TECHNOLOGY

Process for Making Better Cheese Faster

➤ A FAST, simple method has been developed for making Cheddar cheese from pasteurized milk.

The U. S. Department of Agriculture scientists who developed the process say the body and texture of cheese made in the new way are superior to those of high-grade cheese made by present methods.

The cheese is waxy and nearly free of mechanically-caused holes. The researchers say "an excellent mild flavor" develops within three months when the cheese is cured at 55 degrees Fahrenheit.

Unlike old techniques, the new process requires only two and one-half hours. Although the system has not been used commercially, it has been tested on a pilot-plant scale and is ready for trial by industry.

A streptococcus organism is one of the elements used to start the necessary lactic acid formation. The bacteria, scientifically described as a "non-hemolytic strain of streptococcus durans," produce lactic acid in milk and cheese at the high temperatures essential to processing.

The recommended manufacturing procedure: pasteurize and cool the milk; add two lactic acid starters—conventional Cheddar cheese starter and streptococcus; add setting (rennet); cut the curd into one-fourth-inch cubes, stir to prevent clumping but avoid breaking curd particles; 20 minutes after cutting, cook and drain the whey; add salt; pass through a hoop covered with cheesecloth; press 30 minutes, dress, press overnight.

Science News Letter, December 15, 1956

ZOOLOGY

Elephants Outwit Electric Fences

➤ WILD ELEPHANTS are often too smart to be fooled by the shocking tickle of electric fences.

Three British scientists, J. A. Hislop, E. O. Shebbeare and A. H. Fetherstonhaugh, all of whom have had experience in Malaya, have differing opinions about the effectiveness of electric fences in keeping elephants out of areas where they are not wanted. There is no question but that elephants are difficult to deal with because of their size and sagacity.

The conclusion seems to be that electric fences are better than no fences at all, but that care must be taken in constructing them and seeing that they are in working order.

Electric fences have been found useful in protecting rubber estates in Malaya from wild animals. Even the elephants can be kept out of restricted areas provided the electric fences are not erected across a major migration route, and the elephants have adequate fodder and enough room in which to roam.

Science News Letter, December 15, 1956

MEDICINE

Deep-Seated Cancers Hit

➤ HOPE FOR TREATING persons with cancers deep within their bodies by bombarding the cancers with rays from a powerful cyclotron was voiced by Dr. Rollin K. McCombs, University of California.

Such bombardments have been used to penetrate successfully the deep-seated pituitary gland of breast cancer patients without damaging the tissues in between, Dr. McCombs told the Radiological Society of North America meeting in Chicago.

With protons produced by a 340,000,000-electron-volt cyclotron at the University of California, 26 patients with advanced stages of breast cancer were treated. All 26 failed to respond to conventional treatment.

Only two patients are still alive, Dr. McCombs reported. However, he said, hope is held out for the cyclotron as a weapon in the fight against cancer.

The California radiologist stated, "I believe we have achieved our purpose, the destruction of a deep-seated organ without damage to intervening tissues. I believe that some of our patients have been benefited and that we have demonstrated that we can depress the pituitary function and destroy the pituitary without subjecting the patient to a craniotomy, with its mortality and morbidity."

Research has also shown, Dr. McCombs reported, that in addition to five patients who showed some healing of bone lesions after treatment, there were two in which the bony metastases remained stationary for several months.

The results of using the powerful cyclotron, he said, indicate the technique will be of value in the treatment of pituitary tumors as well as Cushing's disease. Further research is needed, Dr. McCombs said.

Science News Letter, December 15, 1956