AGRICULTURE

Cows Feed Selves In Automatic Barn

➤ AN ultra-modern barn designed as a self-service cafeteria for wintering cattle was announced by Rutgers University, New Brunswick, N. J. This novel solution to the problem of winter feeding is adaptable to both small and large farms.

Designed for maximum cow-convenience and minimum man-labor, the self-feeding arrangement permits the cows to satisfy their hunger at will just as they do in summer pasture. The cows feed through specially designed gates with dividers that safeguard the animals against strangulation.

A winter's supply of hay is stored vertically in huge bins that run the length of the barn. The cows feed from the bottom and the weight of the hay keeps a constant supply at the feeding point.

Its designers believe the new feeder to be a major labor saver. They point out that last winter it took only four man-hours to feed 70 tons of dry hay to 44 beef steers.

The "automatic barn" is one product of farm mechanization experiments conducted by the New Jersey Experiment Station at Fiddler's Creek Farm near Lambertville. Paul M. Mazur, New York banker and owner of the farm, endowed the project and has cooperated with University scientists on it. Some of their other developments, still largely in the experimental stage, are a self-feeding silo, and machines and methods for harvesting and handling hay.

The Fiddler's Creek barn, designs and devices of which are available free of charge for non-commercial use, is described as "a quonset within a quonset." The inner building is the barn proper, where the animals feed themselves and are housed. Over this shed stands another larger structure. The space between the sidewalls of the two semicircular "quonsets" forms the bin where the hay is stored. The hay is blown in through an air hose, direct from the hay wagon into the top of the storage bin.

Another innovation is an air-blowing system through the stored hay, which permits the hay to be dried in the barn rather than in the field where hay-making is at the mercy of the weather.

In the automatic barn and the self-feeding silo, which is being tested this winter, Mr. Mazur and his colleagues foresee the possibility of increased mechanization, even on very small farms.

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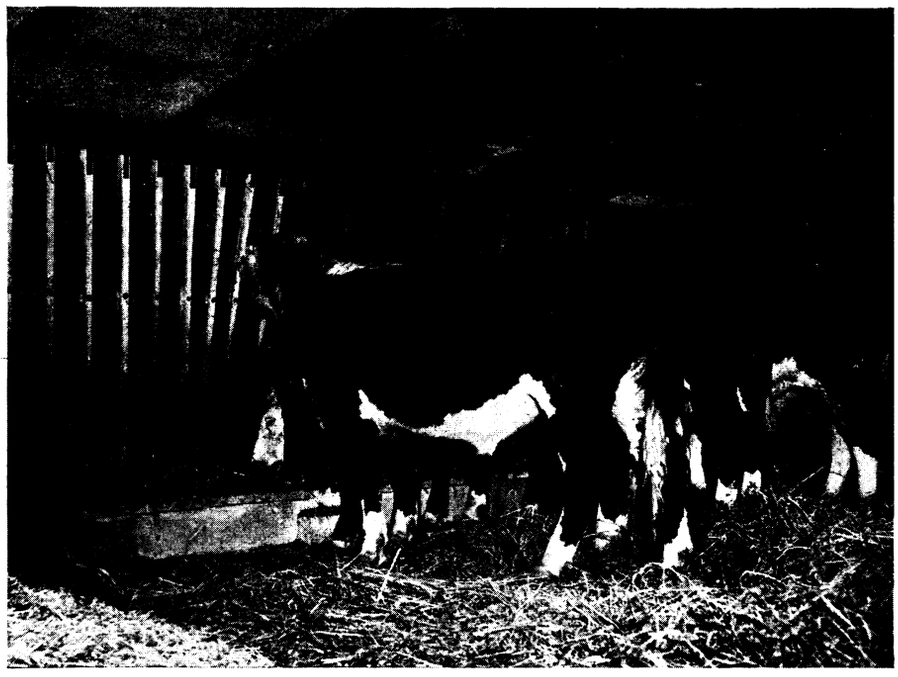
Joint research by the National Bureau of Standards and the Civil Aeronautics Administration has developed a *coating for fabric-covered aircraft* that about doubles the time between ignition of the fabric and its destruction by fire.



SELF-FEEDER FOR CATTLE—Farm labor and costs are greatly reduced by permitting cattle to feed themselves through specially designed gates.

MEDICINE

Chemicals Aid Leukemia

Anti-folic acid chemicals bring temporary improvement in leukemia. Two other chemicals, nitrogen mustard and urethane, give relief in tumor ills.

➤ CHEMICAL treatment of more than 200 persons suffering from cancer-like acute leukemia has brought about significant temporary improvement in from 11% to 50% of the cases.

Other forms of cancer have also been temporarily aided by the same chemicals, which are known to be antagonistic to the folic acid vitamin.

Dr. Carl V. Moore of the Washington Universtiy School of Medicine, St. Louis, reported these encouraging results to the meeting of the American College of Surgeons in Chicago.

Dr. Moore has himself treated 17 patients with significant temporary improvement in six. Other doctors have treated 203 patients with the anti-folic acid chemicals, with remissions ranging from 11% to 50%.

One of Dr. Moore's patients, a four-year-old boy, has been practically well, or as the doctor put it, "in fairly complete remission," for a year.

The chemicals used are aminopterin, amethopterin, and Amino-An-Fol.

Children apparently are helped more than grown-ups by these anti-folic acid chemicals, Dr. Moore said his and other doctors' work suggests. He emphasized, however, that the chemicals do not cure and that they cause severe toxic reactions. Painful inflammations and ulcers of the mouth, diarrhea and hemorrhage from stomach and intestines are among the toxic reactions caused by these chemicals.

Nitrogen mustard, the war gas chemical, often brings striking temporary improvement in Hodgkin's disease, and another chemical, urethane, has been helping patients with a bone marrow tumor, called multiple myeloma.

"It is obvious that the goal of destroying tumor cells without irreparably damaging normal tissues has not been attained." Dr. Moore declared.

"It is equally evident, however, that many of these substances are now of practical clinical value as palliative (relieving but not curing) agents in the management of patients with neoplastic (tumor) diseases, and that results are good enough to suggest that the ultimate goal of this type of chemotherapy may yet be achieved."

The "most important single practical development" in chemical treatment of cancer, he declared, probably is the use of female sex hormones in the treatment of cancer of the prostate gland.

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