

in the form of specially designed electronic storage tubes.

With its ability to remember, act upon, and deliver information at a rate of 20,000 times a second, Whirlwind I is the first machine suitable for supplying instantaneous instructions for such applications as controlling aircraft traffic patterns.

Whirlwind also has many other applications for the study of industrial process control, insurance handling, inventory, economic analysis, census problems, and scientific and engineering computations.

Completion of trial tests of Whirlwind was announced in a paper presented by Robert R. Everett and Norman H. Taylor of the Digital Computer Laboratory of M. I. T., at the joint American Institute of Electrical Engineers and Institute of Radio Engineers Computer Conference in Philadelphia.

During the next year Whirlwind will be devoted to a variety of engineering, scientific, and industrial applications as well as to military projects sponsored by the Office of Naval Research and the United States Air Force.

Science News Letter, December 22, 1951

BIOCHEMISTRY

Discover B Vitamin That Concerns Insects, Not Man

► DISCOVERY OF a new B vitamin was announced by Drs. G. S. Fraenkel, H. E. Carter and P. K. Bhattacharyya and Miss K. R. Weidman of the University of Illinois at an American Chemical Society meeting in Austin, Tex.

B T is the name of the new vitamin. It is essential for certain insects, among them the Tenebrio beetle which infests grain and flour in storage. It is the same as the chemical, carnitine, found in animal muscle. So far, there is no evidence that man or other higher animals require it the way they do other vitamins.

Science News Letter, December 22, 1951

GENETICS

More Milk for South

► COWS FOR the South that will give "considerably higher" milk production than native cattle can be expected within three or four years from crossbreeds being developed in Washington.

U. S. Department of Agriculture scientists report that crosses between India's Red Sindhi bulls and Jersey, Brown Swiss and Holstein cows give a high volume of milk and butterfat even in the warm humid climate of the South.

Although they have not yet found out the exact physiological reactions and, therefore, the reasons why a cow does give less milk in hot weather conditions, they do know that the animal's appetite is less and that it eats less. The animal devotes most of its energy to trying to keep comfortable, just as a person on a very hot day spends much of his energy non-productively—just fanning himself in an effort to keep cool.

The dairy scientists are trying to find out exactly why a cow gives less milk when exposed to continuous heat. When these reactions are known, they believe that they can then breed cows that will be able to stand up under steady hot weather.

Artificial breeding through crossbred bulls is expected to be the best method of getting the higher-producing cows to the farmers quickly. Some southern farmers are taking crossbred cows into their herds now, thus giving the Department additional information about the animal's performance under actual farm conditions.

Under carefully controlled experimental conditions at Beltsville, Md., the scientists found that ten cows, crosses between the Red Sindhi and Jersey, averaged 8,717 pounds of milk and 516 pounds of butterfat in a year. At the Louisiana station under continuous hot weather conditions, production figures for the crossbred animals were

less than at Beltsville, but still considerably above the average production level in the Gulf Coast area of 2,000 pounds of milk per year.

A progress report on the crossbreeding program is contained in the annual report of the chief of the Department's Bureau of Dairy Industry.

Science News Letter, December 22, 1951

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