

For Better Service

# Dairy Lab Remodeled

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The Dairy Science Department at the University of Arizona is now in a better position than ever to serve the state in this important agricultural research and training field.

With red tile floors, white glazed tile walls and fluorescent lighting, the newly remodeled dairy laboratory is a great improvement over the original 1917 installation. The facility serves both as a teaching and research center in various phases of work related to milk and dairy products processing, storage, and testing.



Bob Ellis, student from Tucson, is testing milk for butterfat.

## Lab Was Rebuilt

A sizable portion of the modernization work involved a complete rebuilding of the classroom laboratory. New work tables with the latest type of acid resistant tops were installed, so that the students can make use of the best in equipment.

Milk and milk products are complex materials. They undergo many types of

changes during processing and storage. In the laboratory, therefore, students conduct bacteriological, chemical, and physical tests on the products being studied.

In the milk processing area, extensive equipment rearrangement was carried out. Now it is possible to pump milk directly from a trailer-mounted tank in the driveway into the building for processing. This has eliminated the use of 10 gallon cans for hauling milk from the farm, and is in line with the extensive use in this state of the bulk-handling system.

Milk produced by the Experiment Station dairy herd is pasteurized in the laboratory and used in the campus cafeteria. Student help is used in the handling and processing. In this way students have a chance to get practical experience to supplement their classroom work.

Equipment is available in the plant to carry out most types of processing operations — pasteurization, homogenization, separation, and the manufacture of such products as cheese, butter and ice cream.

## New Equipment

The newest item of equipment is a high-temperature short-time pasteurizer. By this device, milk can be heated almost instantly to 161°F., held at that temperature for 15 seconds and then cooled rapidly to 40°F. or below. The university is very fortunate to have equipment of this type since less than half of the institutions doing work in the dairy field have similar equipment.

Three new refrigerated storage rooms were built in the laboratory. One is designed for milk storage at 35 to 40°F, one for cheese storage at 40 to 50°F and one for ice cream hardening and storage at minus 20°F.

The ice cream hardening room is being used for studies in the use of cantaloup for flavoring ice cream and other frozen desserts. This melon is produced in quantity in the state and furnishes an appealing flavoring ingredient for ice cream. Expanding its use could be of value to both the dairy and cantaloup industries.



Bob Ellis, (left) and J. W. Stull check temperatures in the milk-pasteurizing vat.

Located on the ground floor of the College of Agriculture building on the U of A campus, this improved dairy laboratory is designed to serve not only the state's dairy industry but also the consumers, who have a deserved interest in the quality, cleanliness and palatability of dairy products which they buy. Visitors who wish to see these improved laboratory facilities are always welcome.

The control panel of the high-temperature short-time pasteurizer is easily adjusted.

