

DAIRY BREEDERS, TAKE NOTE:

USDA Begins Predicted Difference for Dollars and % Test

Editor's Note: The USDA recently added some new statistical information on predicted difference of sires to show the farmer how much a particular sire can mean to his herd. The information should be of interest to all farmers who believe that a good breeding program is a major factor in herd building and profits. The item was submitted by Gary Willier, ABS district sales manager.

Each May while most thoughts turn to Spring things, the thoughts of those involved in dairy cattle breeding are apt to stray to the May USDA DHIA Active AI Sire Summary List.

The Sire Summary is a report card for all registered dairy bulls with more than 10 daughters completing records supervised by the Dairy Herd Improvement testing organizations across the nation. The Summary is published each year in January, May and September. The May report includes all Active Sires while the January and September reports include only those sires with proofs significantly different from the May report.

This year's report has several additions which can be quite helpful to the dairyman interested in selecting bulls to use in his herd.

The USDA report compares production of all the daughters of a particular bull with that of their herdmates — those animals in the same herd calving in the same month, two months before or two months after that particular daughter. The evaluation also compares the herdmates to the average of all cows of that breed and regresses the result according to the number of daughters involved, number of herds, etc.

The end result is a Predicted Difference — an estimate of what future daughters of this bull will produce compared to the average of the breed. A Predicted Difference for pounds of milk and pounds of fat have been standard for several years.

The 1971 May report also lists a Predicted Difference (P.D.) for per cent test and for dollars.

It is no great surprise that cows which give more milk make more money for their owners. Bulls with a high P.D. for milk will sire daughters which will on the average make more money for their owners than will daughters of bulls with average or minus P.D. for milk. This is both logical and straight forward.

A more difficult evaluation, however, is the effect of the per cent test of the milk being produced. A cow producing 15,000 pounds of 3.8 per cent milk should return considerably more money to her owner than a cow producing 15,000 pounds of 3.2 per cent milk. Just how much more depends on the market and the butter fat differential premium.

With the new P.D. for dollars, USDA has attempted to provide a guideline for dairymen

in selecting sires based on both P.D. for milk and also P.D. for per cent test.

Let's look at two examples from the 1971 May report — Jack and Joe. Jack has a P.D. for milk of +880 and Joe has a P.D. for milk of +871. Daughters of both these bulls should on the average produce about 880 pounds more of milk than daughters of a breed average bull (P.D. of 0) no matter what kind of herds they are compared in. So you can see they are both the right kind of bull.

Further study of these two bulls show, however, that Jack has a P.D. for dollars of +21 while Joe has a P.D. for dollars of +50 or more than double that of Jack. This means that on the average across the U.S. Joe's daughters will return \$29 more each lactation to their owners than Jack's daughters.

As you can imagine, this is due to the higher butterfat content of the milk which will be produced by the Joe daughters.

The value of the new P.D. for dollars can be seen quite easily in this example.

The second addition to the May USDA report is a P.D. for

per cent test. While this has already been taken into consideration in determining the P.D. for dollars, it deserves some separate comment.

Per cent test is one of the most highly heritable of the economically important traits selected for by dairymen (Heritability for test is estimated to be .40 verses that of milk at .25).

As with milk production, per cent test is also greatly influenced by the environment in which the cow finds herself. Because of this, it is extremely difficult to evaluate a bull's ability to affect per cent test by looking only at the daughter level. A bull whose daughters produce 4.0 per cent milk in a herd where the average is 4.2 per cent is probably not a test improver. However, a bull whose daughters average .05 per cent more than the average test of their herdmates — even though the daughters may be averaging only 3.8 per cent — should be a real test improver.

The P.D. for per cent test estimates what future daughters of a bull will test as compared to the breed average. This should prove to be an exceptionally valuable tool for

those interested in improving milk will not make money for their owners.

Any knowledgeable dairyman knows that there is more to selecting bulls than simply looking at production proofs. Cows must not only milk well, but should also last several lactations.

The fact remains, however, that most cows which don't

profitable herd of cows.

USDA invests a great deal of money in preparing P.D.'s for bulls available to dairymen. To overlook this information is to miss out on some of the most valuable and useful tools available in the breeding of a more

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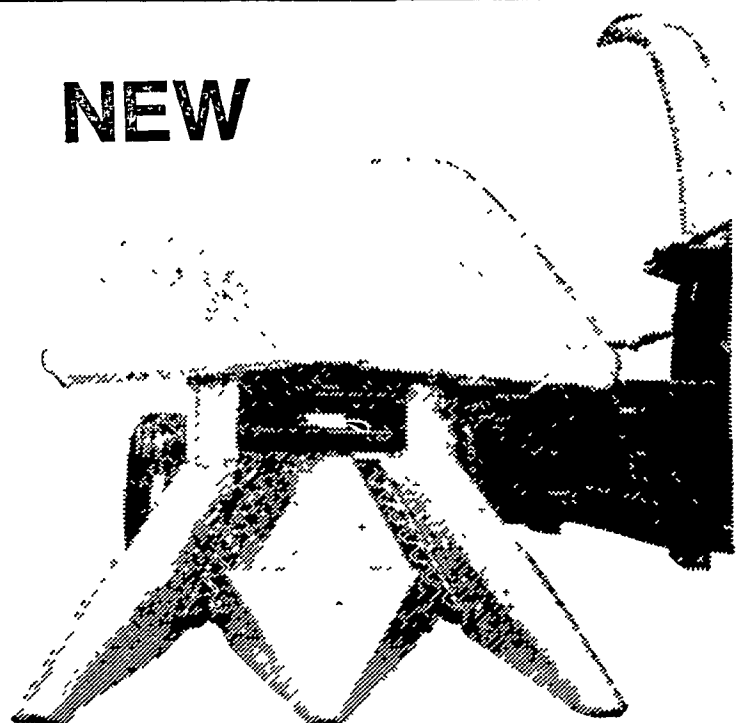


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