"COMPUTER COWS" MAY CRASH

By Heather Smith-Thomas

The beef industry has come a long ways toward producing animals with better performance and more predictable desirable qualities like low birth weight, high weaning and yearling weights, higher yielding carcasses and more red meat. Much of that progress has been through diligent record-keeping, recording weights, doing ultrasound testing, using EPDs for selecting breeding stock, and crunching the numbers with computer technology. This technology will continue to help us improve our cattle, but it has certain flaws that every producer needs to remember. The numbers that come out of the computer are only as good (or reliable) as the data put in. There are also some very important cattle traits that cannot be measured and numbered. A herd of broodcows (or a bull battery) selected by numbers and computer alone may be heading for a wreck.

Buddy Westphal, a long-time Charolais breeder (Valley View Charolais, at Polson, Montana) has been in the business more than 36 years and has used numbers to help develop high performance cattle with easy calving ability (a trait the Charolais breed was sorely lacking 40 years ago when he entered the business). He uses numbers and test data as much or more than any other seedstock producer, yet also recognizes the shortcomings of what he calls "computer cattle". He has some strong opinions about this, based on many years of experience in trying to create cattle that work for the commercial cattleman, the feeder and the packer.

Breeding high performance cattle that will also thrive in the real world (on the range as well as in the feedlot) is always a challenge; the stockman needs to use as many tools as possible to help make the right selections. Too many seedstock

producers are perpetuators rather than breeders, according to Westphal. They are not actively sorting, culling, and selecting toward goals that will help move their cattle forward in traits that are most needed. And many producers still don't understand how to use the numbers when making selections for breeding stock that will be used on commercial cows.

There are producers who are great with numbers but poor with visual selection. When breeding decisions are made on paper, by looking only at the numbers, you could produce cows with bad dispositions, bad udders, fertility problems, and inability to breed back under range conditions. You may then be trying to sell bulls with crooked legs, inability to hold their flesh and energy through the breeding season on the range, or a disposition that will chase you over the fence.

Seedstock producers who have selected only by the computer numbers have proven what breeding for performance can do—there are cattle out there that will give you a tremendous rate of gain and good carcass quality. But some of these won't work in the real world. They are not the total package the average rancher needs in his pastures. "Just like in Quarter Horses, when people got into certain bloodlines—they could win the halter classes but you sure don't want to try to saddle and ride them. In the cutting industry we have horses that are spectacular cowhorses and athletes but untrainable because of their attitudes," says Westphal. Whenever breeders concentrate on some traits and ignore others, the end product will eventually fall short of the mark.

"The same applies to cattle. Even if you are working with the greatest numbers available, you still need visual appraisal and the ability to judge things you can't measure by numbers—like disposition and conformation," he says. EPD's are a help, but only one tool in your toolbox. You can't rely on those big numbers alone, and you have to understand how they work—and recognize their shortcomings. Big numbers may maximize a certain trait, but optimizing is usually a better choice. A dead calf at birth has no performance, no matter what its EPD's are, says Westphal.

"My customers are some of the best cattlemen in the nation, yet many of them don't understand what EPD's mean or how they work. They think it's a race. They might look at one breed of bull that has an EPD of plus 86 for weaning weight, and another breed bull that's only a plus 30, and wonder why they should use the latter. I have to ask them, is that a BKS EPD or a pedigree estimated EPD? There's more than one kind of EPD. And the EPDs in one breed are different from EPDs in another. People are still trying to figure out and understand how to compare different breed EPDs. And the Canadian and American Charolais EPD's were tremendously different for the same bull, just because a different computer figured out the numbers," he says.

"And how did that animal get that EPD? Was it weighed against only one other calf? Did it have 100 index because it was a twin? Where did they come up with the numbers? The manipulation of numbers for EPDs is part of the game some breeders play to enhance EPDs. Incorrect numbers, whether accident or on purpose, entered into the computer can change the EPD value, and that's what's happened with some of the genetics people are using for breeding computer cows. Some computer folks would do better to get an old bowlegged cowboy who has seen a lot of cattle during his lifetime to come in and tell them, 'Nope, that one won't work' or 'Yup, those cows that have a plus 40 for milk are not going to survive up there on the mountain, and won't come home pregnant.' And maybe a 130 pound calf won't survive birth—so it won't wean at 800 pounds nor grade choice," he says.

"It makes me sick that some investors breed computer cows that pollute my breed and give Charolais a bad name; there are a lot of bloodlines that just plain don't work. Some breeders who come up with big numbers in the computer get on a 'bigger is better' tangent and lose track of what's really important. For instance, one of the greatest bulls for performance that the Charolais breed has recorded is spectacular on his EPDs, all the way through. His calves, however, were a huge disappointment. The breeders who used this semen said the calves would not get up and suck. I thought, 'Are they that big?' But no, they're not. Size was not the problem. They were simply the least lively calves you ever saw at birth—worse than a big birth-weight calf. They'd lie there looking up at you, to see if they should roll over and die or if you would bring them a bottle. It doesn't matter what the EPD's say; we don't

need that kind of cattle. This bull is nice to look at and has terrific numbers. But even when cows of another breed were bred to him, the calves had the same trouble. These are 80 pound calves that should jump right up and suck (especially since they should also have hybrid vigor) but they don't," says Westphal.

"That's an example of what can happen when a person only relies on the EPDs. The rancher needs to figure out what kind of bulls he wants, where he wants to buy bulls, who he can trust to give him the right information—someone that has good records and the right information—and then go look at that breeder's better end of cattle, and evaluate whether they will work for his conditions. Within my herd, the better end of my cattle may not work on some ranches but will exell at others. They may have too much performance, and in some cases may have too much milk, if you are saving replacements heifers." You have to match the cattle to your own ranch/range conditions. He stresses the importance of optimizing, rather than maximizing.

Some cattlemen also don't understand that EPD's are not foolproof or totally predictive of what you are going to get. "For instance, my twin sons could have statistically the same EPDs but they are totally different. One has blond hair, the other brown. One is 4 inches taller." There can still be tremendous genetic variations in full siblings even though the EPD will be the same.

"I went through this with embryo transfer calves. I could get 10 calves from the same cow and bull, and have 2 good ones, 2 bad ones and 6 in the middle—yet every one of them has the same EPDs. So which one would you buy? The EPDs are identical! Even within full siblings there might be big differences in birthweight and gestation length—and these were eggs out of the same flush, bred to the same bull. And in most cases we were using the same breed of recipient cows," he says. It's not an exact science. You need to select the animal by viewed evaluation first, then verify its value by all numbers of importance to your needs, he says.

"I worked with Dr. Bellows at the Miles City Research Station (the Charolais Association gave them grant money to do research projects) and they used a lot of my semen for some of their projects because I wanted the research data from my bulls. It helped me find out what was working and what wasn't on their commercial cows. And having their stamp on the data was what I wanted. I could tell a customer that a certain bull could give them more weaning weight, and if Miles City Research Center was also saying this, there was more credibility." They listed the bulls they used (from several breeds) and the results.

"On their Lean Red Meat study, I had 2 bulls that excelled, and if I had been stacking the numbers myself, I would not have listed them that high. Their research and results made a reliable comparison of my bulls with those of other breeds. My Charolais proved superior for growth and carcass. I do the same thing within my breed, trying to verify superior traits in the feedlot and carcass, to see what my cattle are doing for performance."

This type of data is indeed useful to a breeder. But the bottom line on whether certain cattle will work for you is to look at the whole picture—the EPDs are just one part of it, and at times can be misleading even if a person knows how to use them. As one example, Westphal points out that birthweight EPDs are only of value if the people weighing the calves plug the correct figures into the system. Sometimes a breeder's calves are not actually weighed, but only guessed at, or a breeder uses the breed averages assigned by the computer. He recalls an employee, who had worked for another purebred operation, saying that the hired help on that ranch had never weighed a calf.

"They didn't want to hurt their backs lifting and weighing 500 calves. If the calf was big, they gave it a large number; if it was small, they guessed a smaller number. The guessed weights were submitted to the breed's computer as being exact and accurate. I know they could not guess close enough for me to base my breeding program on. At our ranch we use a calf chute that restrains the calf while we tag, tattoo and weigh; it gives exact weight to the pound," says Westphal.

Another problem with birthweight numbers is that a few breeders may fudge and use incorrect numbers to make their bulls look letter. This won't make a difference on a bull that is being used by many breeders; the total numbers will even out to be fairly accurate. But on a bull that's only been used by one breeder, the erroneous numbers can really change the EPDs. The exact birth weight must be used to compute the exact weaning weight, he says.

Using EPD's can be useful only if you know all measurements were accurate and if you understand how they are derived. "Usually the accuracy of a pedigree estimated EPD is very low, yet some cattlemen are paying premium dollars to buy that bigger number. And in some cases the big number bulls may not fit their environment or may be limited in other attributes such as scrotal measurement or structural soundness," says Westphal.

"I feel a breeder should make the visual appraisal first, and then break a tie with the EPD numbers. Some bulls with great EPDs are not even capable of getting much breeding done, because of scrotal size or soundness issues. And others should not be allowed to breed a cow because of other attributes such as bad disposition or structural defects; their big numbers will make them a better steer!"