VETERINARY MEDICINE

Drugs Fight Cow Disease

➤ THE battle against mastitis, the udder infection of dairy cattle that puts a serious crimp in the annual milk output, is slowly being won.

The weapons that insure that this costly ailment will in the near future be reduced to economic unimportance are the antibiotic drugs, penicillin, aureomycin and streptomycin, coupled with the wider spread of hygienic practices.

This prediction was made by a visiting British veterinary expert, Dr. Samuel J. Edwards, a senior member of the Agricultural Research Council's field station at Compton, in Berkshire, England. Dr. Edwards is winding up a three-month study of American dairying under the auspices of the Economic Cooperation Administration.

What is needed to eliminate mastitis once and for all, both in this country and in Great Britain, said Dr. Edwards, is to get all dairy farmers to apply routinely the knowledge of how the disease spreads.

Specifically, he said, this refers to the practice of "hand stripping", that is the custom of hand milking the last drop of milk after the cow has been machine milked. Because the hand can not be disinfected as thoroughly or as dependably as the machine, hand stripping results in the spread of the disease from one cow to another.

On the other hand, exclusive use of milking machines plus a scrupulous disinfection of the machine before and after each cow, cuts down the threat of transmission to a minimum. Machines are used in over 95% of all large herds in Britain, he said, and the percentage is similarly high in the United States.

"I was much impressed with the fact that students in this country have a splendid opportunity to see dairy management of the first class at the state agricultural colleges," Dr. Edwards said. His tour of the United States has taken him to the leading agricultural colleges in the East, Midwest and California, as well as Government experiment stations, and the National Live Stock Exposition at Chicago.

Dr. Edwards, a fellow of the Royal College of Veterinarians, has been making his mastitis study under an ECA technical assistance project.

Science News Letter, February 25, 1950

ASTRONOMY

Icarus Is New Asteroid

➤ ICARUS is the name given to the minor planet or asteroid that travels closer to the sun than any other known in the solar system.

Discovered last year by Dr. Walter Baade, Mt. Wilson Observatory astronomer, this unusual member of the sun's family was known as number 1566 or 1949 MA until it was christened after the mythological boy whose wings of wax were melted by a flight too close to the sun.

The new name was announced by Dr. Paul Herget of Cincinnati University Observatory, world center for minor planet information.

Icarus approaches within 17,000,000 miles of the sun in an elongated, football-shaped path. Believed to be only about nine-tenths of a mile in diameter, it takes only 409 days to complete one journey around the sun.

At one end of this journey along its elliptical path around the sun, Icarus is out beyond the orbit of Mars, at a distance of 180,000,000 miles from the sun. When it is at its nearest approach to the sun it is within the orbit of the planet, Mercury.

Because its path does bring it so close to Mercury, astronomers will be able to determine accurately the mass of Mercury, which is still relatively uncertain.

Icarus is too faint to be seen at any time by the naked eye. At the present time, the asteroid can not be seen from the surface of the earth. Astronomers expect to be able to train their telescopes on the object again late this spring.

The asteroid is estimated to have a temperature as high as 1,000 degrees Fahrenheit when it is closest to the sun. At its greatest distance from the sun six months later, however, the surface is well below the freezing point of water.

Icarus, the mythical boy for whom the asteroid is named, escaped imprisonment on wings made for him by his father Daedelus. They were fastened to his back with wax. So enchanted with flying did Icarus become that he kept going higher and higher until finally the sun melted his wings, and then he dropped into the sea.

Science News Letter, February 25, 1950

AERONAUTICS

Turbo-Prop Air Transport Ready for Flight by June

➤ A FORERUNNER of long-range air transports of the future, a turbo-prop Convair-Liner under construction by Consolidated Vultee in San Diego, Calif., will be ready for flight in June, it has been revealed. It will be America's first turbo-prop transport.

The turbo-prop utilizes an engine similar to that used in jet propulsion but the high-pressure gas created in the gas turbine operates a shaft to which conventional propellers are attached. Speed and economy are the expected results. A speed approaching 500 miles an hour is possible. A saving of approximately 2,000 pounds in engine weight means ability to carry a greater payload.

This new Convair, almost identical with the 40-passenger Convairs now long in service except for the power plant, will be equipped with two of the new Allison T-38 twin turbo-prop engines. Old Convairs can be easily fitted with the new engines. The engine is said to be the most powerful propeller-type engine ever cleared for flight. It develops two horsepower per pound of weight.

Turbo-prop planes have a permanent place in the future, LaMotte T. Cohu, president of Convair, recently declared. They are the logical step in airline progress because the vast public investment in airports, airways and traffic control systems is geared to propeller-driven planes. The new planes will fit neatly into today's traffic pattern because fuel economy is such that planes can carry ample reserves to meet government requirements.

In addition to operating at materially higher cruising speeds, the new Convair liner will provide greater passenger comfort. Noise and vibration of the ordinary piston-powered engines are eliminated. Practical elimination of vibration means lower maintenance costs.

Science News Letter, February 25, 1950

CHEMISTRY

Never Change Car Oil From Fluorine Compounds

➤ FLUORINE compounds that will result in automobile oil and lubricants that will never need changing were predicted at the American Chemical Society meeting in New York by Prof. Earl T. McBee of Purdue University.

Tremendous progress in the study of fluorine chemistry has been made in the few years since the unruly element was pressed into service in the atomic bomb project, he said. Fluorocarbons, compounds of fluorine and carbon, have received special attention. They have proved valuable in insecticides, anesthetics, plastics and many other fields.

With the rapidly increasing knowledge of fluorine chemistry, the production of exceptionally stable coolants, lubricants, hydraulic fluid, and lubricant additives is to be expected. It may become practical in the near future, Prof. McBee added, to produce automobiles in which the engine oil and other lubricants need not be changed and will require only infrequent inspection.

Science News Letter, February 25, 1950