Johnny Rossi, Extension animal scientist at the Coastal Plain Experiment Station, Tifton, Ga., is one of a growing number of beef specialists advocating a comprehensive preweaning strategy that includes deworming well in advance (60-90 days) of the high-stress event.

He notes that it is not uncommon for producers to view this practice as optional, choosing instead to forgo deworming entirely until the calves and mother cows are brought in for weaning and sorting.

Rossi sees this practice as short-sighted and fraught with economic risk. He points out that the failure to deworm calves well in advance of weaning not only has the potential of affecting how a calf physically responds to the stress and trauma of weaning, but Rossi’s research also shows a significant spread in weaning weight between calves dewormed three months before weaning and a control group that didn’t receive the treatment.

Deworming shows response

For Rossi there is no shortage of reasons for deworming prior to weaning. These pertain to both the benefits derived in the months prior to weaning as well as the benefits derived during and after weaning.

The effect internal parasites can have on nursing calves can be significant, especially when their systems are already stressed by drought conditions and limited grazing opportunities for their mothers. Rossi notes that nursing calves become infested as soon as they begin to graze and, if not dewormed in a timely fashion, there is even the remote possibility they might not survive into weaning.

“From personal experience, we have lost a calf or two from worm infestations in a particularly bad year,” Rossi says, adding that while this represents a financial loss to a cow-calf operator, a similar event involving high-potential calves could prove disastrous to a seedstock producer and his or her breeding program. Considering the cost of treatment, he adds, “It just isn’t worth the gamble when you are dealing with high-return animals.”

In the southeastern states, where most calves are born in early January to mid-March, Rossi recommends deworming in June or July, when cattle producers typically consolidate their pairs to remove the bulls, apply fly treatment, dehorn and vaccinate.
“Labor isn’t a big issue because you are going to get your cattle together and work them anyway,” he says. “At most it will take a minute or two extra per calf to deal with the worms, and you will more than pay for the price of the treatment.”

**Cost effective**

Rossi’s assessment of the return on investment (ROI) is supported by the findings of a Texas A&M University research team who reported in 2004 that in 11 of 12 trials conducted, calf weights increased 8 to 46 pounds (lb.) when they were dewormed 90 days before weaning. When they used 12.5 lb. as a conservative average gain, the return ($1.10 per lb.) minus the cost of the dewormer ($0.74 per animal) provided a net return on the investment of $13.01.

While the results from the deworming study conducted by Rossi and his colleagues at three University of Georgia (UG) Research and Education centers weren’t as dramatic as the ones associated with the Texas A&M trials, they did confirm the practice has economic merit.

The UG deworming study involved 395 cow-calf pairs — 209 at the Northwest Research and Education Center in Calhoun, 117 at the Central Branch Experiment Station in Eatonton and 69 at the Southwest Research and Education Center in Plains. Half of the calves at each center were dewormed at different dates prior to weaning, with those at Calhoun being treated 91 days prior to weaning; at Eatonton, 97 days prior to weaning; and at Plains, 77 days prior to weaning.

The remaining halves from each center were designated control groups and received no deworming treatment. To establish continuity and eliminate the possibility of infested mothers affecting the outcome of their offspring, all cows were dewormed at the beginning of the study.

Calves were weighed at the time of treatment and then approximately 30, 60 and 90 days after treatment.

Results vary by site

For Rossi, the results of the Georgia study were conclusive. All nursing calves dewormed prior to weaning increased weaning weights at all locations when compared with control groups. On average, weaning weights were increased by 12.5 lb. as a conservative average gain, the return ($1.10 per lb.) minus the cost of the dewormer ($0.74 per animal) provided a net return on the investment of $13.01.

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Penny-wise, Dollar-foolish CONTINUED FROM PAGE 311

and calf were treated and the group in which only the calf was treated, when all factors were considered the calf alone treatment was found to be most profitable.

“We found that the most effective use of the deworming dollars in our trial was deworming the calf alone,” Selk says. “From an overall economic standpoint it was the best strategy.”

In contrast, treating cows but not their calves resulted in a very small advantage in average daily calf weight gains (see Table 7, page 311). “This was probably from increased milk production,” Selk says.

Effective in humid environment

He cautions that the results from the Oklahoma studies reflect the location in which they were conducted. “This was a typical Eastern United States situation where the pastures were intensely managed, there is a lot of moisture, and the stocking rates were quite high,” he says. “I am not sure if you would see as high a response in the West’s more arid native range-type country where you would have lower cow-calf densities and, therefore, lower worm load.”

While the jury still may be out on the effect deworming has on nursing calves pastured on sparsely stocked native range, studies conducted at University of Florida’s North Florida Research and Education Center in Marianna show that several breeds of spring-born calves, including Angus, do benefit from the treatment. Dewormed calves gained 8.7 lb. more total body weight during the summer, and their average daily gain (ADG) was 0.1 lb. per day greater than their unwarmed counterparts.

The deworming returned $9.57 per head more net revenue (total weight gain in pounds multiplied by $1.28 per lb. minus $1.57 per head deworming cost). Additional labor was not included in the formula.

Benefits beyond weight gain

While Selk sees weight gain as a major reason for deworming calves three months in advance of weaning, he points out that it isn’t the only reason for adopting the practice. For seedstock producers the issue of optimizing an animal’s genetic potential during a formative period of development comes into play.

“A big part of any seedstock producer’s program is growth,” Selk says. “That can easily be inhibited by a serious worm infestation.”

He adds that a worm infestation doesn’t change the genetic capabilities of a calf, but it can influence its ability to express what genetic potential it has for the owner or the potential buyer.

“By deworming his calves at that critical time, a seedstock producer is assured that his bull or heifer will not be pulled down by Ostertagia,” Selk says. “It is a small price to pay for that kind of insurance.”