

Internal Growth at Black Brook Dairy

Bill Stone
Pro-Dairy
Cornell University



How do dairies grow internally?

Heifers

- Low rate of still borns
- Don't lose calves
- Grow heifers properly and breed them on time

Cows

- Minimize transition cow problems
- Successful reproduction program
- Control mastitis
- Sound feet and legs
- Will result in a low cull rate
 - but do cull unprofitable cows

Snapshot of Black Brook Dairy

SUM ... BY LCTGP FOR FDATE>0 DDATE=0									
By LCTGP	%COW	#COW	Av MILK	AvDIMTD	Av PCTF	Av PCTP	Av AGE	Av305ME	
1	26	25	82	187	3.6	2.9	31	30752	
2	32	31	85	180	3.5	3.0	43	28799	
3	41	39	89	163	3.5	2.9	71	27063	
=====	====	====	=====	=====	=====	=====	=====	=====	=====
Total	100	95	86	175	3.5	2.9	51	28600	

Stillborn calves – Goal < 5%

Calf Report for 12/14/03 - 12/13/04

Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
12/03	8	0	0	0	3	5	62	8	0	0	0	0	0	0
1/04	5	0	0	0	3	2	40	5	0	0	0	0	0	0
2/04	10	0	1	10	6	5	45	10	1	9	1	17	0	0
3/04	7	0	0	0	5	2	29	7	0	0	0	0	0	0
4/04	6	0	0	0	3	3	50	6	0	0	0	0	0	0
5/04	7	0	0	0	3	4	57	7	0	0	0	0	0	0
6/04	9	0	2	22	4	7	64	11	0	0	0	0	0	0
7/04	9	0	1	11	6	4	40	10	0	0	0	0	0	0
8/04	15	0	1	7	7	9	56	15	1	6	0	0	1	11
9/04	9	1	0	0	4	4	50	8	0	0	0	0	0	0
10/04	9	0	0	0	6	3	33	9	0	0	0	0	0	0
11/04	10	0	1	10	6	5	45	9	2	18	1	17	1	20
12/04	3	0	0	0	1	2	67	3	0	0	0	0	0	0
====	====	====	====	==	====	====	====	====	====	==	====	==	====	==
TOTAL	107	1	6	6	57	55	49	108	4	4	2	4	2	4

Total freshenings

Excellent!

Stillborn calves – Goal < 5%

Calf Report for 01/19/04 - 01/18/05														
Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
1/04	24	0	5	21	11	18	62	23	6	21	1	9	5	28
2/04	37	2	3	8	23	15	39	30	8	21	3	13	5	33
3/04	46	1	4	9	28	21	43	48	1	2	1	4	0	0
4/04	43	1	2	5	27	17	39	40	4	9	3	11	1	6
5/04	47	3	3	6	23	24	51	44	3	6	2	9	1	4
6/04	62	3	5	8	39	25	39	62	2	3	1	3	1	4
7/04	59	1	3	5	31	30	49	56	5	8	3	10	2	7
8/04	68	1	7	10	35	39	53	66	8	11	6	17	2	5
9/04	51	1	3	6	28	25	47	50	3	6	1	4	2	8
10/04	48	2	2	4	21	27	56	48	0	0	0	0	0	0
11/04	48	2	3	6	26	23	47	46	3	6	2	8	1	4
12/04	52	1	2	4	24	29	55	51	2	4	1	4	1	3
1/05	17	0	0	0	6	11	65	17	0	0	0	0	0	0
====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
TOTAL	602	18	42	7	322	304	49	581	45	7	24	7	21	7

Total freshenings

Good

Stillborn calves in 1st lactation animals

Calf Report for 01/19/04 - 01/18/05														
Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
1/04	11	0	1	9	3	9	75	9	3	25	0	0	3	33
2/04	13	0	0	0	8	5	38	9	4	31	2	25	2	40
3/04	23	1	1	4	11	12	52	22	1	4	1	9	0	0
4/04	19	1	0	0	13	5	28	15	3	17	2	15	1	20
5/04	19	2	2	11	9	10	53	16	3	16	2	22	1	10
6/04	17	1	2	12	8	10	56	16	2	11	1	12	1	10
7/04	18	0	0	0	8	10	56	17	1	6	1	12	0	0
8/04	16	0	0	0	7	9	56	13	3	19	2	29	1	11
9/04	10	0	0	0	3	7	70	9	1	10	0	0	1	14
10/04	16	0	0	0	5	11	69	16	0	0	0	0	0	0
11/04	13	0	0	0	6	7	54	13	0	0	0	0	0	0
12/04	19	0	0	0	9	10	53	19	0	0	0	0	0	0
1/05	3	0	0	0	2	1	33	3	0	0	0	0	0	0
=====	=====	=====	=====	==	=====	=====	==	=====	=====	==	=====	==	=====	==
TOTAL	197	5	6	3	92	106	54	177	21	11	11	12	10	9

Fluke, error, or something exciting?

Stillborn calves in 1st lactation animals

Calf Report for 01/19/04 - 01/18/05														
Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
1/04	11	0	1	9	3	9	75	9	3	25	0	0	3	33
2/04	13	0	0	0	8	5	38	9	4	31	2	25	2	40
3/04	23	1	1	4	11	12	52	22	1	4	1	9	0	0
4/04	19	1	0	0	13	5	28	15	3	17	2	15	1	20
5/04	19	2	2	11	9	10	53	16	3	16	2	22	1	10
6/04	17	1	2	12	8	10	56	16	2	11	1	12	1	10
7/04	18	0	0	0	8	10	56	17	1	6	1	12	0	0
8/04	16	0	0	0	7	9	56	13	3	19	2	29	1	11
9/04	10	0	0	0	3	7	70	9	1	10	0	0	1	14
10/04	16	0	0	0	5	11	69	16	0	0	0	0	0	0
11/04	13	0	0	0	6	7	54	13	0	0	0	0	0	0
12/04	19	0	0	0	9	10	53	19	0	0	0	0	0	0
1/05	3	0	0	0	2	1	33	3	0	0	0	0	0	0
=====	=====	=====	=====	==	=====	=====	==	=====	=====	==	=====	==	=====	==
TOTAL	197	5	6	3	92	106	54	177	21	11	11	12	10	9

Fluke, error, or something exciting?

DOA from a dairy that has been getting smaller...

Calf Report for 03/05/04 - 03/05/05														
Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
3/04	9	0	2	22	4	7	64	10	1	9	0	0	1	14
4/04	10	0	0	0	4	6	60	8	2	20	0	0	2	33
5/04	13	0	2	15	8	7	47	14	1	7	1	12	0	0
6/04	9	1	1	11	4	5	56	9	0	0	0	0	0	0
7/04	6	0	0	0	4	2	33	5	1	17	1	25	0	0
8/04	7	0	0	0	5	2	29	7	0	0	0	0	0	0
9/04	5	0	3	60	4	4	50	5	3	38	1	25	2	50
10/04	11	0	1	9	7	5	42	11	1	8	1	14	0	0
11/04	7	0	1	14	3	5	62	7	1	12	0	0	1	20
12/04	10	0	1	10	4	7	64	8	3	27	0	0	3	43
1/05	9	0	1	11	7	3	30	9	1	10	1	14	0	0
2/05	12	0	1	8	9	4	31	8	5	38	2	22	3	75
3/05	2	1	0	0	0	1	99	0	1	99	0	0	1	99
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
TOTAL	110	2	13	12	63	58	48	101	20	17	7	11	13	22

DOA in 1st lactation animals at this same dairy

Calf Report for 03/05/04 - 03/05/05														
Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
3/04	2	0	0	0	0	2	99	1	1	50	0	0	1	50
4/04	4	0	0	0	1	3	75	2	2	50	0	0	2	67
5/04	5	0	0	0	2	3	60	4	1	20	1	50	0	0
6/04	4	1	0	0	1	2	67	3	0	0	0	0	0	0
7/04	2	0	0	0	2	0	0	1	1	50	1	50	0	0
9/04	1	0	1	99	1	1	50	0	2	99	1	99	1	99
10/04	6	0	0	0	4	2	33	5	1	17	1	25	0	0
11/04	3	0	0	0	2	1	33	3	0	0	0	0	0	0
12/04	4	0	0	0	1	3	75	2	2	50	0	0	2	67
1/05	3	0	0	0	2	1	33	2	1	33	1	50	0	0
2/05	6	0	1	17	4	3	43	2	5	71	2	50	3	99
3/05	2	1	0	0	0	1	99	0	1	99	0	0	1	99
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
TOTAL	42	2	2	5	20	22	52	25	17	40	7	35	10	45

IG: Don't lose calves

Goal: Calf mortality of $< 1\%$

Records indicate two calves lost in 2004

But they were bulls...

IG: Don't lose calves

Goal: Calf mortality of $< 1\%$

Records indicate two calves lost in 2004

But they were bulls...

Date	Ht Elig	Heat	Pct	Pg Elig	Preg	Pct	Aborts
12/01/03	10	1	10	10	0	0	0
12/22/03	13	0	0	13	0	0	0
1/12/04	16	2	12	16	2	12	0
2/02/04	17	3	18	17	1	6	0
2/23/04	16	4	25	16	3	19	0
3/15/04	16	8	50	16	5	31	0
4/05/04	13	5	38	13	3	23	0
4/26/04	13	5	38	13	4	31	0
5/17/04	14	0	0	14	0	0	0
6/07/04	16	2	12	16	0	0	0
6/28/04	19	1	5	19	1	5	0
7/19/04	25	4	16	25	2	8	0
8/09/04	24	10	42	24	6	25	2
8/30/04	19	6	32	19	4	21	0
9/20/04	20	5	25	20	4	20	0
10/11/04	18	5	28	17	2	12	0
11/01/04	16	7	44	0	0	0	0
11/22/04	12	4	33	0	0	0	0
Total	269	61	23	268	37	14	2

Heifer Repro Results

Goals:

HDR > 60%

CR > 60%

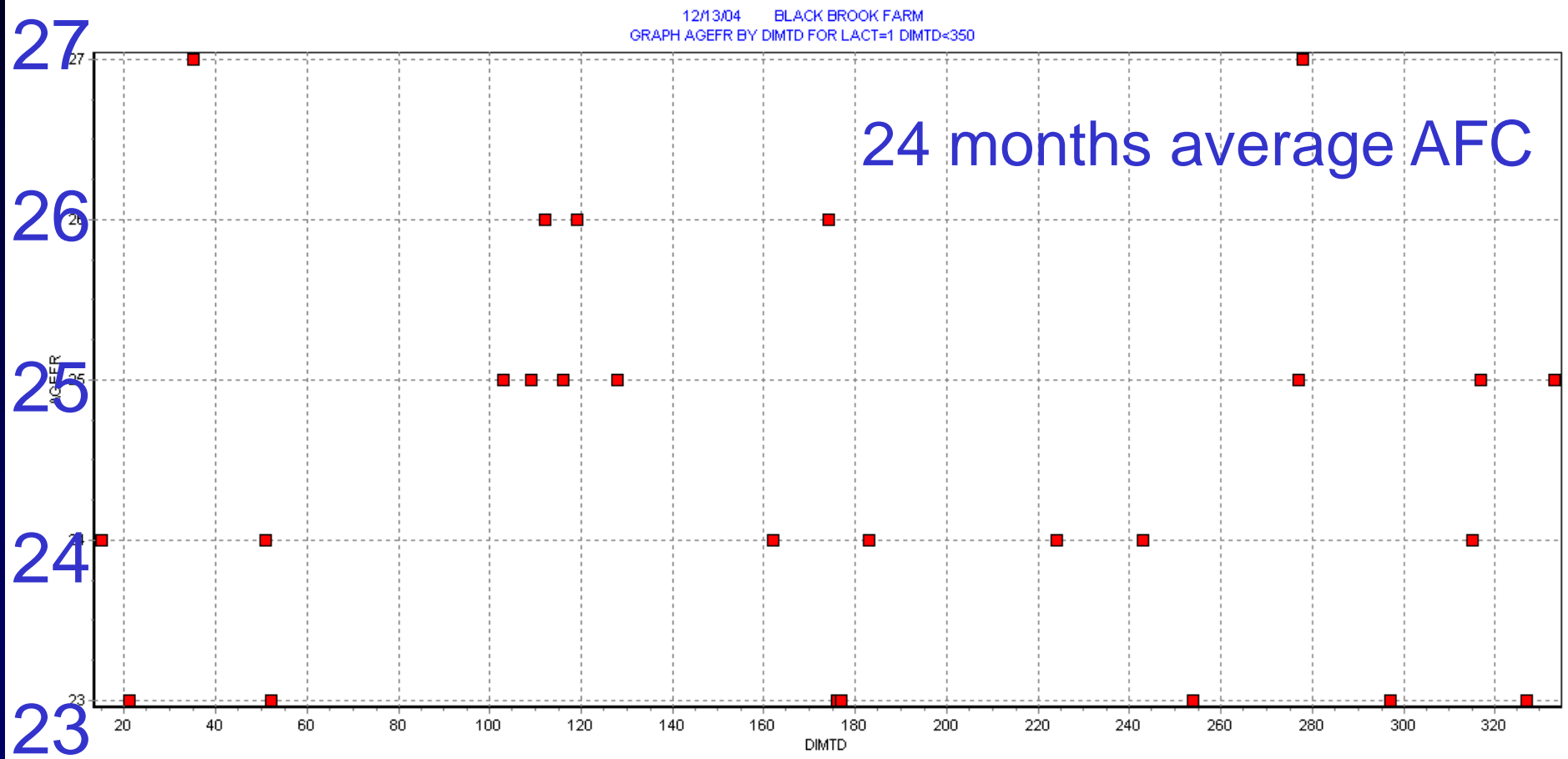
PR > 25%

Pregnancy Rate

Heat Detection Rate

Heifer Repro Results

AFC



50

130

190

270

320

DIM

Goal, %

Health events during 2004

<

EVENTS ... FOR LACT>0\BIS													
Event	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FRESH	107	5	10	7	6	7	9	9	15	9	9	10	11
ABORT	4	1	1	0	0	0	0	1	0	1	0	0	0
SOLD	25	2	2	1	1	1	2	3	4	2	0	2	5
DIED	4	0	1	0	0	0	0	1	0	1	0	0	1
DA	6	0	1	0	0	0	0	0	2	0	2	1	0
MAST	20	0	2	0	0	0	0	0	0	2	5	5	6
MF	2	0	0	0	0	0	0	0	0	0	0	0	2
RP	11	0	0	0	1	1	1	2	2	3	1	0	0
TOTALS	179	8	17	8	8	9	12	16	23	18	17	18	25

6

4

2

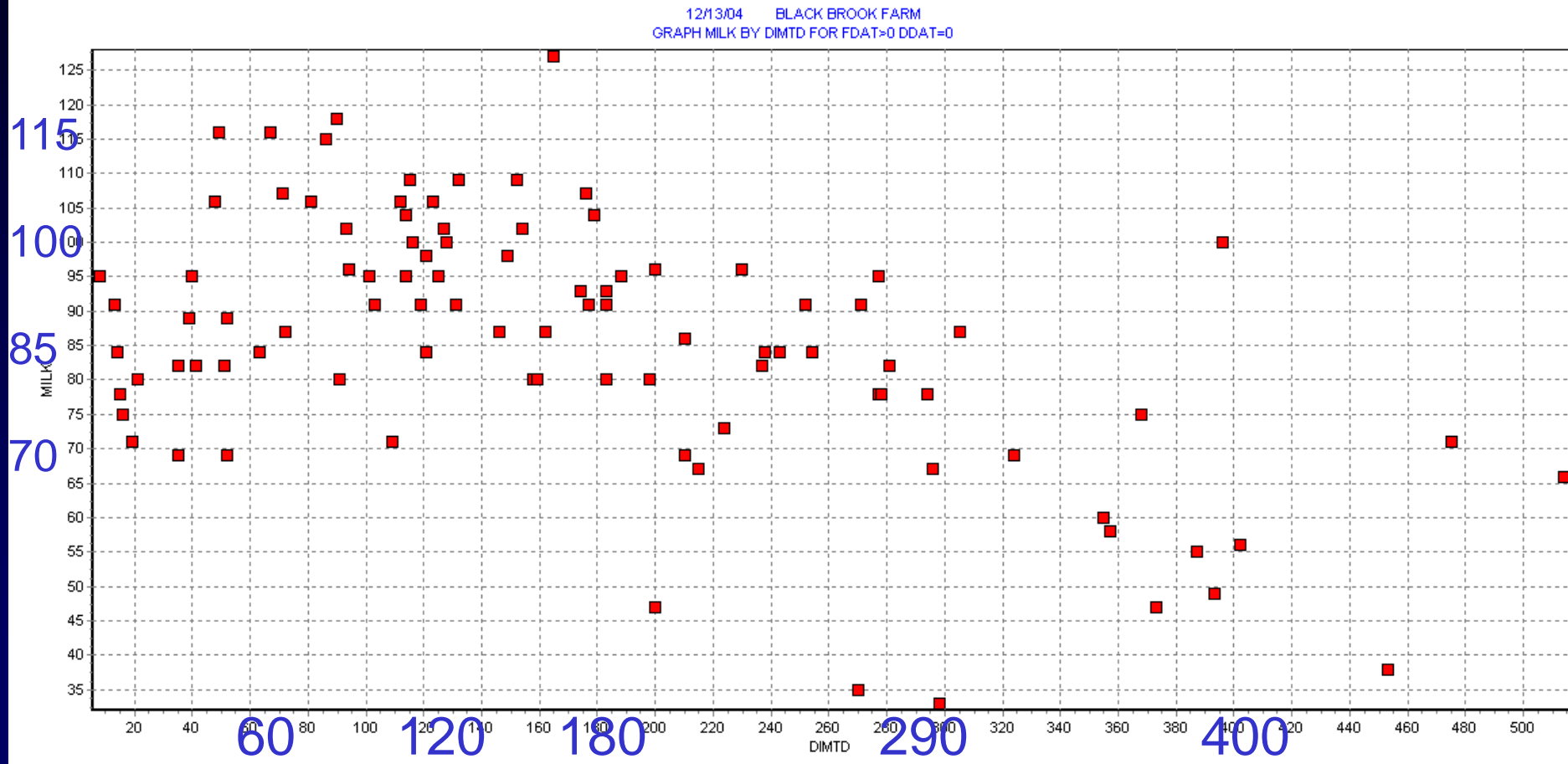
25

2

8

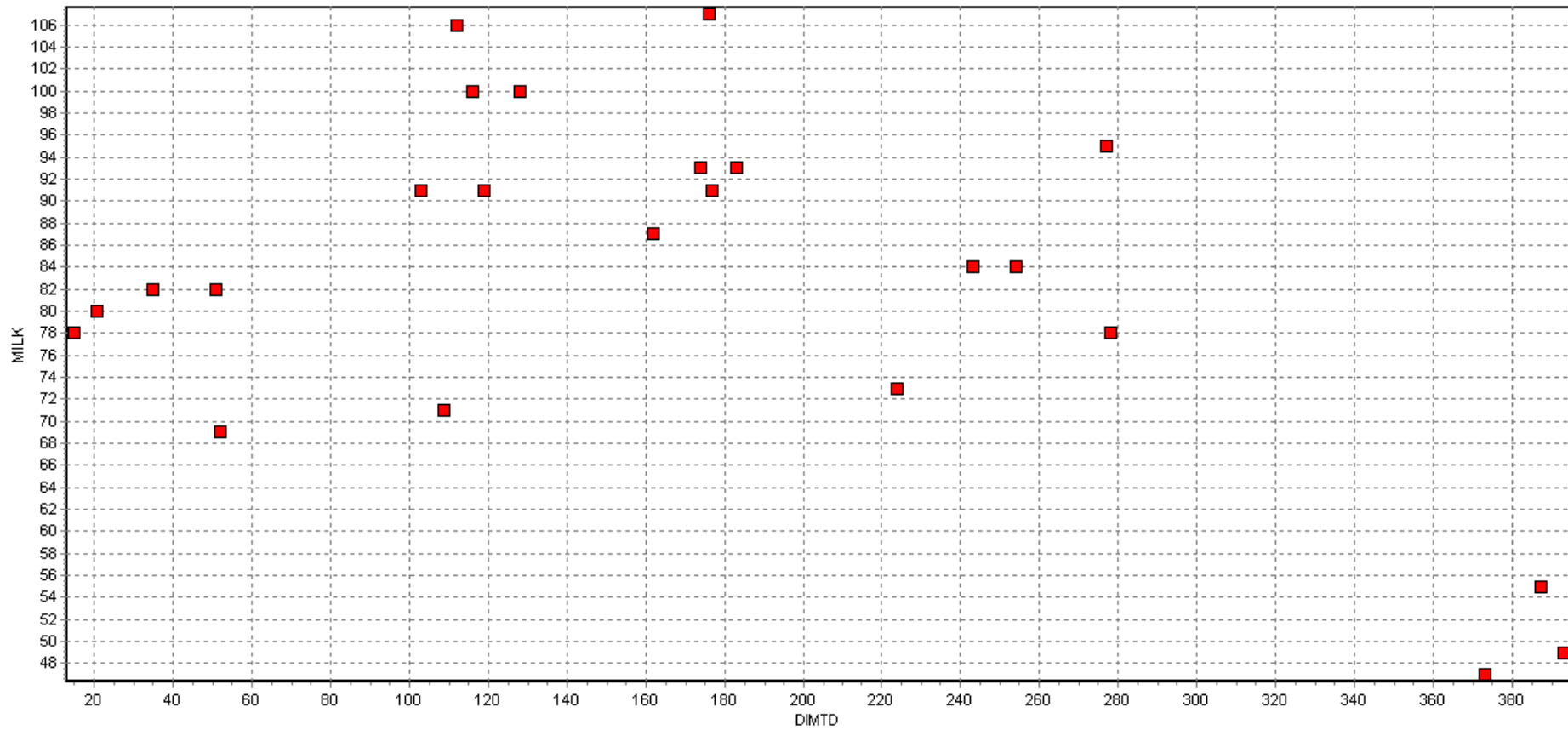
115 cows (milking and dry) in herd

Milk by DIM for the entire herd



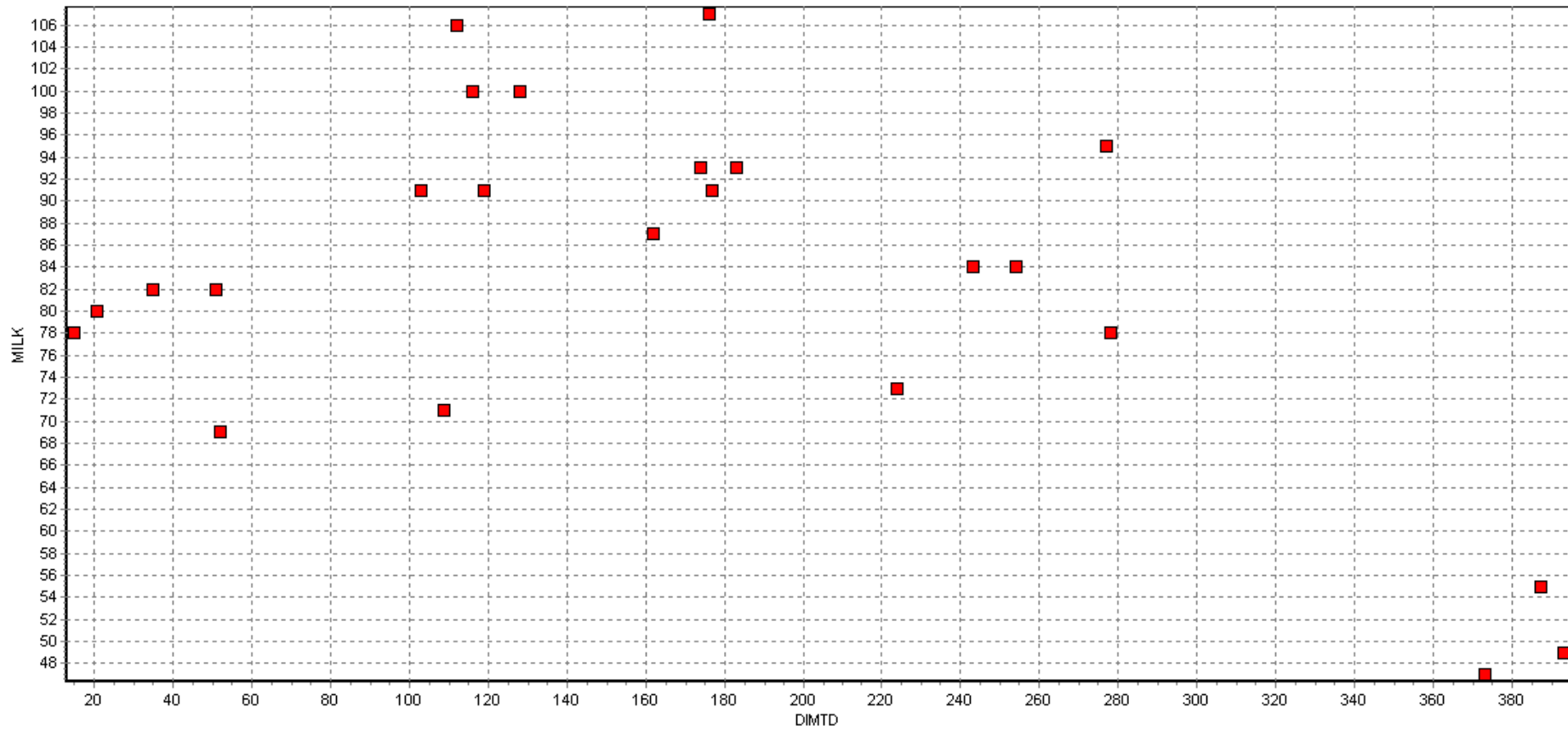
Lact = 1 Milk by DIM

12/13/04 BLACK BROOK FARM
GRAPH MILK BY DIMTD FOR LACT=1 DIMTD<400



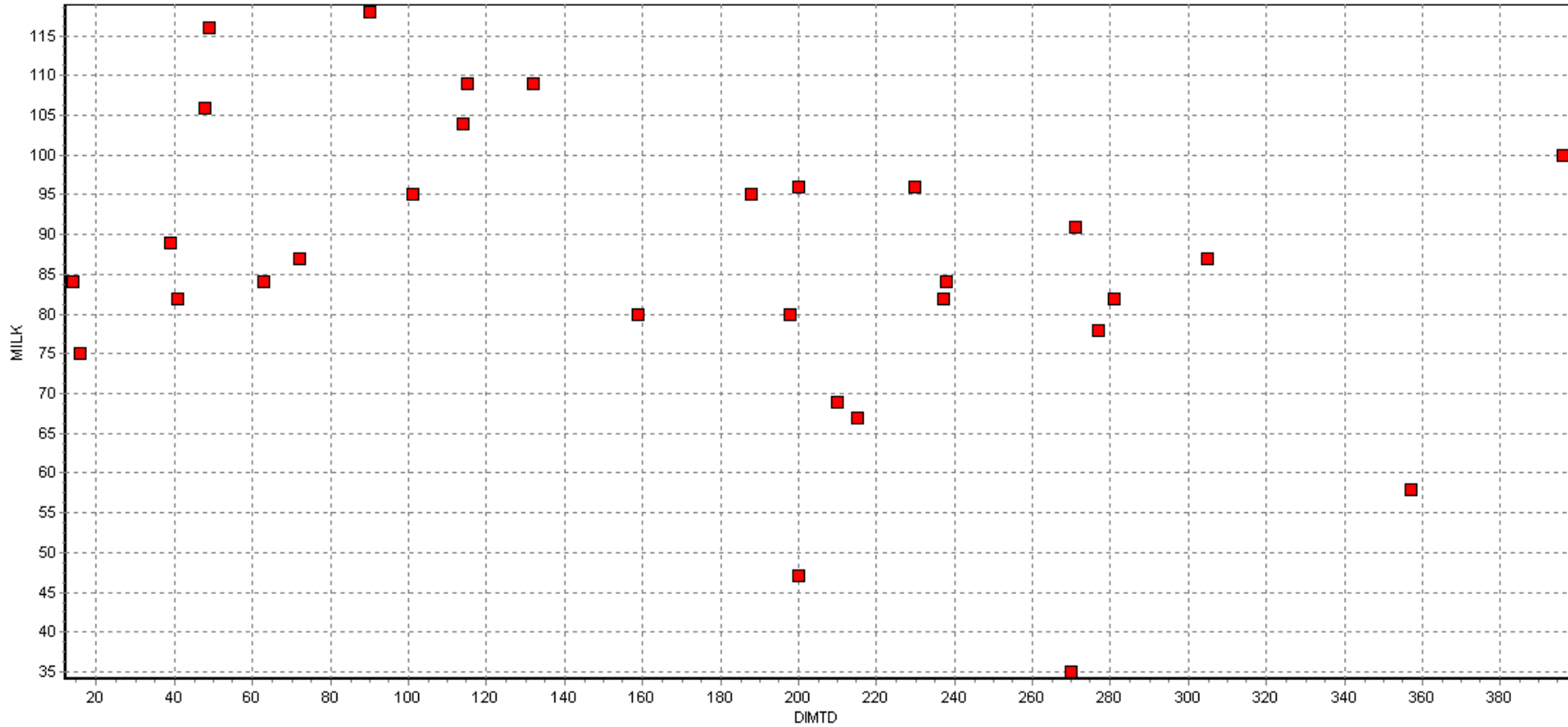
Lact = 1 Milk by DIM

12/13/04 BLACK BROOK FARM
GRAPH MILK BY DIMTD FOR LACT=1 DIMTD<400



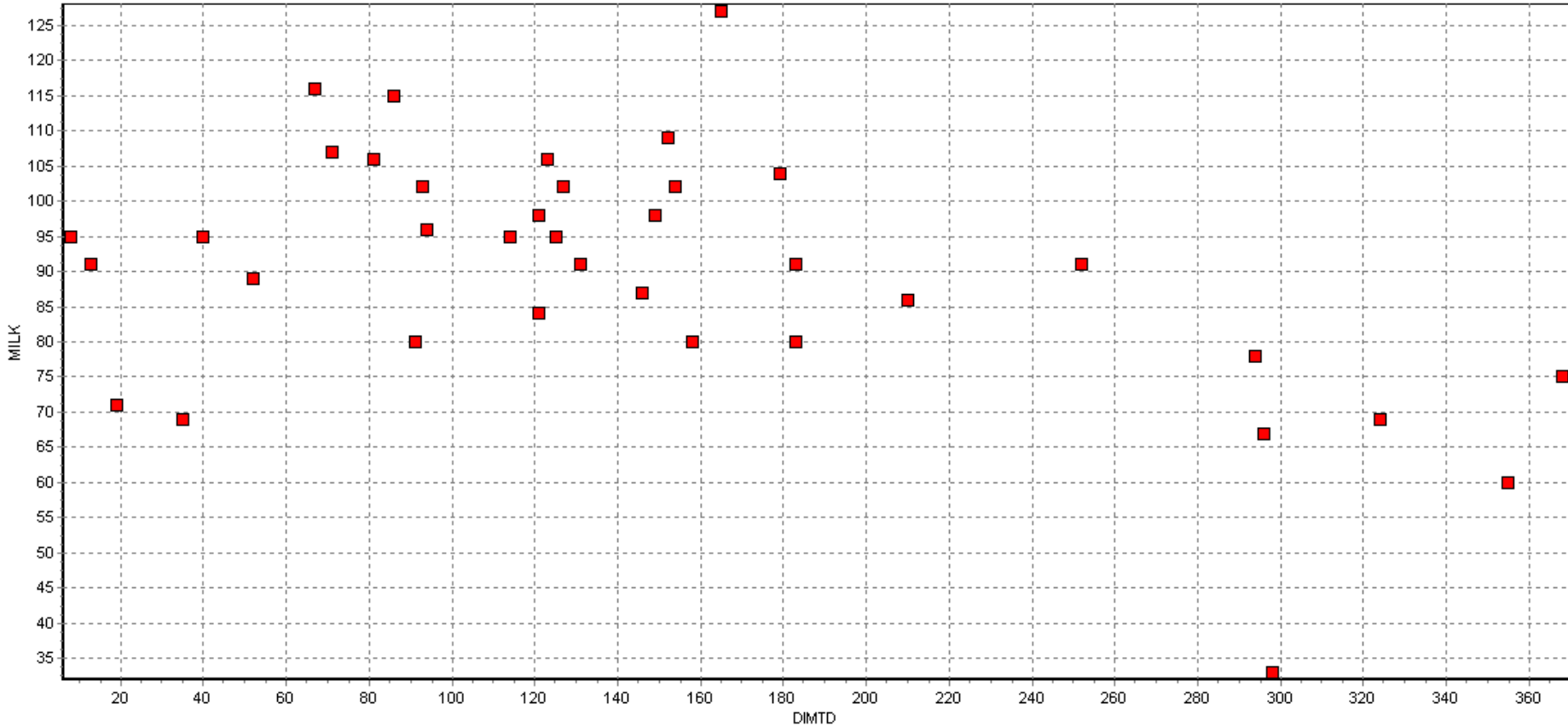
Lact = 2 Milk by DIM

12/13/04 BLACK BROOK FARM
GRAPH MILK BY DIMTD FOR LACT=2 DIMTD<400



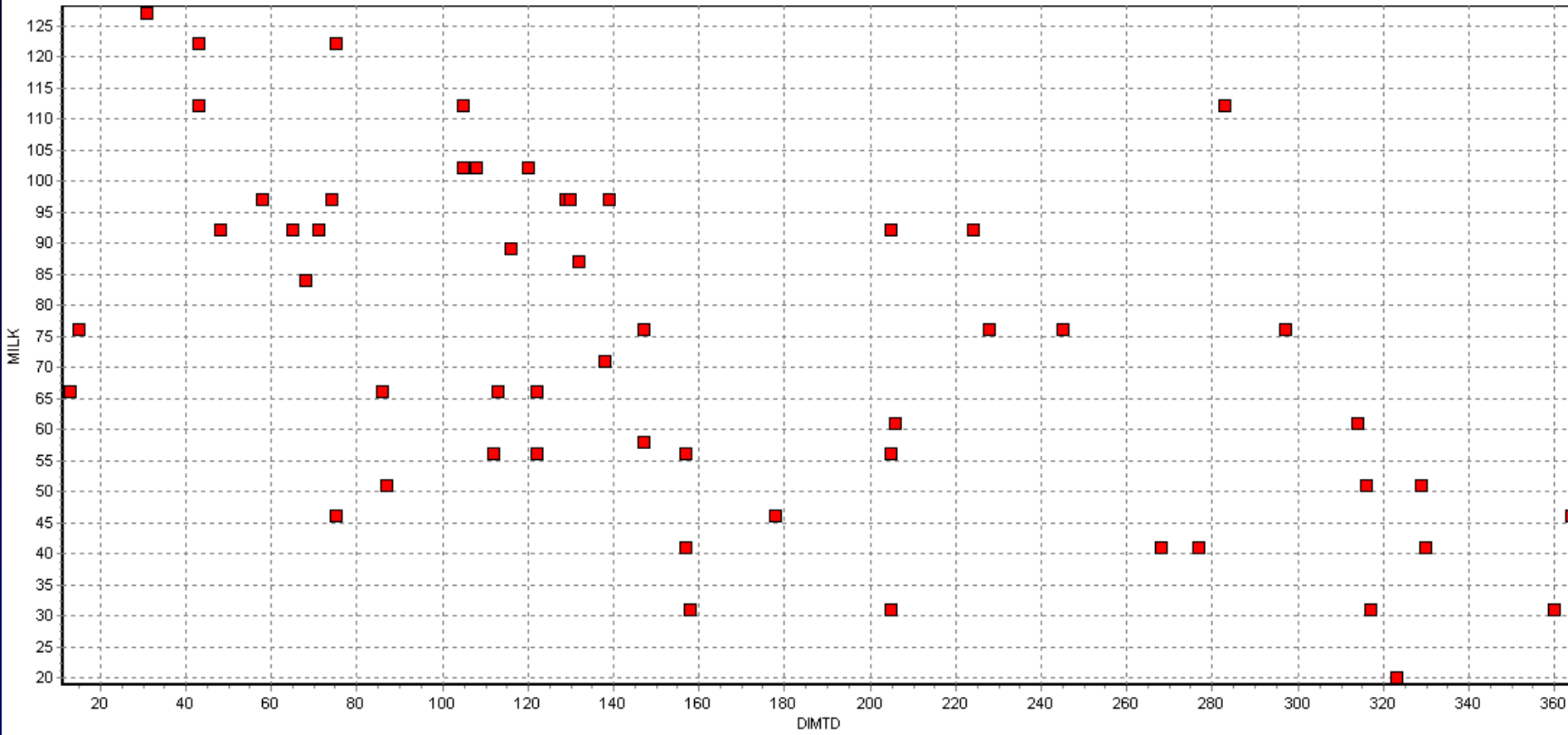
Lact > 2 Milk by DIM

12/13/04 BLACK BROOK FARM
GRAPH MILK BY DIMTD FOR LACT>2 DIMTD<400



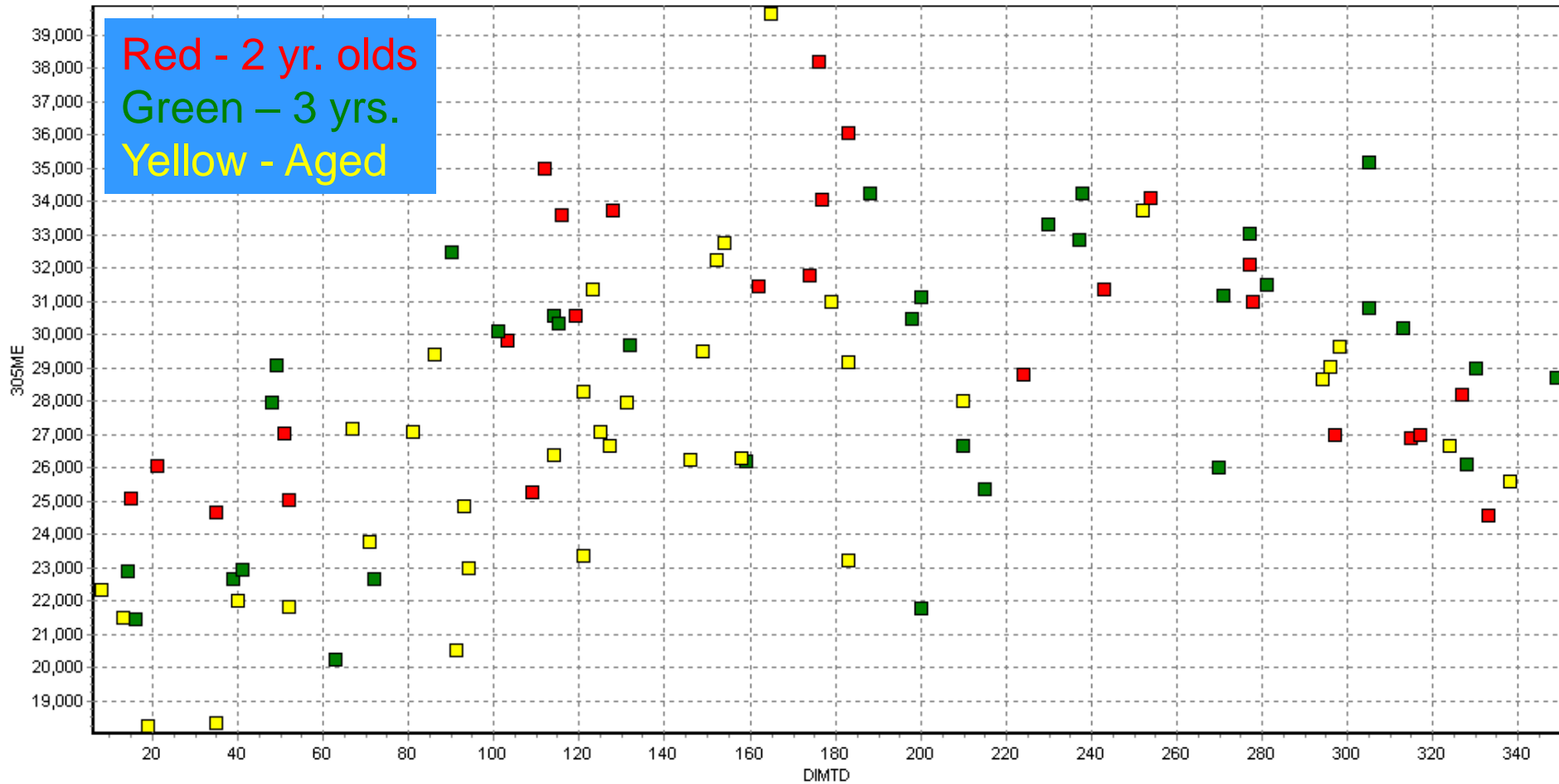
Lact > 2 Milk by DIM

12/22/04 DURFEE, STEVEN & DOUGLAS
GRAPH MILK BY DIMTD FOR LACT>2 DIMTD<400



305ME by DIM and Lact Group

12/13/04 BLACK BROOK FARM
GRAPH 305ME LCTGP BY DIMTD FOR DIMTD<350 305ME>0



When they left the herd...

EVENTS ... FOR LACT>0\BIS													
Event	Total	<30	60	90	120	150	180	210	240	270	300	330	>330
SOLD	25	4	0	0	2	0	2	0	4	1	0	2	10
DIED	4	1	0	0	0	0	1	0	0	0	0	1	1
TOTALS	29	5	0	0	2	0	3	0	4	1	0	3	11

115 cows (milking and dry) in herd
 $29/115 = 25\%$ cull rate

$5/29 = 17\%$

Animals that died during 2004

EVENTS ... BY LACT

ID	LACT	AGE	DIM	MILK	RELV	Event	DIM	Date
838	0	3	0	0	0	DIED	102	01/30/04
844	0	2	0	0	0	DIED	63	01/20/04
693	1	39	280	0	83	DIED	326	02/08/04
444	4	74	154	89	79	DIED	154	07/13/04
605	4	77	391	0	91	DIED	466	09/23/04
606	5	80	1	0	0	DIED	1	12/12/04

Bull calves...

Back-up on 12-13-04...

Date	Ht Elig	Heat	Pct	Pg Elig	Preg	Pct	Aborts
12/01/03	31	14	45	31	7	23	0
12/22/03	29	12	41	29	4	14	0
1/12/04	34	14	41	34	5	15	0
2/02/04	32	18	56	31	5	16	1
2/23/04	33	19	58	33	9	27	1
3/15/04	29	11	38	29	4	14	0
4/05/04	32	12	38	32	7	22	0
4/26/04	31	16	52	30	3	10	0
5/17/04	30	17	57	29	9	31	0
6/07/04	24	10	42	23	5	22	0
6/28/04	21	9	43	20	2	10	0
7/19/04	23	11	48	23	2	9	0
8/09/04	29	10	34	29	3	10	0
8/30/04	32	23	72	30	7	23	0
9/20/04	27	11	41	26	4	15	0
10/11/04	35	17	49	33	4	12	0
11/01/04	35	21	60	0	0	0	0
11/22/04	22	14	64	0	0	0	0
Total	472	224	47	462	80	17	2

Cow Repro Results

Goal:
> 20% PR

Pregnancy Rate

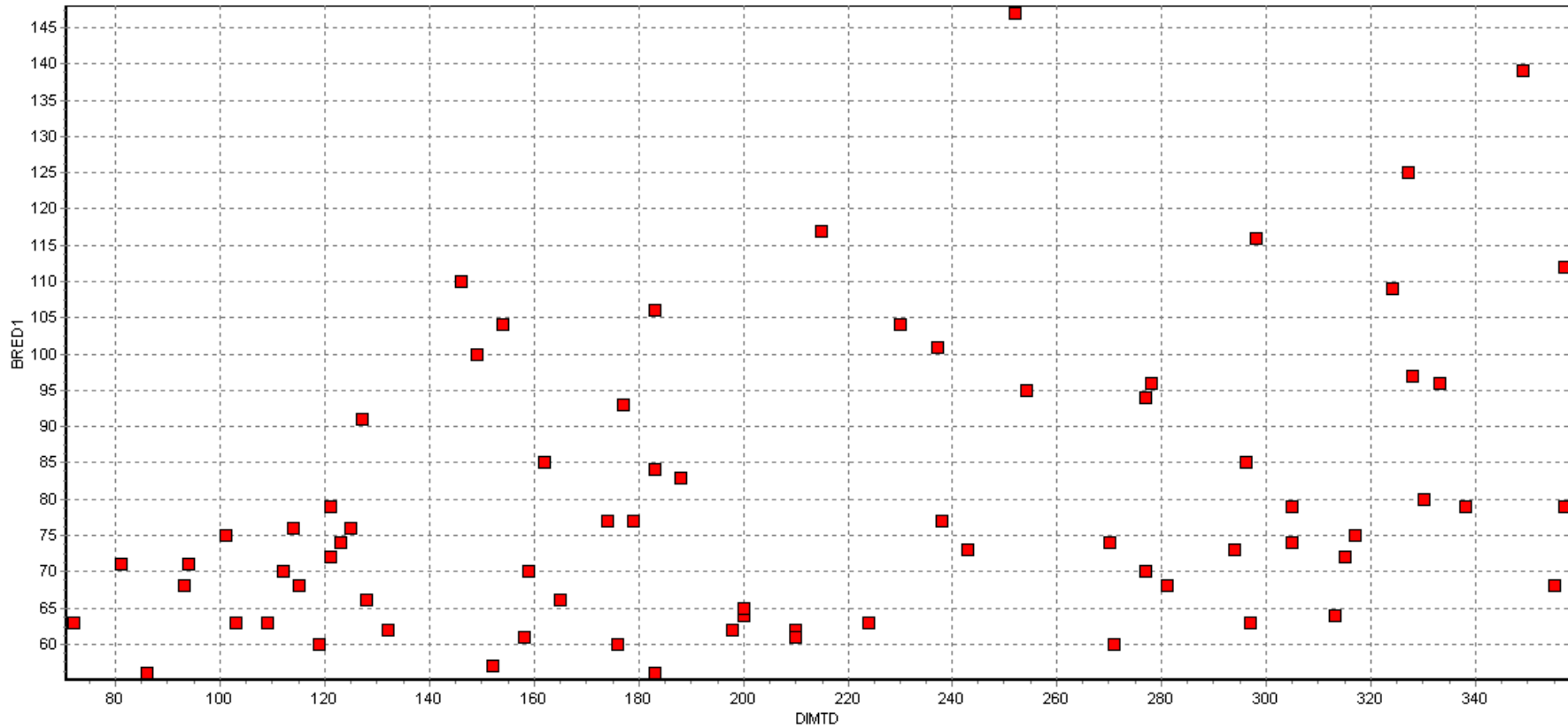
36% CR

Heat Detection Rate

DIM at first breeding

DIM at 1st breeding

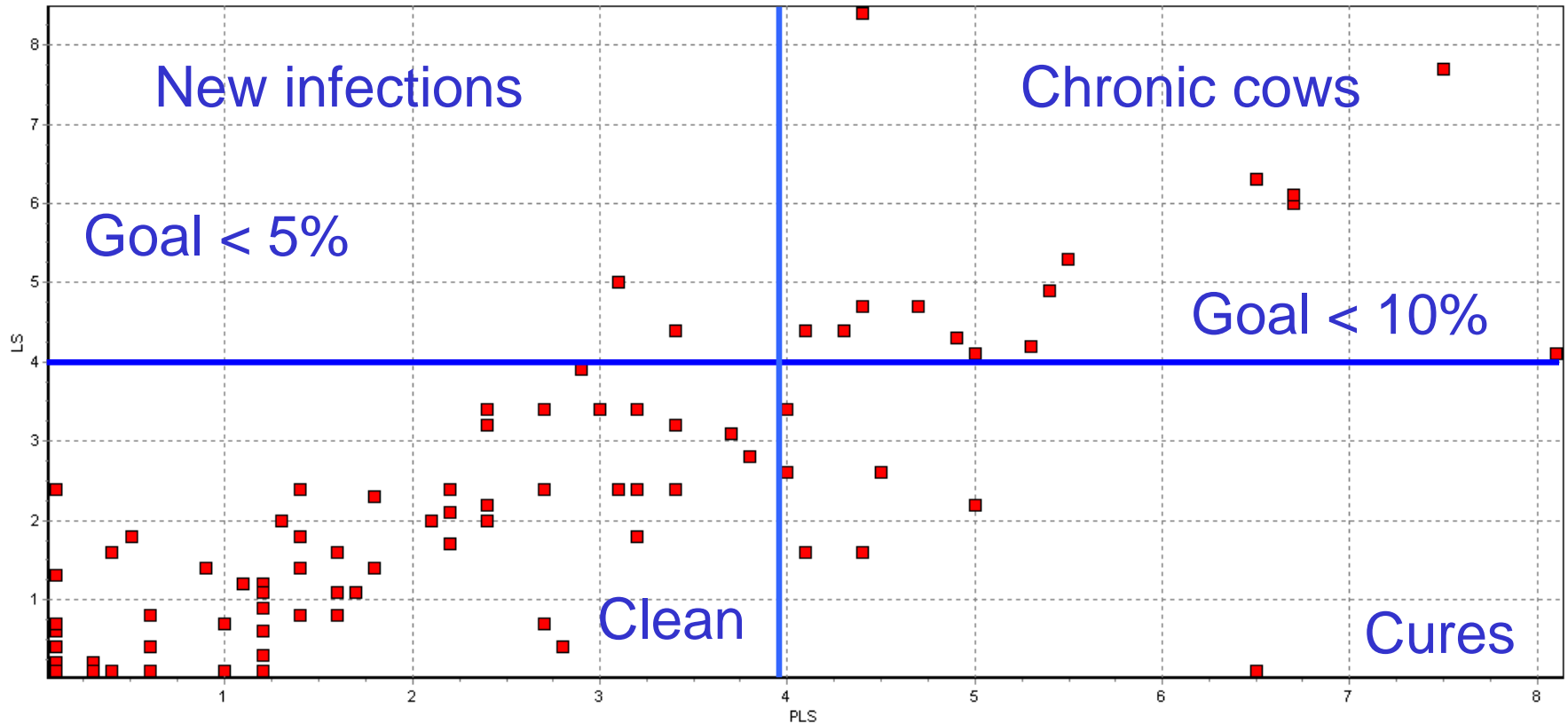
12/13/04 BLACK BROOK FARM
GRAPH BRED1 BY DIMTD FOR DIMTD<365



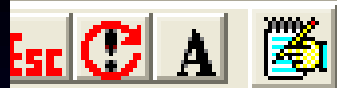
DIM

Udder Health – Previous LS by LS

12/13/04 BLACK BROOK FARM
GRAPH LS BY PLS



#COW	Av	LS	Av	PLS
95		2.2		2.5



COWVAL\R

Parameter	Value	
Cull Milk	59	
Replacement	925	
Heifers	106	
To Sell	14	
To Keep	101	
Average	CWVAL	676
Open	55	
Average	PGVAL	284
Preg	52	
Average	PGVAL	1132

14/115 =
12%

Cows that may make the dairy more money by being replaced...

SHOW ... BY CWVAL FOR CWVAL <> 0									
ID	CWVAL	PGVAL	LACT	DIM	MILK	RELV	LS	PLS	RPRO
716	-858	-858	2	199	47	76	3.1	3.7	PREG
685	-673	104	3	34	69	64	3.4	2.7	FRESH
668	-337	-26	3	90	80	72	1.1	1.6	FRESH
775	-296	535	1	51	69	87	1.3	0.1	FRESH
677	-212	208	3	51	89	76	0.7	2.7	FRESH
627	-201	127	4	401	56	99	3.4	3.0	BRED
561	-197	90	6	323	69	93	4.4	4.1	BRED
721	-181	207	2	62	84	71	1.7	2.2	FRESH
714	-126	156	2	214	67	89	6.3	6.5	BRED
739	-121	1378	1	383	0	92	0.0	2.6	DRY
726	-86	332	2	40	82	80	3.4	4.0	FRESH
621	-66	243	4	120	84	82	0.1	1.0	BRED
586	-56	-46	5	182	80	81	6.0	6.7	BRED
612	-37	211	5	39	95	77	0.4	2.8	FRESH

Why has Black Brook grown this past year?

- Don't lose calves
- The vast majority freshen well
- Excellent udder health
- Good reproductive results

- Don't have to sell cows