Two Years’ Experience in Use of the Transition Cow Index® as a Tool to Improve Dairy Herd Management

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The Transition Cow Index® (TCI™)

- Based on University of Wisconsin Research
- Introduced in January 2006
- An innovative measure of transition period performance in the dairy herd
- Utilizes extensive data from records database
- Our most successful new product introduction
- Research since then has further confirmed its value to producers
What is TCI?

- An objective measure of the effectiveness of transition period management in the dairy herd
- TCI takes a cow’s ending 305 day production from the previous lactation
- Ending 305 is adjusted using TCI variables to predict “Expected Production” for next lactation

What is TCI?

- The cow freshens, the first test (5-40 DIM) is recorded and a “Projected Production” is calculated for that lactation
- Projected Production \( \text{minus} \) Expected Production \( \text{equals} \) her Transition Cow Index
- The cumulative value of all individual TCI’s for cows calving within a defined period allows herd trends in transition cow management to be measured
Factors used in final TCI equation

- Days in milk at first test
- Previous 305-day milk
- Days in milk in prior lactation
- Start of current lactation as calving or abortion
- Start of prior lactation as calving or abortion
- Month of calving
- SCC log score at last test of prior lactation
- Days dry
- Milking frequency current lactation
- Milking frequency prior lactation
- Parity number
- Breed
- rBST use at herd level

Distribution of Herd Average TCI

- Average = -37.3
- 10 percentile = -1557.8
- Median = -31.6
- 90 percentile = 1461.7

Herd average TCI

Number of herds
What we have learned since release of TCI…

- The addition of previously excluded cows (e.g. culls, sick, etc.) has significantly improved precision of index.

- Positive correlation between TCI and survival to the next lactation…

Association of TCI with survival to next lactation

Records of 197,313 cows in 4,025 herds

+1,000 TCI = +2.7% increased likelihood of another lactation
What we have learned since release of TCI...

- Research using TCI is producing valuable information on optimum stall size and feed bunk space.

- Positive correlation between TCI and increased production in the next lactation...

Data from 197,313 cows in 4,025 herds

+1,000 TCI results in +1,270 lbs. milk in next lactation
**Take-home point…**

+ 1,000 lbs. TCI

= US $250 per cow
Distribution...

- TCI is used by herds with over 30 percent of AgSource recorded cows
  - 62 percent of herds with more than 300 cows
- Comprehensive education for DHI field staff, veterinarians, consultants, and dairy producers
- Serving as an effective management tool, AND an effective basis to measure impact of transition period management variables
- Available through AgSource or as sublicense

For More Information:

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Thank you!