

Mama Matters

Cow herd care impacts calves and their future calves.

by **Miranda Reiman**, Certified Angus Beef LLC

Ranchers don't plan to short-change their cows. Yet, the unexpected can leave a herd lacking.

"Typically, producers do not want to calve thin cows and do not like cows to lose weight during late pregnancy. We know that is bad," says Allison Meyer, University of Missouri (MU) animal scientist, listing the side effects. "But a lot of times we end up in a bad situation late in gestation that results in cows losing weight or not getting as many nutrients as they need."

It could be drought, severe weather, poor forage quality or lack of hay stores, Meyer notes.

That sets calves up for challenges both in the delivery and the hours afterward.

"If we don't have calves that are as big as they should be when they are born, that haven't developed as they should prenatally, then we're not going to get all of the genetic potential out of them that we strive for in genetic selection," Meyer says.

They often lack the vigor and temperature regulation that fully developed newborns would have. Research 40 years ago showed cows on a higher plane of nutrition in late pregnancy had increased calf survival from birth through weaning than those in a "low nutrition" group.

More recent work at the University of Nebraska (NU) revealed feedlot steers born to unsupplemented cows required treatment at nearly six times the rate of those from better-fed mothers. They also achieved higher

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— Kim Vonnahme

rates of Choice grading and almost double the amount of Premium Choice.

In "tough situations" it can be hard to keep up with energy needs because in the last 90 days of pregnancy, fetal growth takes about 30% of the total requirements, Meyer says.

"That is often when we're also battling things like really cold weather and poor forage quality for spring-calving herds, or really hot weather and poor forage quality for fall-calving herds," she says.

"We want to make sure that calves are born at the weight they were bred for and not more or less than that," Meyer says. "The way to change birth weight is not nutrition. It's always using the genetics."

It's about more than just their start, says Kim Vonnahme, North Dakota State University animal scientist. Herd nutrition can haunt or help calves all the way through harvest.

"If we look at a steer from conception to consumption, approximately 30% of that steer's lifetime is being spent in the uterus,"

she says. The placenta accounts for almost a third of its total cumulative nutrition.

What the unborn calves are getting, and when, matters.

"If you were to give supplement to a cow at *this* time and not at *this* time, you may impact the gut and see deficiency in the feedlot performance," Vonnahme suggests. "But if you do it at a different time point, you might enhance overall muscle development or when those fat cells become marbling."

In an NU study, female progeny of protein-supplemented cows increased the ratio of calves born in the first 21 days, at 77% compared to 49% for the control group. They also had a 13-point increase in pregnancy rates overall.

"The development of a calf occurs before it hits the ground," she says. "It's really getting back to conception; cattlemen need to think about what they're feeding that dam. Not only do they need to think about rebreeding and look at that cow and her sustainability in the herd, but you're actually influencing the next generation, especially if you're going to keep those replacement heifers."

Both scientists say more research will help hone specific recommendations, but there are steps producers can take today.

Match cow herd selection to environment, Meyer says.

"Sometimes we inadvertently breed too much milking ability or think we have moderate-framed cows, but go for high weaning weights and end up with more growth and mature body size in a cow herd," she says. "So we imagine that cows are perfectly matched, but it doesn't always work that way."

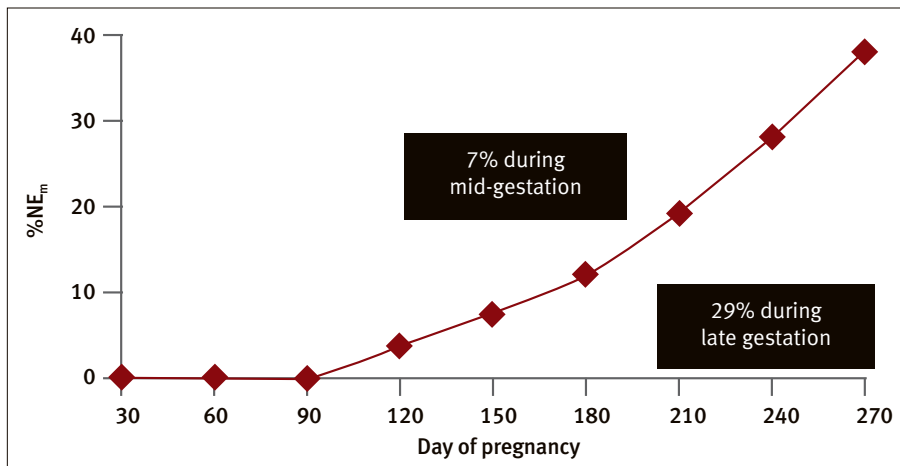
Planning for the feed emergencies is also key.

"We can do a lot of prevention prebirth," Vonnahme says.

If cows are undernourished going into calving, ranchers might be ready to supplement colostrum or bring calves into shelter for calving, for example.

"You have a few areas where you can fix management when something bad happens," Meyer says, noting it all comes down to one core fact: "Cow herd nutrition matters."

Fig. 1: Percent of energy requirements for fetal growth



Source: National Research Council, 2000.