‘Hurry up the first chance you get’: Managing postpartum interval

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How a cow’s genetics respond to the environment she is managed under largely influences the length of her postpartum interval.

I was raised in the southeastern U.S. (Appalachia, to be more specific), and most of my professional career has been spent in Mississippi and Tennessee. Geographical locations with strong cultural influences have their own colloquialisms. We certainly have our fair share across the Southeast and throughout the Appalachian mountain range, both sets being unique. Two of my favorites which happen to be diametrically opposed are “Hurry up the first chance you get” and “Slow down – we’re in a hurry.” The former indicates we need to move faster, and the latter means moving too quickly could cause problems and slow the process down.

I like to apply “Slow down – we’re in a hurry” to summarize the basic principles of low-stress animal handling. But I apply the concept of “Hurry up the first chance you get” to managing cows to rebreed after the previous calving season. To achieve the economically driven objective of having cows produce a calf at about the same time each calendar year, cows need to rebreed within 80 to 85 days following the time of calving. That sounds like plenty of time (nearly four estrus cycles) for that to happen without much effort. But as most of you are aware, there is a period of time after calving in which a cow does not cycle (postpartum anestrus). That period of time from calving until the cow is fertile again is commonly referred to as the postpartum interval.

Also, consider: Just breeding back within that 80- to 85-day time frame is not the only driver of profitability. Cows that breed early in the season are generally more profitable. That brings up what is likely the most important point we can discuss relative to managing the postpartum interval: maintaining as tight a calving season as reasonably possible. If you can achieve a 90 percent or better calf crop to a 45-day breeding season, that narrow window will mean even your later-calving cows will have more time to overcome postpartum anestrus.

What factors influence postpartum interval?

The postpartum interval is not a set period of time for every cow, and it can be different for the same cow every year. The issue that makes it a major point of focus is: Its length can be influenced by several different factors – some we have a good grip on managing and some we likely do not even know about yet. As with anything we manage in cattle, the end result is a combination of genetics and environment. The length of an individual cow’s postpartum interval is a result of how its genetics allow it to respond to the environment it is managed under.

Before discussing individual environmental factors that shorten or lengthen the postpartum interval, understanding what is happening in the cow during that time should help us better understand how to manage it. The cow’s ovaries begin to grow follicles soon after calving. But those early follicles do not produce enough estrogen to make the cow show standing heat or ovulate.

After several follicles grow and regress, one eventually becomes large enough and produces enough estrogen to trigger ovulation. When that follicle ovulates, it becomes a different structure called a corpus luteum that produces a different hormone: progesterone. During a normal cycle, the corpus luteum would make progesterone for about 18 days. But the first corpus luteum after calving only lasts for seven to 10 days (called the “short cycle”). That short cycle is critical for setting the stage so the next corpus luteum will be normal. All that to say we need to manage cows so the short cycle occurs for most cows, so they undergo that short exposure to progesterone before starting the next breeding season.

A number of environmental factors influence how soon after calving the short cycle occurs. The major players are the presence (or absence) of a calf, nutritional status, health status, age and calving difficulty. Having a plan in place to manage these factors at the optimum level for your business model should give your cows the opportunity to breed back as quickly as you need them to.

Most would agree nutrition has the largest influence on the cow’s ability to breed back quickly. We usually evaluate nutritional status by body condition score. But realize that condition scoring provides merely a snapshot and, unless you evaluate it repeatedly, it does not tell you whether a cow is gaining or losing weight. A cow with marginal condition gaining weight will usually be more fertile than a cow with a bit better condition but losing weight. Very basically stated, when a cow receives enough nutrition, it signals the brain, pituitary and reproductive organs it is ready to support another pregnancy and lactation.

To reiterate a point made earlier, each one of these factors that can lead to late breeders and open cows can be more easily managed in a herd
calving in a short window. Nutrition can be controlled more precisely, vaccination protocols and health management can be delivered more timely and difficult calving can be watched for more closely if the season is concentrated and management is focused. The gateway to effectively managing the postpartum interval and getting cows bred back quickly is a concentrated breeding season and using management to eliminate females that do not breed during the season you define. Ultimately, this may be the most effective means of selecting genetics that will excel in the environment you provide. But however diligent your management is, there will be situations like drought where giving cows and heifers a “leg up” might be necessary to avoid the need to replace too many open cows or late breeders in one year. Basically, override the system early in the process and then make sure they have enough nutrition later when it is more available. Temporary calf removal used to be a common approach to reducing the postpartum interval. The presence of a suckling calf signals the cow to delay the short cycle, so removing the calf for 24 to 48 hours can make a cow ovulate. However, temporary calf removal is not as widely used these days since we are able to directly apply progesterone to accomplish a similar outcome.

Tools to “kick-start” the cow’s cycle
Remember the earlier explanation about how short exposure to the hormone progesterone stimulates the resumption of normal estrus cycles? When we use an estrus synchronization protocol that includes progesterone – and most synchronization protocols for beef cattle include it – we mimic the natural short cycle and “kick-start” cows that have not done it themselves. This can be done for A.I. or natural service. Short exposure to progesterone has come to be considered one of the most beneficial components of estrus synchronization and A.I. And many producers have also begun using progesterone for synchronization in natural service breeding programs with very positive results because it decreases the postpartum interval. Both approaches are especially useful for first-calf heifers trying to breed for the second time.

Getting your cows to cycle sooner, breed faster and calve earlier requires managing them to “hurry up the first chance they get.” Sometimes, cows need some assistance when factors beyond our control lead to a longer postpartum interval, usually through reduced nutrition. Applying progesterone to synchronize estrus for A.I. or natural service is an ideal way to help cows – especially young cows – overcome that disadvantage. But having a plan in place and sticking to it year after year so your herd can adapt itself to the environment is important, and a condensed calving season is the gateway to making that plan a reality. So we will also do well to remember that (and I’ll leave you with another one of my favorite sayings) “doing everything all at once takes a long time.”