The purpose of the Dairy Herd Improvement Association program is to provide dairymen information that they can use to improve herd efficiency. Records of production enable the dairymen to cull the least profitable cows, to feed the rest according to their production requirements, and to select the most suitable animals for replacement.

The Dairy Herd Improvement program started in Arizona in 1916 but during the past 10 years has had its greatest growth. As of January 1, 1960, there were 26,259 cows in 231 herds participating as follows:

- **Standard DHIA Program**
  - Manual calculated records — 21,261 cows in 176 herds
  - IBM calculated records — 4,690 cows in 52 herds

- **Owner-Sampler Program**
  - Manual calculated records — 66 cows in 1 herd
  - IBM calculated records — 242 cows in 2 herds

- **Total On Test**
  - 26,259 cows in 231 herds

**New Method of Record Keeping**

Processing of DHIA records by the use of IBM in central processing centers is a new procedure. In Arizona the first herd to start on this program was the University of Arizona dairy herd, beginning in October 1956. As of January 1, 1960, there were 4,932 cows in 54 herds in this program. It is anticipated that within the next three to five years all DHIA records will be processed in these electronic computing centers.

In 1959 the DHIA program in Arizona had an average of 24,172 cows in 222 herds on test each month. There were 22,007 cow years reported in 198 herds with an average production of 10,658 pounds of milk and 394 pounds of butterfat per cow year.

**Herd Size Growing**

The average size of Arizona herds continues to increase. In 1959 it averaged 124 cow years per herd. There were 89 herds with an average production of 400 pounds of butterfat and over. This is 44.9% of the total herds reported. The high herd for the year of 201 cow years had an average of 14,549 pounds of milk and 515 pounds of butterfat. There were three cows which produced over 1,000 pounds of butterfat and over. This is 124 cow years per herd. There were 89 herds with an average production of 400 pounds of butterfat and over. This is 44.9% of the total herds reported. The high herd for the year of 201 cow years had an average of 14,549 pounds of milk and 515 pounds of butterfat. There were three cows which produced over 1,000 pounds of butterfat. Compared to the rest of the nation, as of January 1, 1959, Arizona was:

1. First in percentage of total dairy cow population on test, 46.1%.
2. Second in average size per herd with 105.9 cows.
4. Twenty-fifth in average fat per cow in D.H.I.A. herds.

**Production 2nd In Nation**

In Arizona the average production per cow of 8,730 pounds of milk containing 310 pounds of butterfat is exceeded only by California. The disparity between high production and low dairy cow numbers is accounted for by two facts. Arizona dairying must compete with highly efficient irrigated cotton production, and high summer temperatures in Arizona require special attentions, such as shades and cooling devices, for high producing dairy animals. Thus dairying is limited, except in time of seasonal surplus, to production for the state’s fluid milk needs.

As of Jan. 1, 1960, there were 26,259 dairy cows on DHIA test, largely from the Maricopa county milkshed. By counties, the number above is divided as follows: Maricopa—21,305; Pinal—1,375; Pima — 1,328; Graham — 954; Cochise — 521; Greenlee — 340; Yavapai — 239; Yuma — 197.

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