Dairy Herd Testing Programs

Will Dillon
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Dairy herd testing can mean higher income and greater satisfaction from dairy farming. For more than 70 years, various testing programs have been made available to help dairy farm families improve herd performance. Today, herds of all types and sizes, as well as both registered and grade cattle, are on test.

Dairy herd testing is offered throughout Indiana by joint effort of the Cooperative Extension Service and local Dairy Herd Improvement Associations (DHIA). An association is a group of dairymen who have organized (on a single- or multi-county basis) to obtain production testing service. This service is provided by an employee called a "supervisor." The supervisor's job is to gather the necessary information from each participating herd, test the milk for fat content and fill out the forms for computer processing, analysis and summarization.

Each DHIA is a member of the Indiana State Dairy Association, Inc. (ISDA), which helps coordinate production testing efforts and represents dairy farmer interests at the state and national level.

DHI records are authenticated by the supervisor because he who collects and verifies all of the information. Cost of the service varies from association to association and is in proportion to herd size; but generally, the charges range from $1.00 to $1.25 per cow per month.

Dairy farmers use these records to: (1) identify the low producers that are causing extra work and costing money; (2) develop better feeding programs that get more feed converted into milk; (3) help pinpoint mastitis-problem cows and difficult breeders; (4) check the year-to-year progress in development of a balanced dairy operation; (5) identify cows to sell as breeding stock; (6) help sell young sires to other dairymen or AI organizations; (7) establish loss of income and cattle value in case of fire or other disaster; and (8) earn local, state and national recognition for an excellent dairy operation.

DHI records are also used in extension programs, research studies, pedigree and sale publicity, and sire and cow evaluation. They are recognized by the U.S. Department of Agriculture and the dairy cattle breed associations.

Dairy Herd Improvement Registry Program

The Dairy Herd Improvement Registry (DHIR) records, which are also USDA- and breed association-recognized, are made on essentially the same basis as DHI records, but with additional rules relative to enrollment, cow identification and surprise test as specified by the breed associations. The breeder must make arrangements with his breed association to start or stop DHIR.
There are added fees payable to the breed association and to the ISDA for herds electing to be on DHIR. The additional charge is 8 cents per cow per month by the ISDA. The breed association charges vary, and further information can be obtained from them.

AM-PM Testing Program

Under this program, only one milking is weighed and sampled each test day by the supervisor. From the one weight and sample, a computer estimates 24-hour production and then uses these values to estimate credits for the test interval. Each cow’s production is weighed and sampled alternately at an AM or PM milking in consecutive test periods.

For this procedure to be official, the entire herd must be milked twice daily and milking times must be recorded at each milking. (On test day, the supervisor records the beginning and ending times of the test milking and the two previous milkings.) These AM-PM results are used as a basis for herd awards by the ISDA and in sire and cow evaluation by the USDA.

Although the AM-PM test does not qualify for DHIR, it does cut in half the supervisor’s travel time and expense, because there is no need to return for the second milking. It also makes milking available for test at times not normally used by the supervisor (e.g., Monday morning and Saturday evening). And it keeps the supervisor involved to ensure that the data are reported properly and that DHIA-owned milk measuring equipment is not damaged (as compared to the owner-sampler system).

AM-PM testing can be quite accurate, as the comparison in Table 1 between California DHIR and AM-PM program records shows. The cost of AM-PM testing is about 25 percent less than DHIR testing, because the supervisor still fills in all the forms and determines the milk fat percentage as well as working at one milking each month. Cost ranges from 75 cents to 90 cents per cow per month.

Owner-Sampler Testing Programs

Owner-Sampler (O-S) records can provide the dairy farm family with exactly the same information as the DHIR, DHIR or AM-PM testing programs; in fact, O-S testing data are recorded on the same forms. The difference is that, under this program, the dairyman himself weighs and samples the milk from each cow about once a month, and provides the information to the supervisor.

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of cows</th>
<th>DHIA</th>
<th>AM-PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Bernadino</td>
<td>70</td>
<td>15,940 lbs.</td>
<td>15,950 lbs.</td>
</tr>
<tr>
<td>King’s</td>
<td>103</td>
<td>15,400 lbs.</td>
<td>15,460 lbs.</td>
</tr>
<tr>
<td>San Joaquin</td>
<td>102</td>
<td>13,440 lbs.</td>
<td>13,510 lbs.</td>
</tr>
<tr>
<td>Sonora</td>
<td>122</td>
<td>17,370 lbs.</td>
<td>17,340 lbs.</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>15,600 lbs.</td>
<td>15,620 lbs.</td>
</tr>
</tbody>
</table>

The O-S record is excellent for on-farm management. However, the individual cow records or herd averages from this program cannot be used in USDA summaries or breed association reports.

The supervisor supplies the sample bottles and milk weighing equipment, tests the milk, sees to it that all necessary data are entered properly on the forms, and forwards them to the Dairy Records Processing Center at Raleigh, North Carolina. Cost of the O-S program ranges from 40 cents to 60 cents per cow per month.

Basic Production and Management Testing Program

Basic Production and Management (BPM) records are very flexible, for the dairy farmer himself does all the data gathering and reporting. Information may be obtained only on milk production with no fat tests reported; however, breed averages, plant-pay test or individual cow milk fat tests may be reported if the dairyman desires. The program can be further expanded to provide breeding records, due dates and average income over feed costs as well as lactation records. Cows are entered on test very easily, since individual body weights, ear tags and feed information are not required.

The dairy farm family that uses BPM records can increase returns and satisfaction from the dairy business. Analysis of the reports will: (1) help identify the low producers that are causing extra work and costing money; (2) lead to development of a better feeding program that gets more of your feed converted to milk; (3) help pinpoint mastitis-problem cows and difficult breeders; (4) provide an annual record of the progress in development of a balanced dairy operation; and (5) encourage the family to take greater interest in the dairy cows, because the high producers are identified and may be given better care.
Cost of the BPM program is nominal—from 30 cents to 60 cents per cow per month, depending on the options selected. However, like O-S testing, individual cow records or herd averages from this program are not used in USDA summaries or breed association reports.

WHY TESTING PROGRAMS PAY AND SAVE WORK

The herd testing programs described above have continued to expand over the years, because they help the dairy family earn more (Table 2) and work less (Table 3). Table 2 summarizes the results of a study conducted in New York State that shows a significant and steady increase in net income on farms that participated in testing programs. This is income after the supervisor and other bills have been paid!

Using records to increase production per cow can also save a great deal of labor. Table 3 shows that, with a 16,500-pound herd average, it takes only 22 cows to earn about $20,000 income over feed costs; on the other hand, at lower production levels, number of cows needed and the work increases more than 50 percent.

FOR MORE INFORMATION

Do you plan to milk cows over the next 5 years? If so, you should consider participation in one of the testing programs made available through your local Dairy Herd Improvement Association to insure that your cows are working for you! For more information, contact your local DHIA supervisor, a DHIA member or your County Extension Agent.

| Table 2. Increases in Net Income Over the Years on New York State Dairy Farms Participating in Herd Testing Programs. |
|---|---|---|---|---|---|---|
| Herd size | Consecutive years on test | DHI, DHIR Tests |  |  |  |  |
|  | 1 | 2 | 4 | 7 | 10 |
| 40 | $50 | $100 | $200 | $349 | $499 |
| 60 | 221 | 442 | 885 | 1548 | 2212 |
| 80 | 522 | 1044 | 2088 | 3654 | 5220 |
| O-S, BPM Tests |  |  |  |  |  |
| 30 | $10 | $20 | $41 | $71 | $101 |
| 50 | 265 | 529 | 1059 | 1853 | 2647 |
| 70 | 418 | 838 | 1673 | 2927 | 4181 |

| Table 3. Approximate Number of Cows Needed to Earn $20,000 Income Over Feed Costs (IOFC), from 1976 Indiana DHI Yearly Summary. |
|---|---|---|---|
| Milk Production /cow/year (herd average) | Average IOFC /cow/year | Number of cows needed |
| 16,500 lbs. | $890 | 22 |
| 15,500 lbs. | $840 | 24 |
| 14,500 lbs. | $790 | 25 |
| 13,500 lbs. | $720 | 28 |
| 12,500 lbs. | $650 | 31 |
| 11,500 lbs. | $570 | 35 |