

Double Trouble?

In the last few years, many herds have started to notice an increase in the number of twin births. Although cows are animals that are meant to only have one calf per pregnancy, sometimes we can get more than we asked for. As we have worked to improve genetics, fertility rate and management styles, we are suspecting that we have accidentally worked to improve the twinning rate in our herds.

Why are twins becoming more common?

There are many potential factors that contribute to twin production; however, some are considered to play more of a role than others.

1. Milk production

- High producing cows have increased feed consumption to match their body's demand for milk production. As a result, the liver is working quite efficiently which leads to faster breakdown of natural hormones, leading to a low progesterone environment around the ovaries, and increasing the production of two follicles which can lead to twins (for instance, Holsteins that produce 45kg or more a day, have ~50% increase chance of carrying twins).

2. Genetics

- Some cows and pedigrees have been shown to be more prone to producing twins.

3. Seasonality

- Heat stress and other environmental stressors can play a large role in the health of a cow. Ovary function and fertility are easily impacted by these stressors, and can lead to some abnormal functions (i.e. poor cycling, poor conception rate, double ovulation (twins), etc.).

4. Parity

- Older cows' bodies do not function at the same level as heifers and have a higher risk of twins. This can be a result of differences such as hormone metabolism, milk production levels, and biological functions.

5. Low progesterone production during heats

- Cows that are not going through heat cycles well prior to ovulation; or improper timing of starting hormone protocols can lead to non-ideal environments for proper ovulations.

Why should I care about twins:

1. Animal health / transition disease

- Calving: these cows tend to calve 2 weeks earlier and are more likely to experience difficulties during calvings
- Dry period: due to earlier calvings, these cows tend to experience shorter than ideal dry periods.
- Transition disease: higher risk of retained placentas, metritis, displaced abomasums, & ketosis
- Longevity in the herd: increased risk of culling as in their next lactation, they tend to experience longer days open, higher number of services to conception, and potentially lower production.

2. Calf health

- Abortions / stillbirths: due to the structure of the uterus, twins experience an increase in the risk of abortions and stillbirths, especially in pregnancies where twins are in the same uterine horn. This is because there is reduced space in the uterus and limited blood flow, leading to reduced viability of the pregnancy.
- Health after birth: calves born as twins are known to be smaller in size and weight compared to single calves. As a result, they are more at risk of disease and dying during the first few weeks of life.
- Free-martins: female-male paired twins result in females that are not built properly due to blood hormone interactions in-utero. As a result, most female twins (if born with a male sibling) will have no/little reproductive potential in the herd.

How can we identify twins before birth?

The most accurate way to diagnose twins is through a rectal ultrasound, performed by a veterinarian. Early detection of twins is critical, as gestation continues, and the calves grow, identifying twins becomes more difficult. Twins can be first detected between 30-35 days; during this time, viability of both calves can be assessed. Additionally, during this ultrasound exam, we can determine if twins are on the same side of the uterus and discuss the risk of pregnancy loss.

Some herds rely on alternative methods, such as milk / blood proteins to assess pregnancy status. However, determining the presence of twins with these tools is unreliable and we are unable to determine the viability of the pregnancy.

Can I reduce the presence of twins?

In some cases, reducing the number of twins that we experience in our herds can be appealing for some clients. Although no solution is 100%, there are things we can implement to try to reduce the risk.

1. **Hormone protocol selection**: working with your veterinarian to pick hormone protocols that ensure follicles develop in a high progesterone environment, reducing the risk of multiple ovulations prior to breeding.
2. **Environmental management**: improve the animals' environment, through heat stress mitigation (i.e. fans, water access), feed access, stocking density, and overall animal health can ensure sound reproductive performance of our animals.

How do I manage cows that have twins?

1. **Drying cows off sooner**
 - Cows that are identified with twins during herd health / pregnancy checks, should be recorded and dried off **2 weeks sooner** than other cows.
 - Since twin cows are likely to calve sooner, by altering their dry off date, we can ensure they have an adequate dry period, & reducing the transition stress and disease risk on these cows
2. **Monitoring closely during calving**
 - Twin cows are more likely to experience difficult calvings, and monitoring their progress more intensely will allow for quicker intervention and improved likelihood of outcomes.
 - **Fun fact**: Breech calvings (where all you can feel is the butt and tail) are most seen in twin pregnancies.
3. **Monitoring the dam post-partum**

- Due to increased risk of transition disease, monitoring these cows closely for retained placentas, metritis, reduced feed intake, ketosis, etc. is critical.
4. **Calf care:** is very similar to that of single calves, but twins are more sensitive due to their smaller size.
- **Colostrum:** Ensuring calves get adequate quantities of colostrum is critical, whether a twin or not. Providing a **minimum of 4L of colostrum in the first 6 hours of life** will improve the health of our calves. Twins are at a higher risk of inadequate consumption of colostrum, especially if not supplemented. Providing colostrum, through colostrum replacer, fresh colostrum or thawed-frozen colostrum is **key**.
 - **Neonatal care:** calves need to be dried off, provided a clean/warm environment, watch for signs of scours, and ensure sufficient consumption of colostrum and milk.

Are there economic impacts to having twins?

There are many different theorized estimates of the cost of twins on producers available. One study suggests that the costs range from \$59 to \$161 (USD) per twin pregnancy, even accounting for additional revenue from the sale of two calves. However, this estimate was from a 2021 study, when calf prices were not as high as they are currently. Nevertheless, it provides a reminder that identifying twin cows and managing them slightly differently can be very important and help reduce future costs.