

● **DHIA Tester**

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the farmer has. If he expects them to do him any good he has to make use of them."

Risser checked his scales to make sure they registered "zero", and by the time the first milker pail was full, he was ready with his 20-quart bucket.

He weighed the milk from the first cow, entered the weight on his charts and then stirred the milk thoroughly before dipping his sample. Accurate sampling is just as important as accurate testing, Risser believes. "You can make an accurate butterfat test, but if you don't have a representative sample, you won't get a true picture," he said.

The sample went into a numbered bottle and Risser carried the milk to the bulk tank in the milk house.

By the time he returned, another milker pail was ready and the process was repeated. He had little time to loiter between cows, but he worked

carefully and accurately.

By shortly after 7 o'clock the 28 Holsteins were milked and the sample box closed. Risser took the samples home where he would store them in a cool well pit overnight to keep them from spoiling. He also took the Landis Herd book along with him to enter the permanent records which would be returned to the farmer next morning.

At 5:30 a.m. next morning we were in the barn again where much the same routine took place, except, this time he presented the bill and collected a check before leaving.

Conversation in the barn ranged over a wide scope, but centered mainly around dairying and milk testing. Risser recounted some of his experiences as a tester for two years in Washington and in Lancaster County for the past eight years. He has been head tester in the Red Rose DHIA for the past two years. Since Landis was formerly a cow tester, he had shared many of the same experiences of living with farm families, and they entered

me quite well with amusing accounts of their early days in testing.

Risser took the sample bottle wife-to-be in a church in Washington County while he was testing there. Her father was a dairyman, but his farm was not in Risser's area.

We stopped on the way home to pick up a tray of samples from the farm of Jacob Hess, a neighbor of Landis, who is on the Owner-Sampler program. Hess weighs and samples his own milk and keeps his own feed records. Risser tests the samples and figures the individual cow's record just as he does for the regular DHIA patrons. The Owner-Sampler records are not official, but they are a good guide for the farmer who wants a record for his own use. Risser has almost 30 of these herds under test at present.

After a delicious breakfast of eggs and sausage with the Risseres, I was introduced to the real job of the DHIA supervisor. In the basement of his comfortable home, Risser has set up a laboratory where he "runs" the samples.

Risser took the sample bottle numbered "one" and agitated it thoroughly to make sure the cream was well mixed with the milk. He poured it back and forth in two clean sample bottles to complete the mixing and drew exactly 17.5 cubic centimeters into a pipette, and then transferred it to the thin-necked test bottle. After all the 56 samples had been pipetted into the test bottles, he added a like amount of sulfuric acid to the milk samples and shook the trays to mix the acid and milk. The samples turned a rich coffee color as the acid digested the protein and other solids-not-fat. The digestion made the test bottles so warm that they could not be held in the hand.

Twenty four of the samples went into the centrifuge at one time. The centrifuge is a machine that spins the bottles at a high rate of speed to push the heavy acid and digested milk solids to the bottom of the bottle and bring the dissolved butterfat to the top. After five minutes in the centrifuge, each bottle got enough hot water to bring the level of the sample to the bottom of the neck. After another two minutes of spinning the bottles were filled with enough hot water to bring the entire fat content into the neck of the bottle.

Another minute of centrifuging, and the samples were ready for a hot water bath. Butterfat expands and contracts with temperature changes, so in order to get an accurate reading, Risser keeps the samples in the hot water bath for five minutes. With the aid of a pair of wing dividers, he measures the height of the fat column in the neck of the test bottle and reads the butterfat percentage directly from the graduations on the bottle neck.

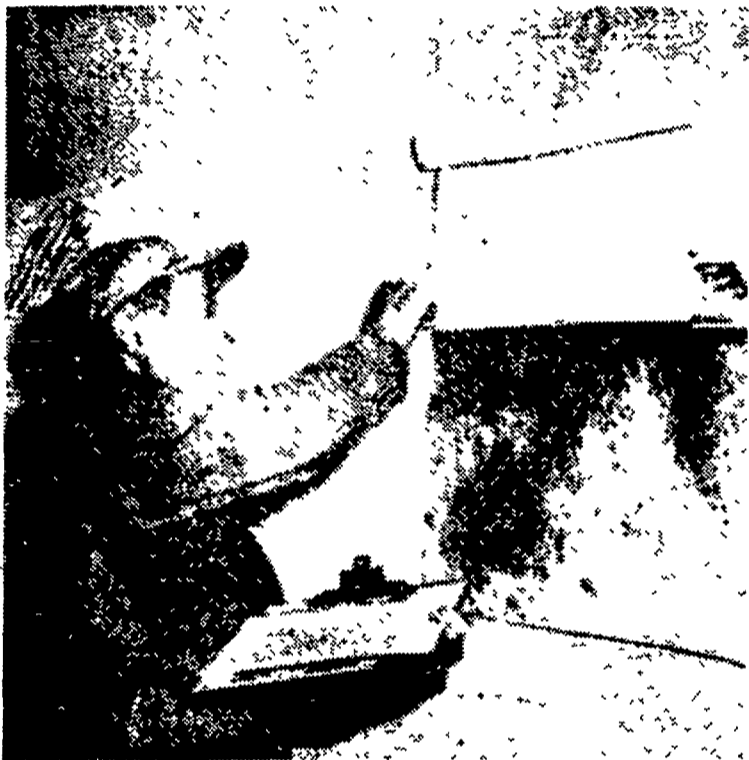
After all the tests had been entered on the record sheets, Risser emptied the test and sample bottles and thoroughly washed all glassware. He made sure all bottles were turned upside down for thorough drying.

By this time it was past mid morning and the daily report to be sent to Penn State for electronic processing had still to be completed. While Jav completed the "IBM" sheets for mailing, his wife, Lois Ann, worked on the monthly newsletter of completed lactations over 350 pounds and the monthly herd averages over 35 pounds which is sent to all members of the association.

By noon, all the paper work was completed and after call-



**AFTER THE MILK HAS BEEN** sampled, Risser carries it to the milk house and pours it into the bulk tank. Here at the farm of Jay Landis, Lancaster R6, he strains milk from one cow while Landis milks another. L. F. Photo.



**THE FIRST THING JAY RISSER** does when he arrives at a farm to collect milk samples is to get freshening, breeding, and dry dates on each of the cows from the farmer's barn charts. He transfers this information to the record which he sends to Penn State. It then becomes part of the permanent record on the herd. L. F. Photo.



**CAREFUL MEASURING OF THE TEST SAMPLE** assures an accurate butterfat test. Here Risser draws 17.5 cubic centimeters of milk into a pipette for transfer from the sample bottle to the test bottle. Milk must be kept from souring until the test is completed. L. F. Photo.



**ACCURATE SAMPLING IS JUST AS** important as accurate testing, Risser believes. He stirs the milk well in the pail before collecting a dipper full. If the milking hours vary from morning to night, he takes a larger sample from the larger milking. L. F. Photo.



**AN EQUAL QUANTITY OF ACID** is added to the milk. The sulfuric acid digests the protein and other solids-not-fat, leaving the butterfat to rise in the neck of the test bottle after a spin in a high speed centrifuge. L. F. Photo.