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RANK THE COWS IN YOUR DAIRY HERD FOR INCOME

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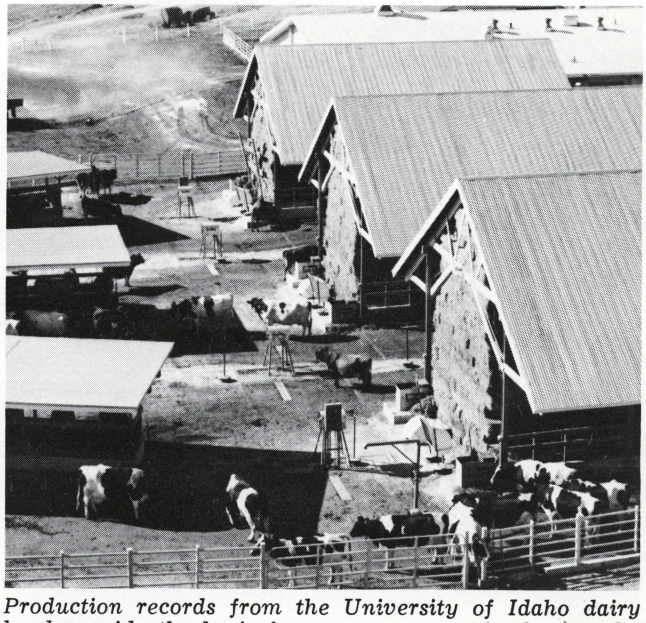
By K. R. Johnson



Production records from the University of Idaho dairy herd provide the basis for a new means of selecting the superior cows in your dairy herd.

An accurate yet simple means of identifying the most profitable cows in Idaho dairy herds is urgently needed. *Less than 15% of the cows in the state are presently production tested.* In this report Idaho Dairy Scientist, Dr. Kenneth Johnson, *outlines a new program which can assist dairymen in ranking each cow in the herd for production and income.* The system recommended is based upon many year's study of production records of the University of Idaho dairy herd. It is not intended as a substitution for DHIA testing.

Briefly the cow's milk is weighed on days 59 and 60 of her lactation, the two weights are averaged, the 59/60 factor is applied and the dairyman has a reliable guide for culling and breeding.

SELECTING PROFITABLE COWS

Dairy herd improvement depends, first, on being able to recognize animals which are genetically superior and, second, providing an environment in which they may successfully reproduce.

Records of production offer the most reliable means of selecting superior cows. If the animals in a herd are handled as a unit, so that none are given special attention, the average production for the herd is a reliable base upon which to compare individual cows in the herd. Production records offer an effective means of selection. Selection standards can be determined for each herd, but these are relative rather than rigid.

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Cows which are poor milkers under apparently favorable conditions should be culled. Under some conditions it may be desirable to allow a borderline cow a second chance. However, by the time this cow's next lactation is 3 to 4 months along, it should be fairly evident whether or not she should be culled.

APPEARANCE POOR GUIDE TO PRODUCTION

The major problem then is to determine the level of milk production for each cow in the herd. This can only be done by some kind of testing program. There is no visual measurement by which a cow's milk production level can be accurately judged. A cow's appearance is a very poor guide to production levels. Some people think they can pick out the high milk producing cows by visual appraisal. These same people are often shocked at how badly they missed the high and low milk producers when shown the milk records of the cows.

PRODUCTION RECORDS LIMITED

Despite the facts presented herein, only about 15% of the dairy cows in Idaho are production tested. This means that 85% of the dairy cows in Idaho are selected or culled by visual appraisal or the guess method, neither of which are accurate. The lack of some kind of measurement of the milk production level of individual cows is the primary reason for the slow rate of genetic improvement.

59/60 FACTOR AS A CULLING GUIDE

Since an estimate of the milk production level of cows not on a testing program is so urgently needed, a factor has been calculated whereby the 305-day lactation record of each cow can be estimated. *By taking the average milk production for the 59th and 60th days of a cow's lactation and multiplying that average by 230 an estimate of that cow's 305-day lactation milk record can be obtained.* The average estimated milk production for 455 cows in the University of Idaho herd, using this factor, was only 12 pounds less than their actual 305-day milk production records. While this factor was calculated from data for our herd it can serve as a basis until a factor for your own herd is established.

INDEXING PRODUCTION

Set a minimum level of milk production for a lactation in your herd. Cows producing less than the established minimum are ranked for culling according to the amount their production falls below the minimum level. As an example let's set 10,000 pounds of milk in a 305-day lactation as the minimum level of production for a cow to stay in the herd. Each cow's milk would be weighed on days 59 and 60 of her lactation and an average taken for the two days. This average milk weight would be multiplied by 230 to give an estimate of that cow's milk production for a 305-day lactation. The cows can be ranked according to their level of milk production and those falling below 10,000 pounds of milk can be ranked for culling.

In order to simplify the use of this factor, a table has been prepared and is used as follows: Weigh the cow's milk on days 59 and 60 of her lactation; average these two weights; read down the left column of the table marked 59-60 day milk weight until you come to the production of the cow in question; read the column to the right; this is an estimate of the 305-day milk production for that cow. As an example, a cow producing an average of 45 pounds of milk on days 59 and 60 would be estimated to produce 10,350 pounds of milk in a 305-day lactation. This factor can be used for either the Holstein or Jersey breeds and for cows of any age.

Low milk producing cows should be culled early in their lactation. After a cow has completed her lactation the owner has either made a profit or suffered a loss. This cannot be changed. In order to insure a profit the nonprofitable cows must be eliminated from the herd. This can only be done by some measurement of the cow's milk production level. *Monthly DHIA tests are preferred and each dairyman is strongly urged to test his cows.* However, for those dairymen not willing to use a monthly testing program this factor is a means by which he can estimate the milk production level of his individual cows.

Guide to estimating a cow's 305 day milk record.

Average milk 59-60 day of lactation (pounds)	Estimated milk for 305 days (pounds)	Average milk 59-60 day of lactation (pounds)	Estimated milk for 305 days (pounds)	Average milk 59-60 day of lactation (pounds)	Estimated milk for 305 days (pounds)
15	3450	43	9890	71	16330
17	3910	45	10350	73	16790
19	4370	47	10810	75	17250
21	4830	49	11270	77	17710
23	5290	51	11730	79	18170
25	5750	53	12190	81	18630
27	6210	55	12650	83	19090
29	6670	57	13110	85	19550
31	7130	59	13570	87	20010
33	7590	61	14030	89	20470
35	8050	63	14490	91	20930
37	8510	65	14950	93	21390
39	8970	67	15410	95	21850
41	9430	69	15870	97	22310

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JAMES E. KRAUS, *Director*

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