

# Why targets, benefits of weighing

On-Farm  
Research

## Key Points

1. Set live weight targets specific to the cows in your farm system.
2. Setting targets allows you to know what you are aiming for to ensure optimal cow performance.
3. Setting targets and monitoring progress means you can be pro-active in making sure you achieve targets.
4. Weighing is more accurate than either weigh band or 'eye-o-meter'.



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Calf Rearing Fact Sheet 4.1

## General

- Setting targets involves identifying goals for the live weight of dairy animals at a specific time or age.
- Within the dairy industry, targets are often referred to as a percentage of mature live weight. Mature live weight is affected by breed but also varies between farms and farm systems.
- Know the mature live weight of your herd and then establish target live weights for stock starting at 10-12 weeks.
- To establish the mature live weight of your herd either weigh 10% of your 6-8 year olds in Dec/Jan (Spring calving herd) or use the following formula:-  
$$\text{Expected mature live weight} = 503 + \text{Live Weight Breeding Value}$$

Note—Live Weight Breeding Value can be obtained from your herd improvement organisation.
- Monitoring progress is important as it allows you to have confidence that you will arrive at the destination (mature live weight) on time and reap the benefits OR be alerted early on and be able to take remedial action to get back on track.
- See Farm Fact Sheet on setting targets 4.2 and on.
- Scales are by far the best option for weighing calves, however weigh bands are better than an imprecise 'eye-o-meter'.



- Visually assessing live weight is unreliable. Calves can be healthy and have a shiny coat but might not be growing at the required rate to achieve targets.
- Ideally heifers should be weighed every month or bi-monthly.
- Target weights are the weights to be achieved by **ALL individuals**. It is not an average of the group.



## Key Points

1. Failure to achieve target live weights will affect cow lifetime performance and result in higher wastage rates.
2. Establish live weight targets for your heifers based on mature cow live weights in your herd.
3. Monitor, review and adjust feeding and animal health plans to achieve targets.
4. Targets are weights for ALL heifers to achieve, not a group average.
5. Electronic scales are more accurate than 'eye-o-meter' or weigh band for assessing live weight.



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Calf Rearing Fact Sheet 4.2

## General

Failure to achieve target weights at mating and pre-calving will result in:

- Lower conception rate of heifers,
- Later calving heifers and consequently lower and later conception rate of first calvers (rising 3 year-olds),
- Lower milk production in first lactation,
- Failure to achieve adequate mature live weights, affecting lifetime production.
- Target live weights are set to ensure heifers reach adequate weights to be mated and calve at or before their herd planned start of calving.
- Puberty occurs when heifers reach 42-47% of mature live weight.
- Achieving target mating weights minimises the incidence of non-cycling heifers and ensures heifers are mated and consequently calve early. This allows for more days post calving before mating starts for the herd. Higher conception rates are achieved if first calvers are mated during their 2nd or subsequent heat.
- Achieving target pre-calving heifer weights will result in higher first lactation milk yields.

## Replacement heifer live weights

- As outlined in Farm Fact Sheet 4.1 replacement heifer live weight targets are often referred to as a percentage of mature live weight.

Age	% mature weight (kg)
6 months	30
9 months	40
15 months (mating)	60
22 months	90

Recommended targets are outlined below:

- Achieving target calving weight starts with achieving target weights at weaning. To reach target pre-calving weights Friesian calves will need to grow at 0.75 kg/day, cross breed at 0.6 kg/day and Jerseys at 0.54 kg/day.
- Later born heifers will have to grow faster to achieve target mating and calving weights at the same time as their contemporaries.
- Poor growth rates or poor animal health will reduce the likelihood of achieving these targets.



Table 1: Target live weights of young stock based on mature cow live weight and Live Weight Breeding Value

Mature Cow Live weight	400 kg	450 kg	500 kg	550 kg	600 kg
Live Weight Breeding Value (LW BV)	-78	-28	+22	+72	+122
3 months (fully weaned)	70	80	90	100	110
6 months (30% mature live weight)	120	135	150	165	180
9 months	160	180	200	220	240
12 months	200	225	250	275	300
15 months (60% mature live weight)	240	270	300	330	360
18 months	290	330	365	400	440
22 months (90% mature live weight)	360	405	450	495	540

Reference: The In Calf Book for New Zealand Dairy Farmers, DairyNZ. Page 43.

## Putting plans into action

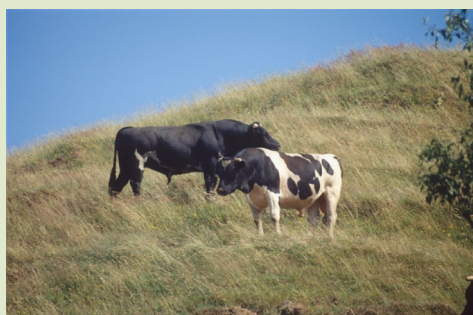
- Establish target live weights for the young stock in your care. This is an individual farm decision based on mature liveweight of cows in your herd.
- Monitor progress. Weigh calves every second month and assess progress against targets. Are you going to reach the mating target? Scales are more accurate than 'eye-o-meters' or weigh bands.
- It is important that ALL heifers reach target - it is not a group average as each individual needs to reach its target weight.
- Weigh at a similar time of day, preferably in the morning to minimise the effect of gut fill.
- If targets are not being achieved take action and if necessary preferentially feed lighter heifers.
- If targets are consistently not achieved review the animal health status of heifers and in particular review the parasite control programme and mineral status of heifers.
- Discuss issues with your vet.





## Key Points

1. Set target growth rates.
2. Monitor live weight gain to ensure you are meeting these targets.
3. If not meeting your targets work out why you are not and fix the issue.
4. Failure to meet targets is usually because they are not eating enough quality feed or there is an underlying health issue.



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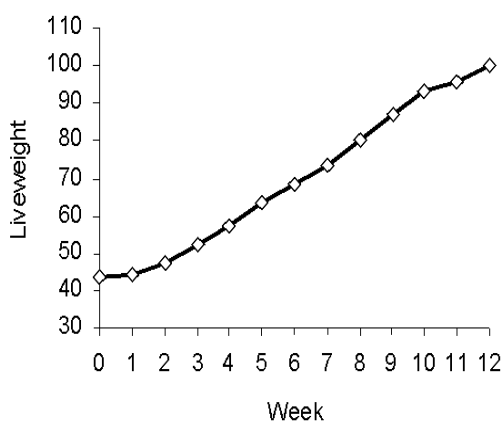
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Calf Rearing Fact Sheet 4.3

## General

- Whereas dairy farmers are often seeking to grow their dairy replacements as fast as possible, bull calf rearers are often operating on tight financial margins as well.
- Bull calves are typically purchased off calf rearers at 100 kg in Nov/Dec with early born calves sought after as they tend to finish earlier. Early born calves often only have to be taken through one winter whereas later born calves will generally have to be taken through two winters. Feeding through this second winter is expensive with associated treading damage (pugging) particularly on heavy soils.
- The target weight for a typical 40 kg calf at 4 days of age is 100 kg at 12 weeks of age. This is considered a good compromise between growth rate and cost. Whilst it is possible to achieve live weights of 100 kg some 2-3 weeks earlier than this, the input costs (milk and meal) are significantly greater.
- Monitoring will allow you to determine whether your calves are growing at the desired rate.

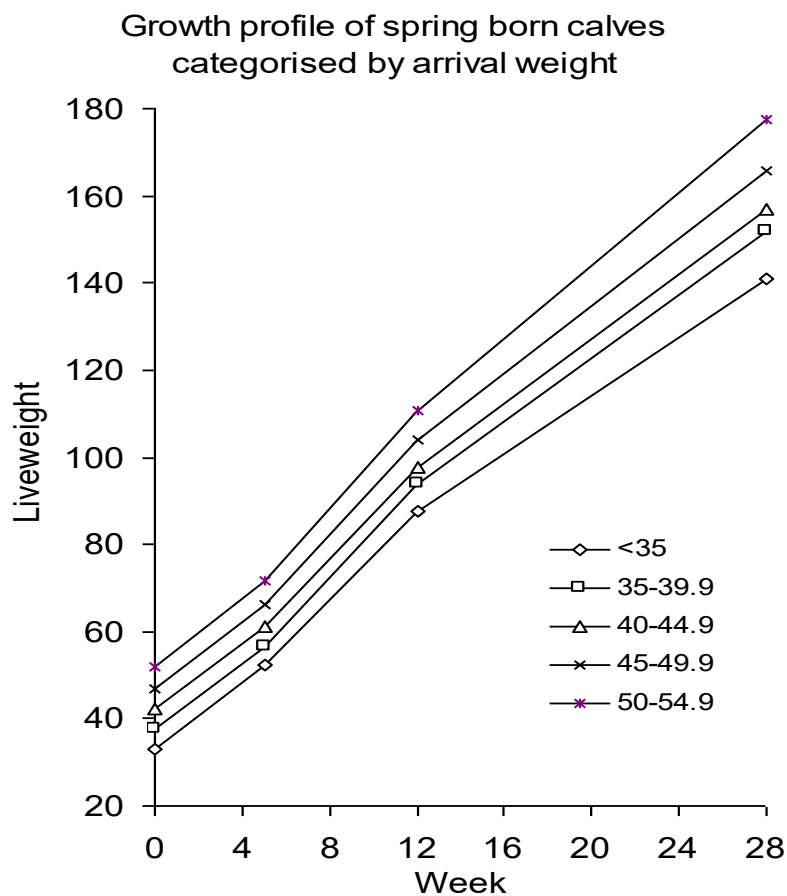
Friesian Liveweight



Wk	Friesian bull LWt (kg)
0	43.7
1	44.5
2	47.4
3	52.1
4	57.3
5	63.2
6	68.4
7	73.6
8	80.3
9	86.8
10	93.2
11	96.0
12	100.2

## Factors affecting growth rate

- The more energy a calf consumes the faster it will grow. However, feeding extra milk or pellets has to be considered within the cost constraints of the system. It is important that all calves get the correct amount of milk and that any other feeds are clean and kept fresh as calves are fussy eaters.
- Birth weight: calves that are heavier at birth grow faster than smaller calves and the gap gets bigger - at least up to 28 weeks of age (see below)
- Breed: Jersey calves will grow slower than Friesian calves - this is probably due to the differences in birth weight
- Health: any health issues will reduce calf growth rate so it is important that problems are detected early and action taken
- Calves that are cold or wet will use energy to keep warm rather than be putting that energy into growth.



## Putting plans into action

- Establish target live weights for your young stock. This is an individual farm decision.
- Monitor progress. Weigh calves every second month and assess progress against targets. Keep records so that you can compare your results with previous years. Scales are more accurate than 'eye-o-meter' or weigh band.
- It is important that all bulls reach target - it is not a group average.
- Weigh at a similar time of day, preferably in the morning to minimise the effect of gut fill.
- If targets are not being achieved take action - if necessary preferentially feed lighter bulls.
- If targets are consistently not achieved review the animal health status of bulls. In particular review the parasite control programme and mineral status of heifers.