



Calving 2 year old cattle

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What is acceptable performance?

Mating targets

Trace elements

Foetal loss and abortions

Mating management



Acceptable “in calf rates”

Conception rates in beef cow herds in New Zealand				
conception rate	64			
	60-----	upper quartile >61%		
	56-----	mean conception rate 55%		
	52			
	48-----	lower quartile <48%		
	44			
	40			

In calf rates in beef cow herds in New Zealand				
% cows in calf	100			
	96-----	upper quartile >94%		
	92-----	median in calf 91%		
	88-----	lower quartile <88%		
	84			
	80			
	76			

Reproductive performance in beef cows in New Zealand; McFadden, Heuer et al.2007

Acceptable “in calf rates” Heifers

Number of heifers in calf at varying conception rates and mating length

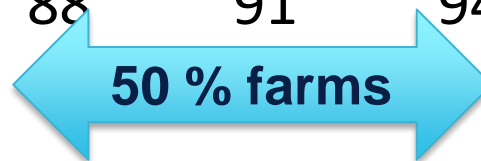
		conception rate			Submission rate
100 mated		60%	65%	70%	
days mated	21	60	65	70	100%
	42	84	88	91	

What is abnormal for your farm?
more than a 5% change from average performance?

Acceptable “in calf rates” Cows

Number of heifers in calf at varying conception rates and mating length

		conception rate			Submission rate
100 mated		50%	55%	60%	
days	21	50	55	60	100%
mated	42	75	80	84	
	63	88	91	94	



What is abnormal for your farm?
more than a 5% change from average performance?

Managing beef cows for better fertility - results of a two-year study ; C. Heuer, D.M. West, G. Tattersfield, R. Jackson

Selecting for age at puberty

Selecting bulls for increased scrotal circumference and heifers for **age at first oestrus** (AFO) for 23 years

69 day (19%) difference AFO

47kg (16%) lighter AFO

3cm increase in scrotal circumference

fewer subfertile bulls at yearling

Bulls

97% bulls fertile at scrotal 30cm

	Yearling	2YO	MA
Scrotal circumference (cm)	32	34	36-38

Testicular tone

Palpate epididymis

Internal exam only if concerned

Semen evaluation (Tattersfield 2006)

2% unsound

8% questionable

sampled 3 times

Bulls

Bull ratios

1:30

Swapping bulls (swap not mix!)

Watch them

hips, penis, shoulders, stifle, feet

Vaccinate

BVD, 5in1, Leptospirosis?

Trace elements and worms

Puberty in heifers

Puberty should occur at least 6 weeks before the target breeding age to enable animals to undergo oestrous cycles before mating

cattle reach puberty at a fairly consistent, but breed-dependent, proportion of mature bodyweight

US Holsteins the conception rate peaked at 57% at 15 to 16 months
Ian and Donnison (Anim Reprod Sci 1999 57:127)

Puberty in heifers

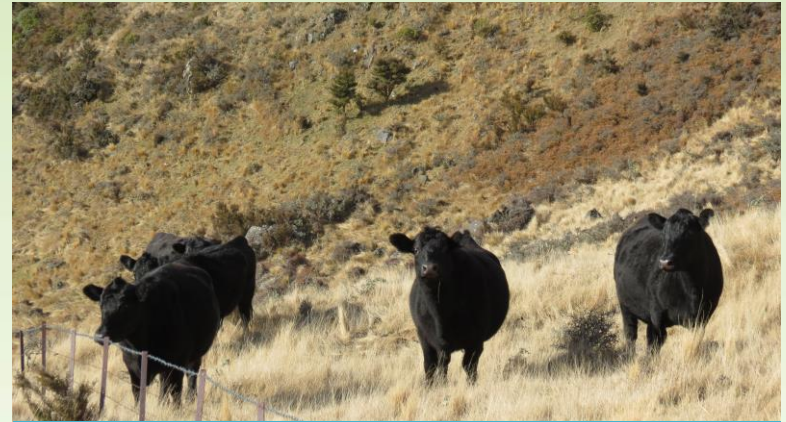


**MA Cows 500kg at
mating.
do you know this?**



EID	Weight (kg)	Animal notes	Date	Time	DOB	COW	SIRE	Treatment type	ADG (kg/day)
942 000011023968	225		07/24/2014	14:17:47	09/25/2013	MA	Totaranui 352/11	Overflow	0.49
942 000011127842	275		07/24/2014	14:17:37	09/25/2013	2009	Totaranui 35/10	Overflow	1
942 000011147854	270		07/24/2014	14:17:24	09/25/2013	2008	Totaranui 42/10	Copper + se	1.33
942 000011003938	227		07/24/2014	14:17:03	09/25/2013	2009	Totaranui 103/11	Copper+mineral b	1.11
942 000011020835	264		07/24/2014	14:16:51	09/25/2013	MA	Totaranui 103/11	Overflow	1
942 000011256844	254		07/24/2014	14:16:40	09/25/2013	MA	Totaranui 42/10	Overflow	0.91
942 000011256325	224		07/24/2014	14:16:16	10/25/2013	LATE	Totaranui 42/10	Copper+mineral b	0.74
942 000011945868	266		07/24/2014	14:16:00	09/25/2013	MA	Totaranui 42/10	Overflow	1
942 000011146376	238		07/24/2014	14:15:49	10/25/2013	LATE	Totaranui 352/11	Copper + se	1.11
942 000004579302	294		07/24/2014	14:15:31	6/11/2014	2009	Totaranui 352/11	Copper + se	1.13

Puberty in heifers



**MA Cows 500kg at mating.
do you know this?**

**Heifers mating
minimum 300kg**

**Heifers 6 weeks
pre-mate 250kg**

Mating heifers before cows

	Begin	End
Heifer mating 42 days	1/12/2014	12/01/2015
Calving	9/09/2015	21/10/2015
PPAI days	50	50
Begin cycling	29/10/2015	10/12/2015
Mating (third heat)	10/12/2015	21/01/2016

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	Begin	End
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Begin cycling	29/10/2015	10/12/2015
Mating (third heat)	10/12/2015	21/01/2016
Cow mating 63 days	15/12/2014	26/01/2015
Calving	23/09/2015	4/11/2015
PPAI days	40	40
Begin cycling	2/11/2015	14/12/2015
Mating (third heat)	14/12/2015	25/01/2016

When should I be calving?

Trace elements

Selenium

the forgotten?

causing decreased conception rates

depressed growth rates

increased retained after births

required for iodine uptake

herbage analysis

winter forages are low

blood sample weaning and month prior to mating

Pour on, oral and short acting last 3 – 4 weeks

Use long acting injection or bolus

Trace elements

Copper

co-factor in many enzyme pathways
treating molybdenum toxicity

herbage analysis

winter forages are low

form insoluble salts with iron, sulphur and molybdenum

blood samples inaccurate

liver sample

Injections last 30-50 days

Bolus 4-6 months

Trace elements

Iodine?

Pregnancy Loss

The majority of embryonic loss occurs between Days 8 and 16 of gestation when the conceptus is elongating and signaling maternal recognition of pregnancy.

McMil

Macrocarpa

Pinus radiata

Neospora

Fungal (silage)

Leptospirosis

Nitrate poisoning

BVD

Pregnancy test

Ultrasound makes it so easy now!

Can age if done early (6 weeks after mating completed)

Identify first and second cycle

This makes management at calving easier

Disease

BVD

have to remove any PI heifers

Vaccinate heifers?

timing is important

assess the risk of coming in contact with PI

Vaccinate bulls (any time)

MUST REMOVE ANY PERSISTENTLY INFECTED (PI) CATTLE
BLOOD SAMPLE 10 COWS
SAMPLE ALL HEIFERS BEFORE MATING

Disease

Leptospirosis

risk of human infection while calving heifers

Can reduce fertility (NZ data)

Vaccinate heifers **before they are infected**

**calf marking / summer
weaning (4-8 weeks later)
pregnancy scanning**

Worms

Drenching frequency depends on the parasite challenge
weaning, 6 weeks, spring?

Type II Ostertagia removed by any ML formulation

LWG is a good monitoring tool, FEC not very accurate

Use combinations (better kill spectrum, delay resistance)

What ever the method (oral / inject / pour on) do the job well

Drench check 10-14 days later

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