

Dairy Calves and Heifers: Tips for Measuring, Monitoring, and Managing

David R. Winston
Extension Dairy Scientist
Department of Dairy Science
Virginia Tech

Calf & Heifer Comfort



Calf Housing

Clean

Dry

Well-ventilated

Draft free



Calf Stress Reduction

Calf stressors

Thermal

Dehorning

Ear tagging

Weaning

Social changes

Transportation

Improper handling by caretakers

Repeatability



Protocols:

Do things the right way every time!

Dry cow management

Newborn calf management

Calf and heifer vaccinations

Sick calf: Scours, pneumonia, bloat, etc.

Reproduction

Managing by Exception

**What data do you
typically collect on your
calves and heifers?**

Tools

Electronic scales

Weight tapes

Altimeter sticks

Data storage and analysis

PCDART / DairyComp 305

Spreadsheets

Growth Data Collection Barriers

Time / Labor

Facilities

Data management

	A	B	C	D	E	F	G	H	I	J
					Weight	Hip Height	Age	Monthly ADG	Lifetime ADG	Monthly ADHC
1	Index	Birthdate	Breed	Group	(lb)	(in)	(d)	(lb/d)	(lb/d)	(mm/d)
2	5088	11/16/12	HO	SB	1565	62.00	735	3.10	2.00	-0.20
3	5093	11/29/12	HO	SB	1505	60.00	722	2.62	1.97	-0.10
4	5109	01/28/13	JE	SB	946	51.00	662	1.90	1.34	0.30
5	5114	02/20/13	HO	SB	1260	56.00	639	2.30	1.86	-0.30
6	5117	03/08/13	HO	SB	1080	54.00	623	2.16	1.62	0.30
7	5118	03/12/13	HO	SB	1105	57.00	619	1.67	1.64	0.40
8	5119	03/17/13	HO	SB	1150	57.00	614	2.67	1.73	0.30
9	5120	03/20/13	HO	SB	1270	59.00	611	2.70	1.91	0.60
10	5121	03/21/13	JE	SB	828	50.00	610	1.43	1.26	0.20
11	5125	03/25/13	HO	SB	996	56.00	606	1.08	1.53	0.60
12	5126	03/26/13	HO	SB	1275	57.00	605	2.78	1.96	0.40
13	5127	03/26/13	HO	SB	1155	58.00	605	3.06	1.76	0.50
14	5128	03/26/13	HO	SB	1180	56.00	605	2.38	1.80	0.20
15	5129	03/27/13	JE	SB	780	50.00	604	1.65	1.20	0.00
16	5132	03/31/13	HO	SB	1140	57.00	600	2.38	1.75	0.30
17	5133	03/31/13	HO	SB	1170	56.00	600	2.62	1.80	0.40

Breed	Group											Grand Total
	Heifer Barn Pen 10	Heifer Barn Pen 9	Heifer Barn Pen 8	Heifer Barn Pen 7	Heifer Barn Pen 6	Heifer Barn Pen 5	Heifer Barn Pen 4	Heifer Barn Pen 3	Hay Barn Field	Whitethorn	Shufflebarger	
HO												
Average Age (d)	19	49	75	87	100	112		132	220	459	571	330
Average Weight (lb)	103	146	210	248	278	298		305	493	954	1093	684
Average Monthly ADG (lb/d)			1.94	2.17	2.20	2.22		1.93	2.07	2.34	2.14	2.15
Average Lifetime ADG (lb/d)	0.53	1.39	1.77	1.92	1.90	1.89		1.68	1.83	1.89	1.76	1.76
Average Hip Height (in)	32.5	35.0	37.3	39.4	40.2	40.5		41.0	46.4	54.6	56.4	48.7
Average Monthly Height Change (mm/d)			2.26	2.42	2.12	2.02		1.74	1.27	0.52	0.36	0.98
n	6	5	6	5	5	4		4	45	30	41	151
JE												
Average Age (d)	20		78	112			125	229	415		558	336
Average Weight (lb)	78		161	223			245	392	662		784	522
Average Monthly ADG (lb/d)			1.35	1.78			1.67	1.73	1.85		1.50	1.68
Average Lifetime ADG (lb/d)	0.74		1.24	1.50			1.51	1.48	1.49		1.30	1.33
Average Hip Height (in)	30.0		35.0	37.0			38.7	42.3	47.9		49.9	44.0
Average Monthly Height Change (mm/d)			1.92	2.12			1.92	1.10	0.47		0.24	0.72
n	9		1	1			6	11	20		19	67

Health Data

Importance

Individual versus group

PCDART, DairyComp, spreadsheets

Health Evaluation

Morbidity

Mortality

Incidence of specific disease

Survival rates



Final Thoughts

People

Facilities

Economics