

Fewer measurements, greater gains!

Déborá Santschi, Ph.D., Agr.
Nutrition and Management Expert, R&D

Steve Adam, Agr.
Dairy Production Expert on Comfort, Behaviour and Well-Being, R&D, Valacta

Measuring your heifers takes time and patience, so why do the experts insist on it? Because it's important! Because the latest research shows that the greater the weight gain in early life (0-2 months), the greater the milk yield in first lactation. Because the ideal time for first breeding depends on the heifer's weight, not age. Because once pregnant, the heifer needs to keep growing properly to produce a healthy calf and maximize milk production. The good news is that if you do your measuring at strategic times during growth, you do not need to measure your heifers as often as was previously thought.

A simple method and specific targets

A simple method for monitoring your heifers' growth is to measure them four times, at the most critical periods of their lives: at two months, at six months, at first breeding (around 13 months), and then again during pregnancy, to ensure that weight gain is maintained. So instead of measuring all your heifers on the same day, you can measure them as they reach the ages indicated in the table below. Then you just need to compare your results with the target weights to determine if your rearing practices are effective or not, and adjust them as needed.

Age	TARGET BODY WEIGHT (KG)				
	HOLSTEIN	AYRSHIRE	JERSEY	BROWN SWISS	CANADIENNE
2 months	100	90	65	95	75
6 months	200	180	135	190	150
13 months	400	330	255	350	280
Pregnancy	Ensure weight gain is maintained				

Target at two months: 100 kg

The first two months of life are critical, as they influence a heifer's health, growth and future milk production. It is generally recommended that heifers double their birth weight by 60 days of age. If we assume a birth weight of 45 kg for Holsteins, heifers should weigh at least 90 kg at this age, and there is no maximum. If you are falling short of that target, consider the following:

- 4 L of colostrum within the first 2 hours of life
- 8 L/d of milk or milk replacer
- Consistency: temperature of the mixing water, feeding times, temperature of the milk at feeding
- Milk replacer mixed according to the supplier's instructions
- Continuous access to clean water from birth
- Access to palatable feed from the first days of life
- Minimum competition
- Optimal biosecurity to prevent disease

Young calves are particularly sensitive to poor air quality, which can greatly reduce growth. But ensuring an adequate supply of fresh air at ground level is not easy with conventional ventilation systems, particularly since calves spend most of their time lying down, often in solid-sided pens. Fans, ducts or tunnels may be required to redistribute fresh air in the vicinity



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of the calves. In cold weather, however, air speed at calf level must be kept below 60 feet/min (1 km/h) to avoid drafts. Until the age of four to six months, calves also need an ample supply of bedding to help maintain body heat; before this age the rumen is not fully functional and generates little heat.

Target at six months: 200 kg

At six months, heifers are often in groups and more difficult to measure, but an assessment at this stage

finished eating may suffer from nutrient deficiencies, with consequent delays in conception.

Group size should also be limited to a maximum of ten animals to minimize competition. In Quebec's smaller herds, a maximum two-month age range is recommended to limit the weight difference within the group (65 to 100 kg, depending on age).

Target at 13 months: 400 kg

Once your heifers have reached puberty, it is important to breed them at the right time to avoid unnecessary rearing costs. By measuring your heifers at 13 months, or even before, you will be able to determine the ideal time for first breeding, with a better chance of conceiving.

Target during pregnancy: Maintain weight gain

The measurements in Valacta's database show that weight gain in most heifers slows down after conception, but this shouldn't be the case! Pregnant heifers need to continue growing to support their calf's development. The demand for protein is high in the last trimester of pregnancy to sustain both calf and mammary gland development, enable the heifer to produce good quality colostrum, and ensure she continues to grow. It is therefore imperative that you measure your heifers at least once, mid-way through pregnancy or when transferred to pre-fresh pens, to monitor weight gain and determine if you need to make any adjustments.

You can now predict when your heifers will be ready to breed

Valacta now offers a free web tool that predicts the growth curve of a heifer based on individual measurements. The curve is used to estimate the age at which the heifer will reach the ideal weight for first breeding. All Valacta clients and their service providers now have free access to this tool on their personal Valacta site.

allows you to ensure that the transition to puberty is going well. If your heifers are weighing in under 180 kg at this age, you probably need to review your practices. Likewise, heifers over 250 kg at six months are likely a little overweight and gaining inefficiently. There are a few avenues to explore if you are too far off the 200-kg target.

BREED	RECOMMENDED WEIGHT AT FRIST BREEDING (KG)
Holstein	400
Ayrshire	350
Jersey	260
Brown swiss	375
Canadienne	300

- Wean gradually by reducing the quantity of milk fed by half every five days.
 - Implement one change at a time during weaning (housing, feeding, treatments).
 - Offer palatable calf feed that maximizes lean gain.
- Before breeding your heifers, make sure that all the heifers in a group have access to the feed bunk at the same time. Animals forced to wait until the others have