

# Setting reproduction targets

## Successful reproduction is key

Breeding herd profitability hinges on getting as many R2+ hinds as possible producing a healthy well-grown fawn at weaning.

A dry hind is a cost to the farm. It returns \$0 for the breeding season.

To maximise breeding herd success, it is important to set and meet feeding, animal health and management targets throughout the year.

For adult hinds, an ambitious weaning target is 100% – one fawn weaned per hind mated, conceived during a 18-21 day oestrus cycle. A more realistic target for most farms is 93%.

A herd efficiency target for good performers is 0.51 kg of fawn weight on 1 March per kg of hind wintered. For example, 100 hinds averaging 110 kg at mating should produce 5610 kg of live fawns at 1 March.

## It starts with hind body condition

Hind condition during late summer has the most influence on conception date and fertility. Target hind body condition scores (BCS) of 3+.

In January, identify hinds with a BCS less than 3 and start preferentially feeding them. To ensure good conception rates in a mid-lactation drought (January to March), good feed management and strategic supplementation are critical.

If condition scores are allowed to drop from 4 to 2.5 in this period most conceptions will be delayed by up to 10 days and 5-10% of hinds will be dry. A drop from BCS 4 to 3 will cause a slight delay in conception and a few failures in old hinds.

Yearling hinds must be a minimum of 70% of their expected mature liveweight to conceive but higher weights are needed to achieve a good conception rate across a mob. Target growth rate curves for the most common genotypes can be found at [www.deernz.org/deer-growth-curves](http://www.deernz.org/deer-growth-curves).

The P2P programme has produced a guide to help farmers monitor hind weights and calculate pregnancy rates based on mob average liveweights at time of stag joining.



Photo: Jamie Ward

A high fawning rate is the first step in the journey to breeding herd profitability

## KEY TARGETS

Overall key performance indicator

**Herd efficiency**  
kg fawn weaned/kg hind wintered  
Target: 0.51

The main drivers

**Weaning percentage**  
Fawns weaned/hinds mated  
Target: >93%

**Fawn weaning weight**  
kg fawn weaned 1st March  
Target: 57 kg (from MA red), minimum 41 kg from R2 hind  
Target: 70 kg (from MA wapiti crossbred), minimum 53 kg from R2 hind

Factors that affect performance

Hind condition score  
Hind mating weight  
Stag to hind ratio  
Stag fertility  
Conception date  
Hind health (trace elements and disease prevention including vaccination)  
Fawn health (misadventure, parasite management, disease prevention, trace element status)  
Hind and fawn nutrition over lactation.

## Herd management targets

### Hinds before mating

Wean hinds at least two weeks before mating and put them into mating groups at least 10 days before mating. This helps reduce stress.

### Stags

Target a stag:hind ratio of 1:8 for yearling stags joined with yearling hinds. For older stags and hinds the ratio can be increased to between 1:30 and 1:50.

Target a joining date no later than 10 March to avoid late born fawns (i.e. 18 days or one cycle late). Join first fawners/R2 hinds earlier (before 1 February) to allow socialisation. Remove stags by 1 May at the latest to prevent extended fawning beyond Christmas day.

### Target weights for replacement hinds as weaners and at first mating

	MA hinds = 130 kg	MA hinds = 110 kg
Target fawn weight at 1 March	53 kg	41 kg
Minimum individual R2 weight at joining	91 kg	77 kg
Target R2 hind weight (mob average) for top performance (90% average conception rate)	114 kg	85 kg

**Hinds during pregnancy**

Feed to keep hind BCS at 3 (range 2.5 - 4.5). Calculate winter feed requirements, test feed quality and ensure you feed enough. Pregnancy scan to identify dry hinds (and feed less or sell). Foetal aging is useful to identify late conceiving hinds.

**Targets during fawning**

Set-stock hinds into sheltered paddocks 2 to 3 weeks before fawning. Check fences are secure as misadventure is a significant cause of fawn loss.

Target a stocking rate of 5 to 7 hinds/ha to allow hinds the best opportunity to find some seclusion from others while fawning (100 m of space). Aim for pasture covers of 10 cm if there is limited natural cover for fawns.

Hind disturbances during fawning – including competition for birth sites, especially when stocking rates are too high or conception patterns are tight following artificial breeding programmes – are another major cause of fawn deaths.

Animal health issues to consider include clostridial disease vaccination for hinds and fawns, yersiniosis protection in young fawns and leptospirosis vaccinations across the whole herd. Also important to breeding success are: parasite management in young fawns pre- and post-weaning; targeted parasite management where necessary in yearling hinds; and facial eczema management.

**Aim for tight weight range**

It is better to have a tight mob distribution around the target weight than a big spread of weights, or heavier and light sub-groups.

**More >>**

Deer performance reproduction template: [www.deernz.org/benchmarks](http://www.deernz.org/benchmarks)

Target growth rate curves: [www.deernz.org/deer-growth-curves](http://www.deernz.org/deer-growth-curves)

*Deer Fact:* Best practice management of pregnant hinds

*Deer Fact:* Best practice mating management

**Hind body condition score and feed intake targets during pregnancy**

	Hind BCS (out of 5)	Voluntary intake (kg DM/head/day)	Quality of feed (Metabolisable energy)	Total megajoules of ME/day
Early to mid pregnancy (April – July)	3.5+	1.8 – 2.2	9+ and 12% crude protein	24.7
Mid to late pregnancy (August – October)	3.5+ but no more than 4.5 or dystocia risk	2.6 – 2.8	10.5	25.9 building to 27

See *Deer Fact:* Best practice management of pregnant hinds, for more information

**NZ deer industry reproductive performance data (low, medium and high) for rising-two (R2) and mixed age (MA) hinds**

	Early pregnancy rate (% of all MA hinds joined with stag and proven pregnant by rectal ultrasound scan in first trimester)	Fawn loss during pregnancy & birth % (foetal wastage rate)	Fawn mortality rate (Birth to weaning) *	Total fawns weaned (% of all hinds joined vs fawns weaned pre-rut)
MA Low	<90%	16%	4%	<70%
R2 Low	<60%	25%	4%	<40%
MA Medium	95%	8%	1-3%	84-86%
R2 Medium	85%	15%	1-3%	67-69%
MA High	97%	2%	0-2%	93-95%
R2 High	95%	5%	0.2%	88-91%

\*No evidence of difference in 1st fawners



**Deer Industry New Zealand**

PO Box 10702, Wellington 6143 / Level 5, Wellington Chambers  
154 Featherston Street / Wellington 6011 / New Zealand  
Telephone: +64 4 473 4500 / Email: [info@deernz.org](mailto:info@deernz.org)



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