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Production Test for More Dairy Profits

To show a profit from the dairy herd today, a successful dairyman can not operate on short-term planning — he must be continually raising the production of his herd. This can be done through a long-range breeding, feeding, and management plan based on accurate production records. It is the high year-after-year production that pays the dairy expenses and gives the dairyman the profit he deserves.

Knowing the average production of the dairy herd from the milk check at the creamery is of little value. This information does not indicate which cows are "freeloaders" on the good cows in the herd.

The average cow is not a money maker if the dairyman values his labor. The average production of all dairy cows in South Dakota is 5,900 pounds of milk, while the average cow on DHIA produces 10,735 pounds of milk. The difference between these cows is 4,835 pounds, or with milk at \$3.30 per cwt., \$160 in gross profits. Yet the 10,735 pound producer eats only about \$37 more in feed than the one that produces 5,900 pounds.

Why do the herds on a testing program produce more milk per cow and make more money? Simply because these dairymen have good production records and they use them to do a better job of feeding, breeding, culling, and management.

HOW PRODUCTION RECORDS CAN BE USED

It is impossible to feed effectively without some production record-keeping plan. A dairy cow can be fed grain in three ways: overfed, underfed, or fed correctly according to production. How can a cow be fed according to production if the production remains the big question? Butterfat percentages should be considered in feeding and this is impossible if individual tests are not taken. Overfeeding increases the feed bill unnecessarily and underfeeding cuts milk production. Dairy production records can be used at the very start in the feeding practices. Often feed savings alone will pay for the cost of record-keeping.

Culling

There is no other way to find low producing cows than to keep production records. If a dairyman's labor is worth anything, it is easy to understand that many cows are being milked at a financial loss (note the graph). About 100 hours of labor are involved with each dairy cow during the year. This means that the cow producing only 6,000 pounds of milk a year returns 13c per hour, while the cow producing 16,000 pounds returns \$2.48 per hour.

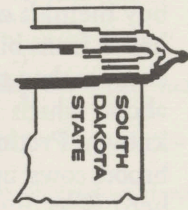
Culling out low producers is probably the great-

By Hollis D. Hall, Extension Dairyman

FOR MORE DAIRY PROFITS

production test

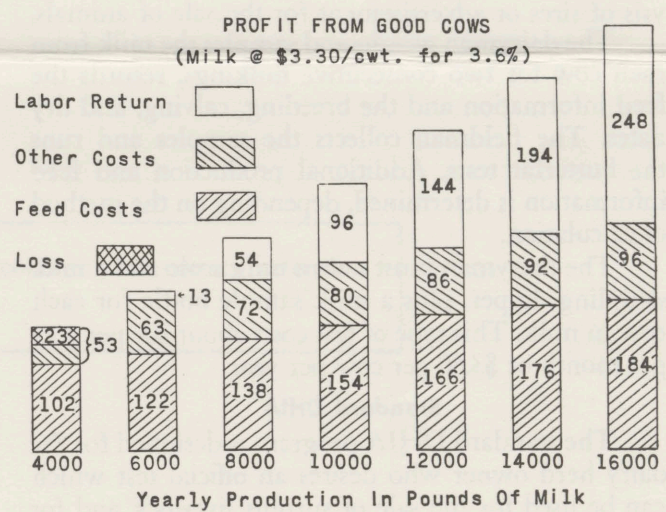
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est single use that can be made of production records. The average South Dakota milk cow, not on test, produces about 5,760 pounds of milk and returns about \$8 labor income, while the average South Dakota DHIA cow produces 10,735 pounds of milk and returns about \$114 labor income, or about 14 times as much.

Many dairymen who do not test their herds measure a cow's production by the amount she produces at the peak of her production. Production records indicate the total days in milk and the total production for this length of time. Records will reveal these "hot-shot, short-time" milkers. Two cows may produce the same amount of milk but test quite differently. There is a great difference in the value of 10,000 pounds of milk testing 2% and 10,000 pounds testing 4%. Individual butterfat tests can only be obtained from production records.



CULL THE LOW PRODUCER

Breeding

It is much quicker, less expensive, and a more sound practice to raise herd replacements than to buy them. It costs approximately \$155 to raise a dairy heifer from birth to 2 years of age. This is about \$100 cheaper than the cost of purchasing a springing heifer about which little or no production data may be known. Production records will aid in locating good brood cows upon which to build a good producing herd. Selecting or purchasing herd replacements without records is certainly a blind venture.

Production records will enable a dairyman to breed low testing cows to bulls with high test analyses, so as to develop a herd to fit his particular market situation.

Sale of Surplus Stock

After dairymen have been able to replace the low producers in their herds with heifers of high production potential, they may find that there are some surplus heifers for sale to other dairymen. Buyers who are interested in improving their herds look for replacements from cows with DHIA records. These animals command a premium sale price and can easily pay for many years of testing.

TYPES OF PRODUCTION RECORDS

The most common production record keeping systems used in South Dakota are Owner-Sampler and standard DHIA. Each is specifically designed for the dairymen's varied needs.

Owner-Sampler

The Owner-Sampler program is designed for the dairyman with a smaller grade herd who does not anticipate selling surplus cattle but wishes production information for culling and feeding purposes. These records are not official and can not be used in the analysis of sires or advertisement for the sale of animals.

The dairyman weighs and samples the milk from each cow for two consecutive milkings, records the feed information and the breeding, calving, and dry dates. The fieldman collects the samples and runs the butterfat tests. Additional production and feed information is determined, depending on the method of calculation.

The dairyman must own a milk scale and a milk sampling dipper, plus a milk sample bottle for each cow in milk. This type of test costs about 30c per cow per month or \$3.60 per cow per year.

Standard DHIA

The standard DHIA program is designed for the dairy herd owner who desires an official test which can be used for the sale of surplus livestock and for sire analysis. The DHIA fieldman weighs, samples, and tests the milk from two consecutive milkings;

records the amount and price of feed consumed by each cow; and identifies and ear-tags newly born calves. Additional production, feed, and cost information is provided for the dairyman's use in management practices.

The dairyman agrees to provide room and board for the fieldman during his monthly field visit to the farm. All necessary testing equipment is supplied either by the Dairy Herd Improvement Association or the fieldman. This type of record costs approximately 60c per cow per month or \$7.20 per cow per year.

METHODS OF CALCULATING THE RECORDS

Owner-Sampler records can be calculated either manually or by electronic data processing machines. The standard DHIA records are all processed by an electronic data processing machine. When production records are manually calculated all of the bookwork is completed by the DHIA fieldman. When production records are processed by electronic data processing machines, the DHIA fieldman submits the completed barn sheet to the processing center. The processing center for this area is at Ames, Iowa. The method of calculation does not alter the reliability of the records; however, more information is available when the records are machine processed.

The information available for each type of record under each method of calculation is shown in the table on page 5.

Owner-Sampler Barn Sheet										CARBON PAPER NOT NEEDED IN USING THESE FORMS	
COOPERATIVE EXTENSION SERVICE SOUTH DAKOTA STATE UNIVERSITY											
Production Record for Month of JAN., 1965		Owner JOHN ADAMS		Samples taken 1-21						Samples returned 1-22	
Total cows in herd 17		Address RT. 4 BROOKINGS, S. DAK.		Tester M. R. JONES		Reported 1-26					
Centering date 20											
Syle No.	Cows Name	Weight of Milk		Milk 1 day	Milk Month	%	Fat Month	Total to Date		Dates Bred Fresh or Dry	Grain per Day
		Eve.	Morn.					Days	Milk		
1.	9	15.0	14.0	29.0	900	4.5	41	243	10060	431	10
2.	26	27.0	26.7	53.7	1660	3.8	63	199	10600	381	Bred 16
3.	DUCHESS	25.0	24.3	49.3	1530	3.7	57	106	6750	242	12-21-64 14
4.	AMY	14.6	13.0	27.6	860	4.2	36	327	11410	461	Sold 9
5.	BELLE							274	10530	454	1-4-65
6.	SUSAN	21.8	20.0	41.8	1300	3.9	51	85	4190	177	13
7.	OPAL	15.0	14.5	29.5	910	3.3	30	303	10010	404	7 1/2
8.	SPOT							478	17930	707	Dry 4
9.	PRIMROSE	31.6	31.0	62.6	1940	4.1	80	33	2070	85	12-31-64 20
10.	MARY	18.8	19.0	37.8	1170	3.4	40	146	6780	264	10
11.	B-ETHEL	23.4	23.4	46.8	1450	3.4	49	97	4340	153	12
12.	GRACE	26.1	26.4	52.5	1630	3.6	59	90	4500		15
13.	SALLY	23.4	23.2	46.6	1440	3.5	50	69	2650	100	Bred 12 1/2
14.	MYRT	25.0	25.8	50.8	1570	3.0	47	63	3530	122	1-20-65 12
15.	HAZEL										Purchased 12-24-64 4
16.	SMITH	11.4	11.1	22.5	590	3.9	23	26	590	23	1-9-65 7
17.	EMBLEM	28.4	29.0	57.4	1780	2.7	48	31	1780	48	1-2-65 12
18.											
19.											
20.											
21.											
22.											
23.											
24.											
Totals								18730		674	
Average								3.6%		42.1	

FIGURE 1

LIFETIME HISTORY OF INDIVIDUAL COW Index no. 45

Barn name PAT		Tattoo no.	Eartag no.	
Registration name SO DAK JANE PAT		46WAB9255		
Breed REG. HOL.		Date of birth FEB. 1, 1960	Registration no. 3857297	
Site SO DAK VALLY PAT		Official type classification	Check if cow is progeny of artificial insemination <input type="checkbox"/>	
Dam SO DAK FOBES DORIS		Index no. 5	Registration no. of sire 913076	
			Eartag or registration no. of dam 2629349	

LACTATION PRODUCTION SUMMARY

Lact. no.	Type of record	Calv. age (mo.)	Calv. wt.	Days dry before calv.	FIRST 305 DAYS				COMPLETE LACTATION				Income over F.C.	Fieldman's initial	
					Lbs. M.B.	% B.F.	Lbs. S.N.F.	% S.N.F.	Lbs. in milk	M.B.	B.F.	S.N.F.			% S.N.F.
1	DHIA	26	12	--	11380	4.0	455	8.3	945	327	11950	478	992	376	MRJ
2	DHIA	38	14	61	13430	4.2	565	8.2	1101	340	14330	602	1175	480	MRJ
3	DHIA	52	14	63							26280	1080	2167	256	MRJ
4															
5															
6															
7															
8															
9															
10															

CALVING RECORD

Lact. no.	DATE OF CALVING			Calf's name and eartag no.	Sex	Pg. no.	Site of calf	Disposal of calf
	Mo.	Day	Year					
1	4	4	62	SUE 3672984 Reg. #	F	94	2140	weaned 8-15-63
2	4	26	63	46WAC9283	M		DUKE	
3	3	4	64	MABEL 4182396 Reg. #	F	133	JUNIOR	
4								
5								
6								
7								
8								
9								
10								

FIGURE 3

PEDIGREE Index no. 45

Sire SO DAK VALLY PAT No. 913076		Grand sire SO DAK VAL No. 816035				
Classified EX.		Classified V.G.				
Proof		Proof				
15 Dams 16,560 m. 3.6% 596 b.f.		+ 1,290 m + 456 f				
15 Dams 14,806 m. 3.5% 518 b.f.						
Diff. + 1754 m + 1K + 78 b.f.						
Grand dam SO DAK JAN Index no. 1890555		Classified EX				
		4-0 305d 12,490m 475 b.f.				
		5-2 305d 14,150m 524 b.f.				
		6-3 305d 14,590m 569 b.f.				
Grand sire SO DAK DUKE No. 889506		Classified V.G.				
Dam SO DAK FOBES DORIS Index no. 5		+ 500 m + 30 b.f.				
2629349						
Age	Days	Lbs. M.B.	% B.F.	Lbs. B.F.	% S.N.F.	Lbs. S.N.F.
2-2	306	11250	3.6	405		
3-2	310	13540	3.7	501		
4-4	305	14200	3.7	525		
5-5	305	16780	3.5	587	8.5	1426
6-6	305	15200	3.6	547	8.6	1307
Other data						

Remarks, treatment record, pictures, etc.

6-14-62 T.B. Test Neg.
 5-1-63 Milk Fever-Treated by Dr. Brown
 8-9-64 Mastitis Antibiotic treatment
 9-14-64 Mastitis Hot pack treatment

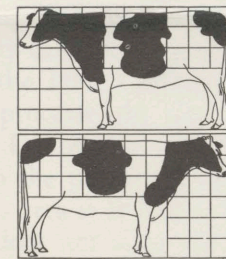


FIGURE 4. REVERSE SIDE OF FIG. 3.

can be employed. The interested group should meet with the county extension agent and the county dairy committee to formulate plans for canvassing the area for more dairymen interested in the program. Generally it is much easier to hire a competent DHIA fieldman with a large number of members than with few members.

After a sufficient number of interested dairymen have been contacted, they should all meet to form the Dairy Herd Improvement Association. A board of directors should be elected and a constitution and by-laws adopted.

The local association should operate under the direction of the state Extension dairyman through the county extension agent. All of the business affairs of the association will be handled by the local board of directors.

Total cost of equipment should be investigated and membership and annual dues set so as to defray these association expenses. An association of many dairymen will experience much lower individual

dues to pay for equipment than a small association.

The association must also decide on a testing fee and contact candidates for the DHIA fieldman position. The responsibility of hiring a fieldman lies with the association, but the training of the fieldman is the responsibility of the state Extension dairyman.

TESTING HAS HELPED OTHERS—IT CAN HELP YOU ALSO

During the 40 years that testing has been in operation in South Dakota, the tested cow has increased production on the average of 119 pounds of milk per year, while the untested cow has increased only 78 pounds annually.

Production testing has been a useful tool to increase production in herds for many years. You too can invest in this tool and advance in the dairy business.

INFORMATION AVAILABLE WITH EACH TYPE OF RECORD UNDER EACH METHOD OF CALCULATION

(Manually calculated) Owner-Sampler	(Machine calculated) Standard DHIA and Owner-Sampler cow information	(Machine calculated) Standard DHIA and Owner-Sampler herd information
(Figure 1)	(Figure 2)	(Figure 2)
<p>A. Individual Cow Information</p> <ol style="list-style-type: none"> 1. Amount of milk produced (daily, monthly, and lactation to date). 2. Amount of butterfat produced (monthly and lactation to date). 3. Butterfat test on test day. 4. Recommended daily amount of grain mix to feed. <p>B. Herd Information</p> <ol style="list-style-type: none"> 1. Monthly totals and average milk and butterfat production for the herd. 2. Yearly totals and average milk and butterfat production for the herd. 	<ol style="list-style-type: none"> 1. Amount of milk produced (daily, monthly, and lactation to date). 2. Amount of butterfat produced (monthly and lactation to date). 3. Butterfat test on test day and average test for lactation to date. 4. Amount of grain fed daily and recommendations as to the amount to feed daily. 5. Lactation to date value of product. 6. Lactation to date income over feed costs. 7. Lactation summary when cow is dried off and a 305-day lactation summary.¹ 8. Number of days dry previous to starting present lactation, days carrying a calf during present lactation, and days in milk with present lactation. 9. Calving and lactation records entered by the fieldman on the "Lifetime History of Individual Cow" form (figures 3 and 4).² <p>¹305-day lactation used for sire analysis on standard DHIA only. ²This form completed by fieldman on Standard DHIA only.</p>	<ol style="list-style-type: none"> 1. Average daily milk, butterfat, and percent test. 2. Average daily amounts of feed consumed. 3. Average daily value of product, feed costs, and income over feed costs. 4. Total herd production, feed consumption and costs, value of product, and income over feed costs for the present month. 5. Twelve month herd average on production, feed consumption and costs, value of products, and income over feed cost. (A rolling herd average is computed each month. This is an average of the past 12 months production.) 6. Total herd production, feed consumption and costs, value of product, and income over feed costs for past 12 months. 7. A DHIA lactation listing of all cows grouped by sires with actual and 305-day, 2-times-a-day milking, mature equivalent records to facilitate culling and breeding. Lactation averages, actual and 305-day, 2-times-a-day milking, mature equivalent records grouped according to calving season. This information is made available to the dairyman annually on the "DHIA Lactation Listing" (figure 5).

For additional information contact your county extension agent of DHIA fieldman.

