

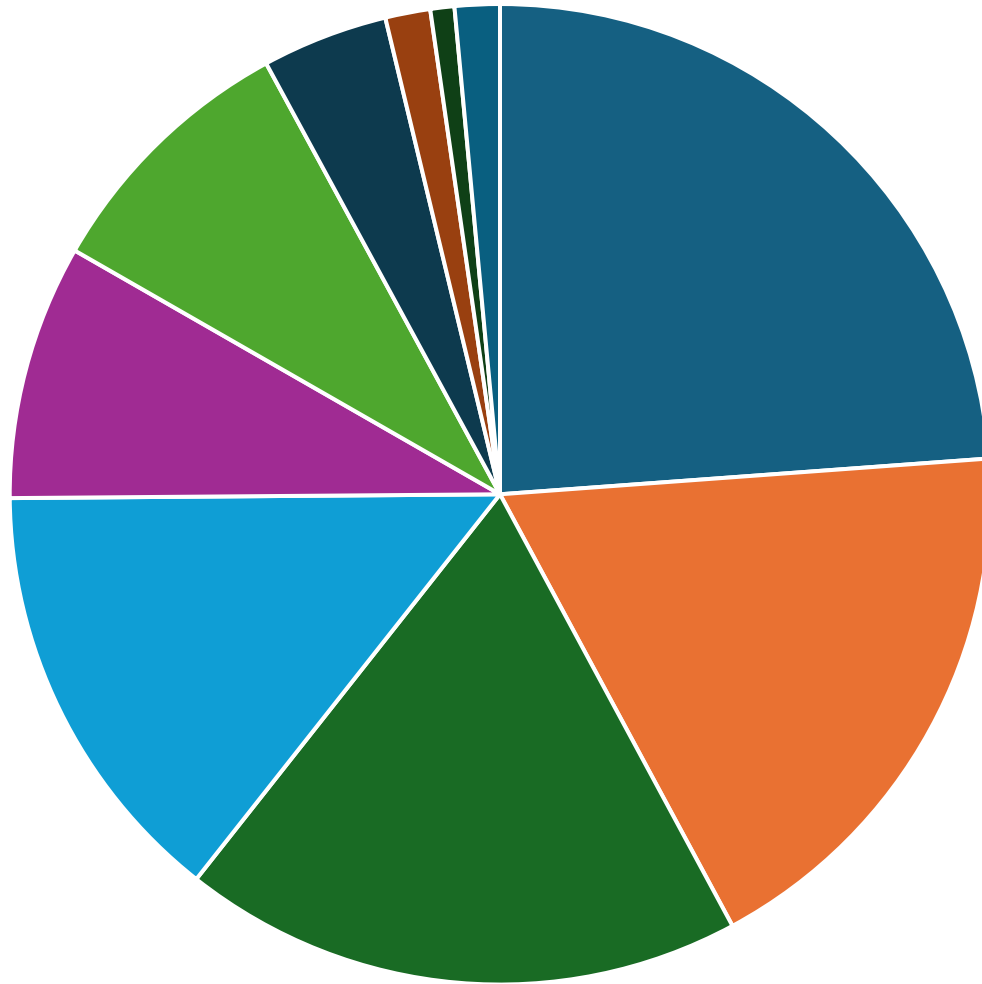
Commercial beef production from Twinner Cattle

- Leo Cummins;- Byaduk, Vic
- Liz Cummins;- Byaduk, Vic
- John Keiller;- Cashmore, Vic
- Alistair Donaldson;- Ebor, NSW
- Jeremy Kaldvee;- Kingston SE, SA
- Nick McBride; Kingston SE, SA
- Andrew Speirs;- Carapook, Vic
- Rory Speirs;- Carapook, Vic
- Allen Joiner;- Clinton, BC



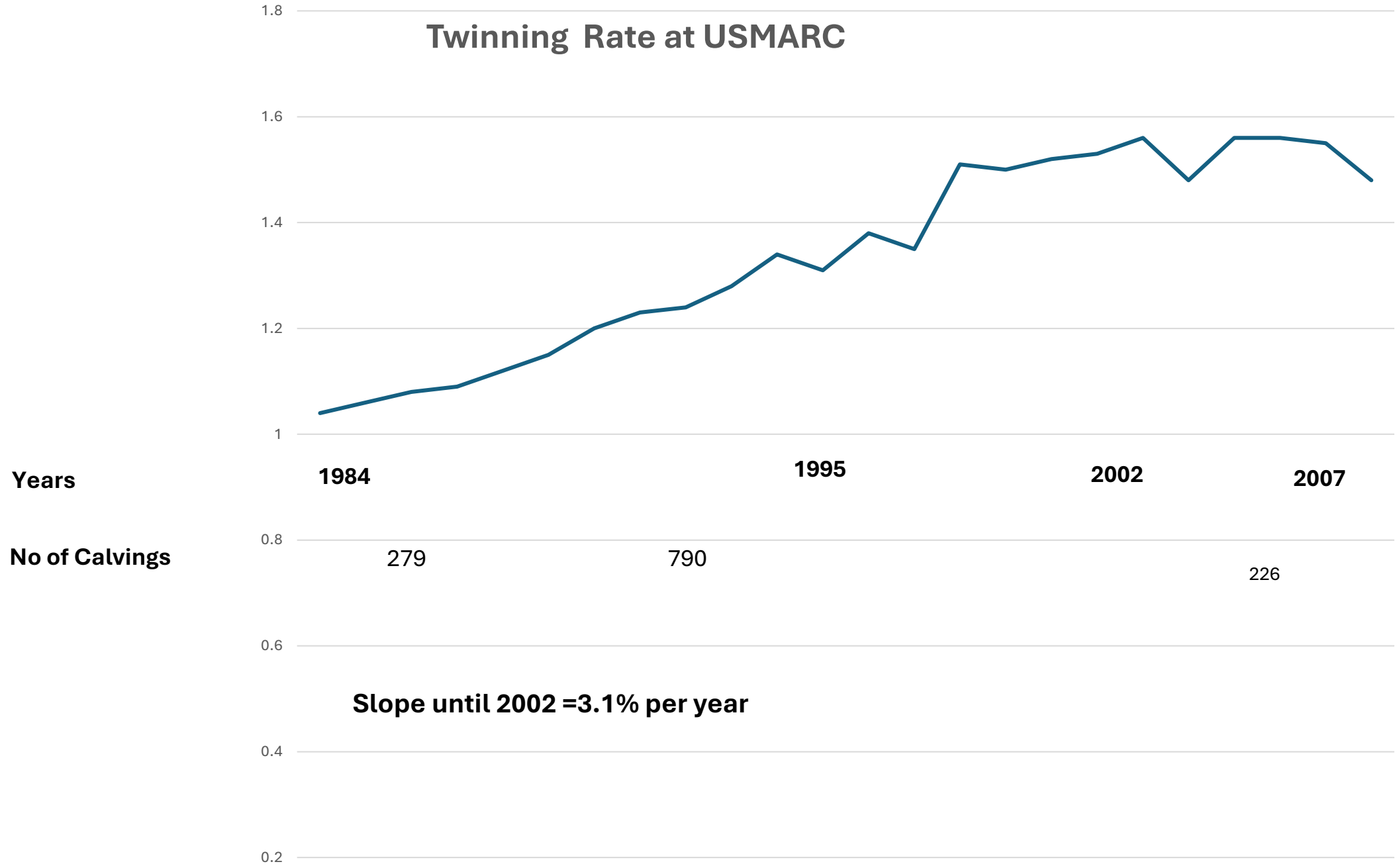


USMARC breed composition 2001



■ Pinzgaur ■ Holstein ■ Simmental ■ Swedish Friesian ■ Norwegian Red ■ Hereford/Angus ■ Charolais ■ Brown Swiss ■ Gelbvieh ■ Others

Twining Rate at USMARC



Years

No of Calvings

Slope until 2002 = 3.1% per year

Recent Modelling of the effects of twinning in Beef pasture-based systems

Ireland (Bergin et al 2022)	Base herd	Twinnings (CR 1.5)	
Cows Calving	72.5	62.6	-14%
Carcass output (Kg/Ha)	452	526	+16%
Net margin (€/Ha)	330	581	+76%

Southern Australia (Gebbels et al 2023)	Base Herd	Twinnings (CR 1.56)	
Cows Calving	100	83	-17%
Carcass output (tonnes)	28.1	33.4	+19%
Methane intensity	17.4	14.9	-15%

South Eastern Australia



British
Columbia
Canada



Commercial Results (per Cow Calving)

Herd	No Cows	Calves Born	Calves weaned	Calving assistance
LC	100	144(144%)	115 (115%)	16 (16%)
AD	59	73(124%)	65 (110%)	1 (2%)
JK	177	231(131%)	196 (111%)	8 (5%)
AS	7	11 (157%)	11 (157%)	0
AJ	200	258 (129%)	240 (120%)	8 (4%)
TOTAL	543	717 (132%)	627 (115%)	33 (6%)

Calf Survival Rates

- Calf Survival (whole herd basis, for 5 herds)
 $627/717 = 87\%$
 - calf survival singles = 95%
 - calf survival twins = 81%
- McB (twin scanned only) $242/298 = 81\%$
- USMARC (to 200 days) {Echternkamp & Gregory 2002}
 - Calf survival singles = 88.6%
 - Calf survival twins = 76.2





Weaner Steers fit into Regional Weaner Sales



Weaner Steers fit into Regional Weaner Sales

Western Vic group 302Kg



New England group; 287Kg







Commercial Results

The Twinners in these herds are manageable and increase calf output by 25%

- 6 herds at various locations, with various age structures and proportions of MARC twinner blood
- Average twinning rate in these herds was 32% with a weaning rate of 115%, compared with the long term calving rate of 89% for the Victorian monitor farm project
- Twinning increases productivity per cow and decreases herd methane intensity
- The slow uptake of Twinning suggests that it is a disruptive technology requiring a changed paradigm for cow fertility
- MARC has made the breakthrough and there are plenty of opportunities for further development



Another Successful Calving

Thanks to the co- authors and their staff for providing this information





Survival rates

Lifetime wool

	singles	twins
Normal practice	84%	40%
Lifetime Wool	95%	69%

Cash Cow

- Median for Foetal/calf loss
- 11% for heifers
- 7% for cows
- Median Cow mortality/missing
- 8% for heifers
- 7%for cows

Commercial Results

Twinnings are manageable and increase calf output by 25%

- 6 herds at various locations, with various age structures and proportions of MARC twinner blood
- Total of 543 calvings with a twin birth rate of 32%
- 627 calves weaned = 115%
- Long term Victorian Farm Monitor project reported 89% calving
- Twinning increases productivity per cow and decreases herd methane intensity
- MARC has made the breakthrough and there are opportunities for further development