

Calving date considerations

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Why worry about calving season dates? Calving dates are the key driver of most of the other operations and practices of a ranch. A list of the potential management aspects that might be manipulated to create a more resilient sustainable ranching operation include calving dates, winter grazing, drought management destocking plan, cow size, and retaining ownership of calves/yearlings. Calving dates often have the greatest effect on how a ranch is managed and the opportunities available to minimize costs. Calving season fits into a bigger picture of sustainable ranch livestock management in the current environment of higher input costs, lower prices, higher feedlot costs, variable frequently dry climate, and other challenges. We offer the following thoughts on calving dates.

Early calving

Early calving is the new traditional practice that evolved in the 20th century with increased mechanization, hay production, and alternative feeds. Dates vary from calving seasons that start in January to those in April. The array of production practices associated with cattle production and marketing has adjusted in synchrony with the early calving dates. Customary lifestyles are comfortable for many producers.

The following is a list of early-season calving considerations.

1. Larger/older calves to trail to federal allotments or make pasture moves

Many federal grazing allotments are distant from the ranch. Customarily, cattle are trailed to these permits. Trailing younger calves with their mothers is somewhat difficult in many instances and trucking is expensive. Earlier calving is probably also more conducive to cattle management and grazing systems typical of federal allotment grazing practices. Moving several hundred pairs with young calves could be time-consuming.

2. Breeding before going to common allotments

Common allotments have several operators with different breeds and quality of cattle. While some allotments have grazing associations that enforce breed types and bulls, those that do not would create difficulty for individual producers to maintain a breeding program except with early breeding.

3. Bigger calf in fall

Producers who sell weaned calves in the fall desire larger calves to yield a larger gross return.

4. Breeding before neighbors turnout (no bulls getting to cows before time)

Maintaining a breeding program even with fenced range could be difficult where adjacent

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pastures might have different breeds of bulls.

5. Cull cows are fatter in fall because of a longer time since milk production declined

Early-calving cows normally reduce milk production while forage quality is relatively high. This allows them to gain

substantial weight before fall because the nutrient drain of lactation is reduced.

6. Earlier calving matches calf nutritional requirements to forage quality available in late spring and summer

An early calf's rumen is fully functioning at 60 days when grass is at a high nutritional level so average daily gains will be relatively high.

7. Grazing systems with frequent cattle movement

High-intensity, short-duration grazing systems with moves at three to five day intervals could be especially difficult with small calves.

8. Avoiding wet spring weather and disease

Many producers have found that when calving in January and February when the weather is cold and soils frozen, disease in young calves is minimized as the disease organisms remain frozen. These months are typically colder but dry with little snow.

Late-spring calving

The appropriate temporal window in late spring for a calving season will vary by location as the event should coincide with the best nutritional availability from rangeland or pasture and be sufficiently later than spring greenup so cows have adequate time to regain body condition after loss of weight over winter.

The following is a list of late-season calving considerations.

1. Low stress on cows (and manager); no shed calving

Late spring calving would normally occur while cows are on rangeland or perhaps seeded pasture. This removes the stresses of a cold, crowded environment typical of many calving operations. With warm weather and good forage, there will be no nutritional stress. Calving ease difficulties (distocia) will be sharply reduced or eliminated because of better physical condition and better nutrition of the cows. Managers will not be subjected to the all-night-calving-barn-watch scenario.

No calving facilities are needed. Calving on range or pasture makes calving pastures or sheds obsolete. There should be no cold-stressed calves by the kitchen stove. Stories about cold calves in the house are going to go away.

2. Less feed required over winter; more winter grazing opportunities because of lower nutrient requirements of cow in mid-winter; hay reserves are mostly just insurance

The typical low-quality forages present on rangelands in late winter do not provide a diet up to published National Research Council (NRC) requirements regardless of pregnancy status; however, late-calving cows in mid gestation have their lowest requirement of the year in winter, and the natural forages meet requirements for most of the winter. Rangelands with abundant, palatable shrubs may provide adequate nutrition all winter. Even in environments where hay is required because of deep or crusted snow, the length of time hay will be needed and the amounts needed are reduced.

3. Lower death loss to enteric disease with dispersed calving on green grass and less distocia (greater calving ease)

Commonly, there will be a gain of several percent in the number of live calves and in their survival due to greater calving ease and less opportunity for disease to spread in a dispersed herd. Better nutrition leading up to a late calving date allows cows to regain body condition from over winter, and they will be in better physical condition due to the exercise of traveling on rangeland.

4. Better breed back, late breeding season

While cow's nutritional status in late summer may not be as good as earlier, many ranches with late calving report that breed back is better than with earlier dates, although others report contrary results. It is well known that most wild and many domestic ruminant's breeding season is mediated by declining day length resulting in late spring birth. Research suggests the same is true of cattle even though domestication and, particularly, supplemental or replacement feeding at unnatural times of the year has obscured their natural tendency toward late summer breeding. Controversy remains in this area also. Recent research suggests that a period of higher nutrition has the effect of increasing successful breeding. The over-summer nutritional status may replicate these effects. There may be greater potential for utilizing artificial insemination and other management intensive breeding tools when breeding during the less labor demanding time of the year, ie. September, typical of late calving operations.

5. Less problem developing and calving heifers

Heifers have historically been difficult and afforded special feeding regimes and a special breeding/calving season. Unfortunately, the feed cost of forcing early heifer development

combined with the lower initial breed up, lower breed back after the first calf, and greater calving difficulty with lower calf survival would appear to question the reasons for early calving and contemporary heifer development practices. Heifers generally perform better with late season calving and alternative heifer development practices.

6. Better price/pound for lighter weanling calves or retained calves will be at a better weight to enter feedlot the following late summer; lower trucking cost per calf if fall-weaned calves are transported

Late-born calves are always lighter in fall and will return less if sold at the customary time; However, following the markets carefully and opportunistically selecting appropriate strategies for sale or retention is necessary to optimize income. Historically, lightweight calves have brought a higher price per pound because the cost of gain in feedlots, wheat pastures, or summer range the next year was sufficiently low cost that the added value would compensate for higher animal cost. Currently, higher-cost feedlot gain makes retaining ownership for added value on the ranch more attractive. Birth date has little effect on the weight of long yearlings ending their second summer because of the compensatory gain after a very low gain over winter. If weanling calves are the product sold, delaying sale to winter or early spring can frequently recover much of the price differential between early- and late-born calves due to their weight at fall weaning. The low weaning weight in fall has the disadvantage of minimizing the opportunity to compare weights with neighbors.

7. Lower break-even cost (unit cost of production)

Modeling of year-round cow nutritional maintenance costs indicate that cow costs will be lower with June calving than calving in any other month in southern Wyoming. Best dates at other locations might vary with forage type and dates of beginning growth. Later calving dates reduce the quality and amount of feed needed by the cow during winter. Winter feed costs are typically the greatest proportion of annual costs. The lower costs could suggest that the margin between unit cost and selling price would be greater with late-born calves. In addition, greater calf survival would further enhance the amount of calf production. Modeling of potential feed costs suggest that fall calving, while having many similarities with late spring calving, will incur higher feed costs. Recently developed ranch economic models suggest that over a long planning horizon both late calving and retaining ownership through yearling age are more profitable than conventional early calving and selling weanling calves in fall.

8. Balancing the cow's needs to the availability of nutrients from range

Ranches produce forage. Any additional nutrients purchased to supplement cows add cost. Management strategies that maximize the proportion of feeds provided by forage play to the strength of the ruminant system and minimize the cost of maintaining a cow over the year. Since winter forages are lower quality, the cow's nutrient requirement should be low to effectively use that resource. Likewise, the



high nutrient requirements associated with fetal growth and lactation should occur when natural forages can provide these nutrients.

9. Better grazing location control with younger calves; grazing management opportunity using young calves and low-stress handling techniques to hold cows in a location

With young calves, cows tend to leave the young calf while going to water, especially when water is a distance away. On pastures where better grazing distribution might be desired, cows with calves can be moved using low stress techniques to planned locations. Low-stress handling makes moving cow-calf pairs feasible. Cows will be more likely to graze and return to these locations as the calf will be frequently be left when they go to water. The duration of this response depends on the effectiveness of the low-stress handling and the dependence of the calf on milk for liquid instead of water.

10. Younger, less-expensive bulls can be used because of the later breeding season

Typically, bulls are born very early and fed abundantly to reach a large size by the time the typical producer with early calving wants to buy the bull. Is a feed-lot bull what is needed? Alternatively, smaller-sized, range-raised bulls may be available from bull producers at a cost lower than the typical feedlot-fed bull. Smaller, not inferior, bulls, may also be available to the careful shopper.

11. No frozen ears and tails or dock in price because of these

Early calving seems to inevitably have its share of cold weather. Subfreezing weather, besides the heavy toll on nutrient reserves, can result in frozen extremities. Calves look odd with reduced ears or no tails. Occasionally, feet freeze. Newborn have frozen to the ground immediately after birth in freezing weather.

12. Less (no extra) labor for calving season

Because of minimal calving difficulties and disease incidence, calving in warm weather does not require the constant attention demanded by early calving seasons. Minimal concerns are not worth the constant checking and associated labor typical of early calving. Other ranch duties, such as irrigation water management, are not hindered by attention to calving.

13. Less chance of predation losses due to swamping (matching birthing time with wildlife) and later season facilitates maternal aggression because cows are stronger

A well-established principle of wildlife biology, swamping is the term used to describe when a plethora of young are all

born within a few days. So many are born in the short time that the chance of predation of an individual is much reduced. As is evident to many sheep producers, the level of predation on lambs drops substantially when young of deer, antelope, and other species flood the landscape and provide natural alternative sources of food for predators. Cows will be stronger and more aggressive due to better nutritional status and smaller chance of difficult births.

14. Reduced costs of adding gains to retained yearlings; late-born yearlings seldom weigh less than early-born yearlings at the end of second summer

Compensatory gain at the beginning of green range feed in spring is common. This added gain potential results in late-born calves weighing similar to early-born calves at the end of summer in their second year. While not realized by those who sell weanling calves, compensatory gain benefits accrue to retained ownership.

15. Less grass tetany because the cow nutrient requirement is lower when tetany is prevalent

Grass tetany is prevalent in early spring, particularly when damp, cloudy conditions promote rapid growth of cool-season grasses. The deficiency of magnesium that precipitates the tetany is exacerbated by heavy nutrient demands such as during early lactation. Warm, sunny weather when late-calving cows are lactating does not foster the growth physiology in grasses inducing tetany that is prevalent earlier.

16. Greater flexibility in marketing

The lighter weight calves will provide a greater array of options as to when they might be sold ranging from weaning time through slaughter. When corn was cheap, an early-born large weanling calf could be fed to finish without additional range grazing. The late-born calf is not in synchronization with this model and may be marketed at times when the calf supply is smaller and prices better. Open/cull cows would probably be sold later than the general market peak numbers. Later weaning of late-born calves with potential retained ownership would tend to keep the income from that calf crop in the same year with associated tax benefits.