

# The Dairy Business

By Newton Bair

**EVALUATING THE BROOD COW.** Grandpa would never understand the jargon used in today's dairy business. Modern cow language is filled with acronyms, abbreviations and alphabetical acrobatics that can make even a Dutchman blush! But we all have to learn how to understand and speak it in order to know what's going on.

We all know what DHI stands for, Dairy Herd Improvement, is the name of the game. It's a very serious game, and the stakes are high, so the tools we use are very sophisticated. But we like to shorten the handles.

So, when we want to talk about the Estimated Producing Ability of a cow, we simply refer to the EPA value. We seldom say Predicted Difference or Estimated Pedigree Value anymore; it's easier to say PD and EPV, and a lot shorter to write. But the main thing is that we know what they mean and how to use them in evaluating our cows.

So, let's look at the CI (Cow Index), the most sophisticated formula used in today's practical genetics. It's also one of the least understood by the layman.

Many dairymen recently have received their first computer sheets listing a CI for every cow in their herd that has completed a lactation. So now's the time to

learn how they are computed, and just how valuable they can be.

Anyone who has signed a contract mating with an AI Stud knows the importance of a high CI on the contract cow.

Before you can fully understand how the Cow Index formula works, there are some terms to be defined and understood. EPA is an Estimate of a cow's Producing Ability. It takes into account her genetic background and her own environmental conditions that can affect her records.

The EPA formula uses a series of "weighted percentages" correlated among successive lactation records. Here are the weights used for various number of records:

No Records	1	2	3	4	5	6	7	8
Weight	5	67	75	80	83	86	88	89

Another term used is HD, the Herdmate Deviation. This figure can be plus (+) or minus (-), depending on whether a cow's records are higher or lower than her herdmates. The formula is: EPA=weight (for no. of records) X HD.

Example: a cow with four records and an average herdmate deviation of +5000 pounds of milk has an EPA of .80 x +5000 = +4000 pounds.

EPA values for all cows are listed on the Computerized Life History Sheet,

WASHINGTON, D.C. — The basic interest rate on home ownership loans made by the U.S. Department of Agriculture's Farmers Home Administration has been raised to 12 percent, Alex P. Mercure, USDA

and you can easily compare the EPA for all cows in your herd.

**COMPUTING THE COW INDEX (CI)** The CI is an estimate of a cow's ability to transmit her qualities to her offspring. Sire analysts check the Cow Index value before considering her for a planned mating contract.

Based on production records, it is an expansion of the cows average Herdmate Deviation (HD) and the Predicted Difference (PD) of her sire. Both are modified by a weighting factor. The factors are different from those used in calculating the Estimated Producing Ability.

No Records	1	2	3	4	5	6	7
Weight	15	21	24	26	27	28	2

The formula is: CI = .5 [(Cow factor X HD) + (Bull factor X Bulls PD)]. The Bull factor for a Bull with 90% Repeatability is .85.

Example: The cow in the above example has an HD of +5000 lb. milk on 4 records. She was sired by a bull with 90% + Repeatability, and a Predicted Difference of 1000 lb. Her CI is computed as follows:

$$\text{Cow Index} = .5 [(.26 \times 5000) + (.85 \times 1000)]$$

$$\text{Cow Index} = .5 [1300 + 850]$$

$$\text{Cow Index} = 1075$$

Obviously, the more records a cow has, with a high Herdmate Deviation (HD), the more reliable is her index. If the above cow had only one record, her CI would be 800, probably too low to be considered for the contract mating game.

Even if you don't want to bother to figure your own EPA or CI, I thought it might be fun to see how it's done.

assistant secretary for rural development, said Wednesday.

The previous rate, in effect since June, was 11.5 percent.

Mercure said the rate applies to rural housing loans to families of moderate income.

Formulas used in setting interest rates for Farmers Home Administration and other government lenders, said Mercure, are

prescribed by law and are closely tied to the cost of federal borrowing and prevailing private market interest rates for similar maturities.

The change in interest rate applies only to non-subsidized housing loans made by the Farmers Home Administration, the rural credit service of USDA, in rural areas including towns

of not more than 20,000 population.

Loans still will be available as rates as low as one percent to low-income families under the "interest credit" provision of the national housing act, Mercure said.



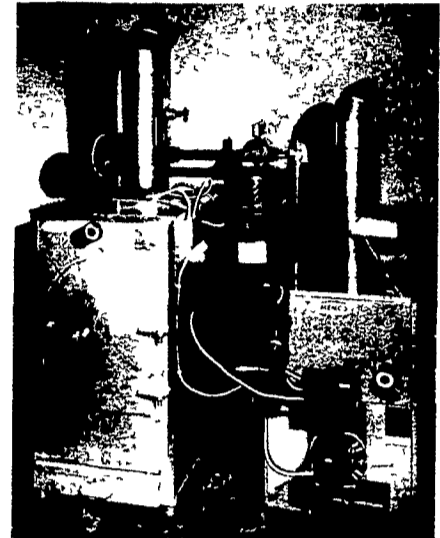
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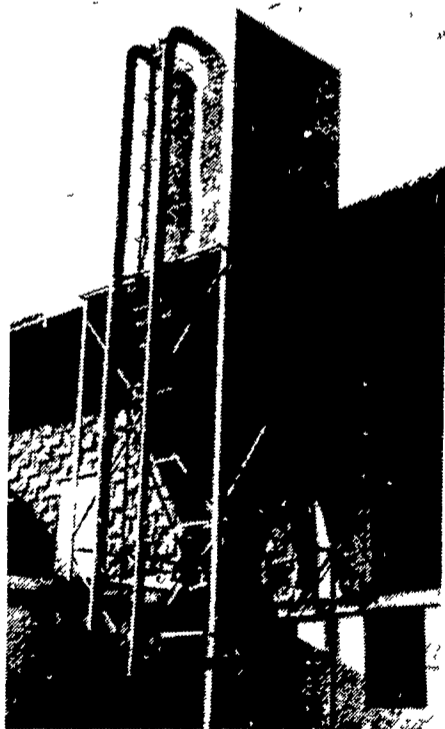
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