

SKINNY COWS AREN'T SEXY

It's time to re-think dairy form and strength in cow evaluations by Jim Dickrell

Like anorexic-looking high-fashion models, skinny cows just aren't sexy.

Nor are they very productive. Nor fertile. Nor long for this world.

Ironically, this is nothing new. Charles Darwin wrote in his paradigm-breaking *Origin of the Species* in 1859: "It is difficult to get a cow to give much milk and to fatten readily."

And yet, dairy producers continue to select bulls that sire cows to milk heavily and be beauty queens in dairy form. "Instead, our goal should be cows that milk a lot, but don't look like it," says Chad Dechow, a dairy geneticist with Pennsylvania State University.

The problem is that average dry matter intake has not kept pace with increasing milk production. To meet nutrient demands, high-producing cows mobilize fat off their backs.

"High dairy character is correlated with an inability to maintain body condition during peak lactation," he

says. So selecting for high yield and high dairy character is a recipe for disaster, creating high-maintenance cows that are a mismatch between their genetics and their environment, Dechow says.

Selecting for strength, particularly as it is now defined, doesn't help. "Unfortunately, genetic evaluations for strength are not associated with improved health or fertility," Dechow says.

"Strength is highly correlated with body size, while a measure of strength that is independent of body size would be more appropriate," he says.

The problem is multi-dimensional:

- Cows that have high rates of body weight loss early in lactation are more likely to have displaced abomasums and metabolic disease than cows with average body weight loss.

- Cows that lose more than one body condition score (BCS) after calving have lower conception rates and delayed conception compared to cows that lose less than one half of a BCS.

- Death losses are increasing. In the 1990s, cow death losses averaged around 5%. Today, death losses have nearly doubled. "We've had tremendous increases in yield, but a decline in cow fitness, which has led to economic losses and animal welfare issues," Dechow says.

"Economic pressures on dairy pro-



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ducers will continue to require selection for high yield," Dechow says. "However, dairy producers, breed associations and dairy cattle geneticists now recognize the need to select cows that have the ability to resist disease and reproduce more efficiently.

"Emphasis placed on extreme dairy character must be reduced or eliminated, and evaluation on strength should be independent of body size," he says.

In other words, Dechow recommends selecting for yield and letting dairy form go where it will. More emphasis should also be placed on managing cows so that they are not over-conditioned at calving.

The trick is to then breed them so they are not too thin during lactation. "Breeding cows that have the ability to maintain body condition during peak lactation will result in sustainable increases in milk yield while limiting unfavorable change in cow health and reproductive performance," Dechow says. **DT**

IS BULKY BETTER?

→ High dairy form is correlated with weight loss during cows' lactation.

→ Cows that lose weight rapidly early in their lactation are more likely to have displaced abomasums and metabolic disease.

→ For more information, contact Chad Dechow at cdd1@psu.edu.