

Printed in U.S.A. Second class postage paid at Washington, D. C. Established in mimeograph form March 13, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member Audit Bureau of Circulation.

SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees Nominated by the American Association for the Advancement of Science: William W. Rubey, University of California at Los Angeles; Wallace R. Brode; Douglas Whitaker, Rockefeller Institute for Medical Research. Nominated by the National Academy of Sciences: Harlow Shapley, Harvard College Observatory; Philip Bard, Johns Hopkins University; Henry Allen Moe, John Simon Guggenheim Memorial Foundation. Nominated by the National Research Council: Leonard Carmichael, Smithsonian Institution; John R. Dunning, Columbia University; Benjamin H. Willier, Johns Hopkins University. Nominated by the Journalistic Profession: Michael J. Ogden, Providence Journal-Bulletin; O. W. Riegel, Washington and Lee University; Lee Hills, Detroit Free Press. Nominated by the Scripps Estate: Edward J. Meeman, Memphis Press-Scimitar; Frank Ford, Washington, D. C.; Charles E. Scripps, Cincinnati, Ohio.

Officers—President, Leonard Carmichael; Vice President and Chairman of Executive Committee, Charles E. Scripps; Treasurer, Wallace R. Brode; Secretary, Watson Davis.

Staff—Director, Watson Davis. Writers: Gloria Ball, Ann Ewing, Lillian Levy, Faye Marley, Jane Marye, Tove Neville, Marjorie Van de Water, Judy Viorst, Burrell Wood. Science Youth Division: Joseph H. Kraus, Shirley Moore, Dorothy Schriver, Leslie Watkins. Photography: Fremont Davis. Production: Priscilla Howe, Marcia Nelson. Syndicate Sales: Hallie Jenkins. Librarian: Margit Friedrich. Interlingua Division in New York: Alexander Code, 80 E. 11th St., GRamercy 3-5410. Advertising Manager: Fred A. Moulton, METropolitan 8-2562.