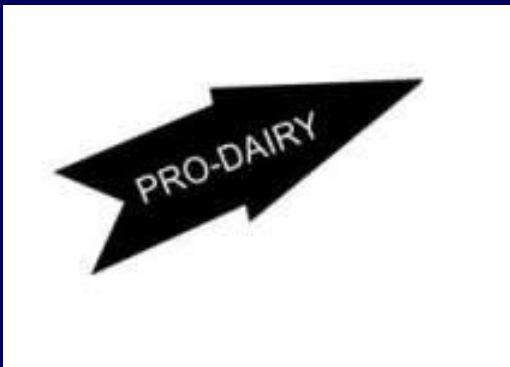


Internal Growth at Durfee Dairy

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 Durfee Dairy



SUM ... BY LCTGP FOR FDATE>0 DDATE=0

By LCTGP	%COW	#COW	Av MILK	AvDIMTD	Av PCTF	Av PCTP	Av AGE	Av305ME
1	39	68	67	197	3.6	3.1	32	25975
2	26	46	79	170	3.2	3.1	44	27054
3	34	59	72	184	3.2	3.1	75	23438
=====	====	====	=====	=====	=====	=====	=====	=====
Total	100	173	72	186	3.4	3.1	50	25389

Stillborn calves – Goal < 5%

Calf Report for 12/23/03 - 12/22/04

Month	Fresh	None	Twins	%T	Male	Female	%F	Alive	Dead	%D	M:Dead	%M	F:Dead	%F
12/03	12	0	0	0	5	7	58	12	0	0	0	0	0	0
1/04	12	1	1	8	7	5	42	10	2	17	2	29	0	0
2/04	26	1	1	4	13	13	50	25	1	4	0	0	1	8
3/04	14	0	1	7	11	4	27	14	1	7	0	0	1	25
4/04	7	1	1	14	3	4	57	5	2	29	1	33	1	25
5/04	8	0	1	12	6	3	33	9	0	0	0	0	0	0
6/04	26	6	3	12	13	10	43	21	2	9	2	15	0	0
7/04	25	1	2	8	15	11	42	25	1	4	1	7	0	0
8/04	25	3	3	12	11	14	56	20	5	20	2	18	3	21
9/04	21	1	0	0	9	11	55	16	4	20	1	11	3	27
10/04	11	1	3	27	6	7	54	13	0	0	0	0	0	0
11/04	18	0	0	0	10	8	44	18	0	0	0	0	0	0
12/04	8	2	0	0	3	3	50	6	0	0	0	0	0	0
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
TOTAL	213	17	16	8	112	100	47	194	18	8	9	8	9	9

Total freshenings

Heifers DOA
(12% in heifers)

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?

IG: Don't lose calves

Goal: Calf mortality of $< 1\%$

Farm records – 6 hutch heifers lost in 2004
6%

Date	Ht Elig	Heat	Pct	Pg Elig	Preg	Pct	Aborts
12/10/03	26	2	8	26	0	0	0
12/31/03	30	0	0	30	0	0	0
1/21/04	37	1	3	37	0	0	0
2/11/04	41	2	5	41	0	0	0
3/03/04	46	2	4	46	1	2	0
3/24/04	47	16	34	47	6	13	1
4/14/04	43	7	16	40	3	8	0
5/05/04	40	6	15	40	5	12	1
5/26/04	38	7	18	38	4	11	0
6/16/04	43	2	5	43	2	5	0
7/07/04	47	9	19	47	5	11	1
7/28/04	43	4	9	43	1	2	0
8/18/04	45	1	2	45	1	2	0
9/08/04	49	1	2	49	0	0	0
9/29/04	60	3	5	60	1	2	0
10/20/04	63	5	8	63	3	5	0
11/10/04	64	13	20	0	0	0	0
12/01/04	59	17	29	0	0	0	0
Total	698	68	10	695	32	5	3

Heifer Repro Results

Goals:

HDR > 60%

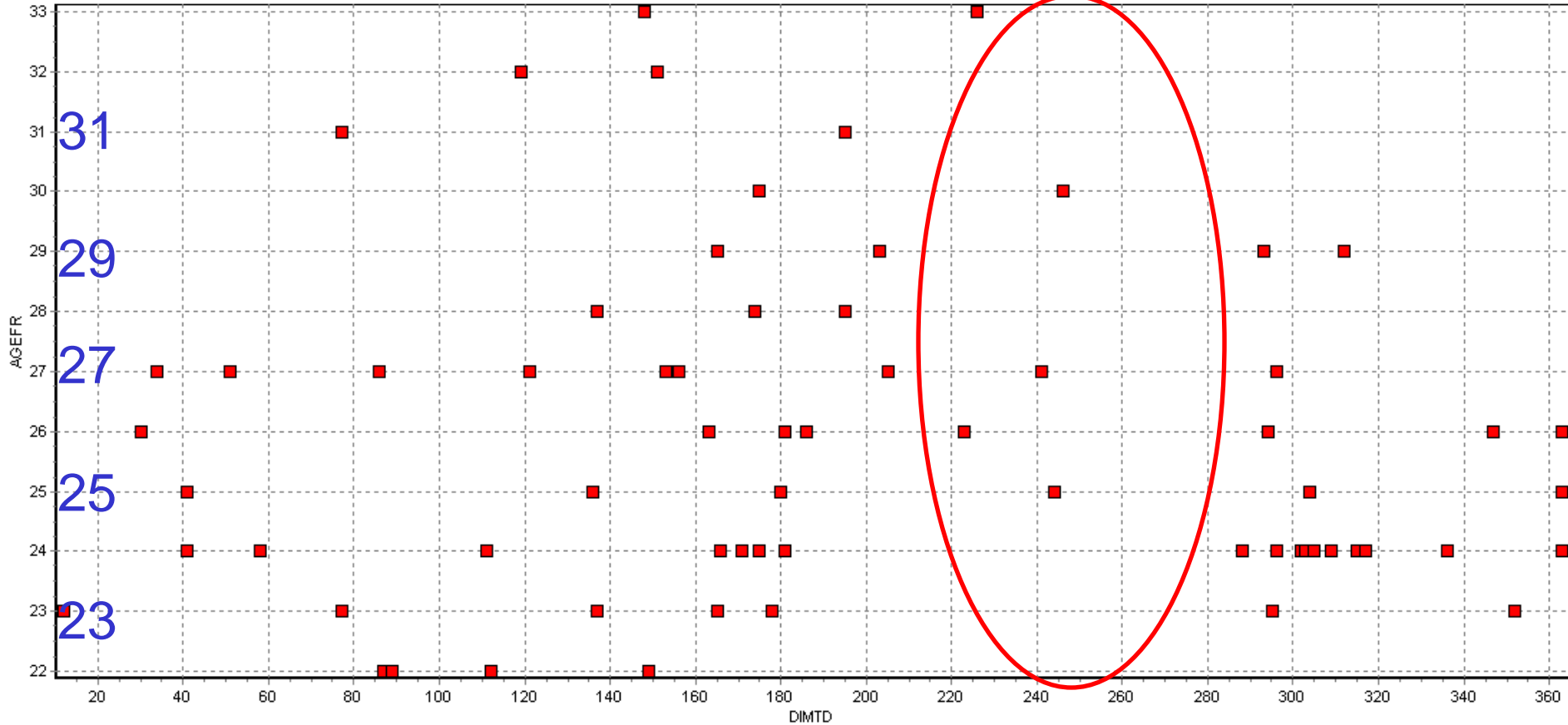
CR > 60%

PR > 25%

Regular heifer
preg checks?

Heifer Repro Results

12/22/04 DURFEE, STEVEN & DOUGLAS
GRAPH AGEFR BY DIMTD FOR LACT=1 DIMTD<400



26 months average AFC

EVENTS ... FOR LACT>O\BIS													
Event	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ABORT	19	3	0	2	3	3	1	1	2	2	1	0	1
SOLD	60	4	8	4	4	5	2	5	5	8	9	1	5
TOTALS	79	7	8	6	7	8	3	6	7	10	10	1	6

From the best information source – office notebook:

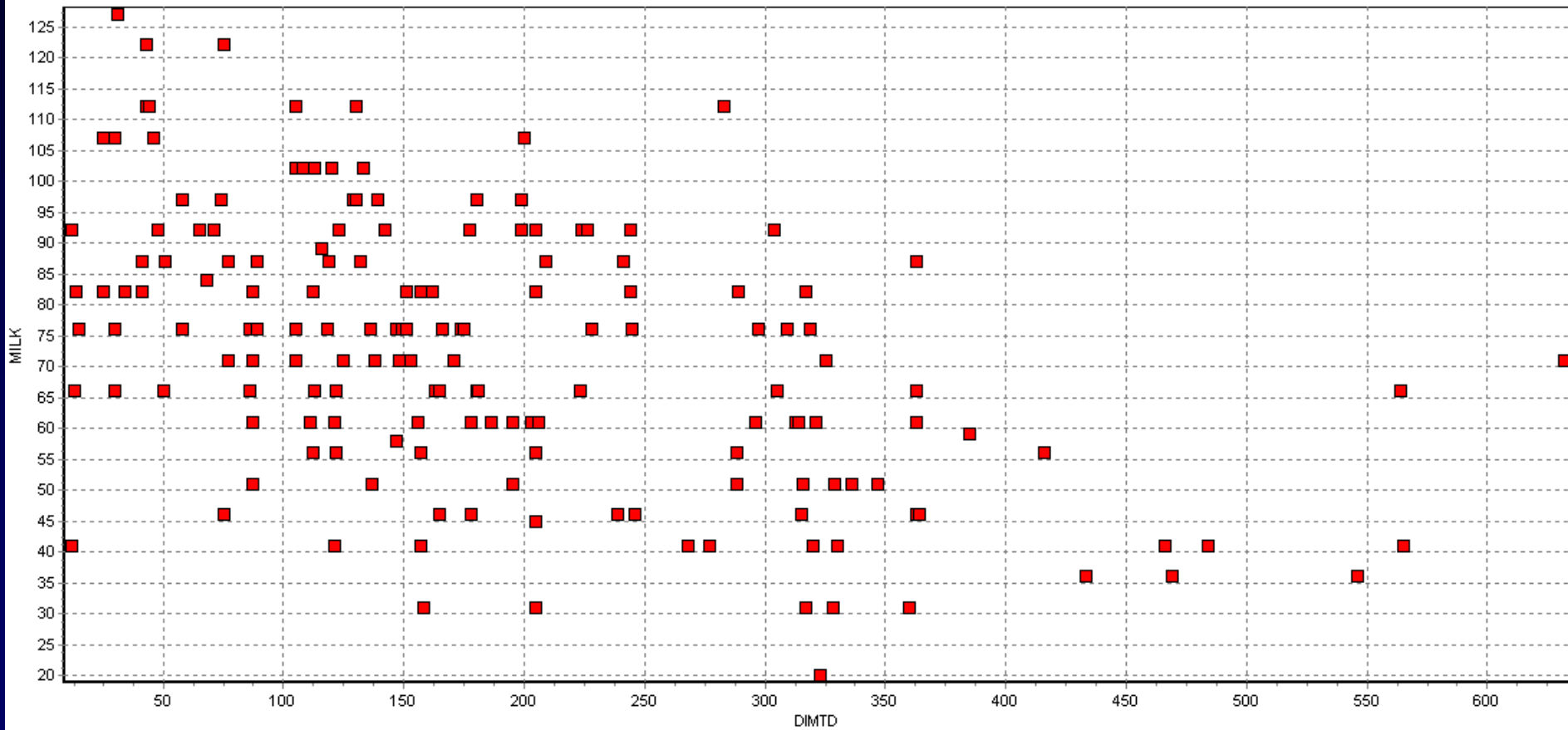
2004 Cows Culled*

Repro	15 (1/3 cystic)
Dead	8
Metabolic	6
Feet/Legs	6
Disease	6
Mastitis	5
Injured	3
“Old Age”	2
Low Prod.	1
	<u>52</u> (30% cull rate)

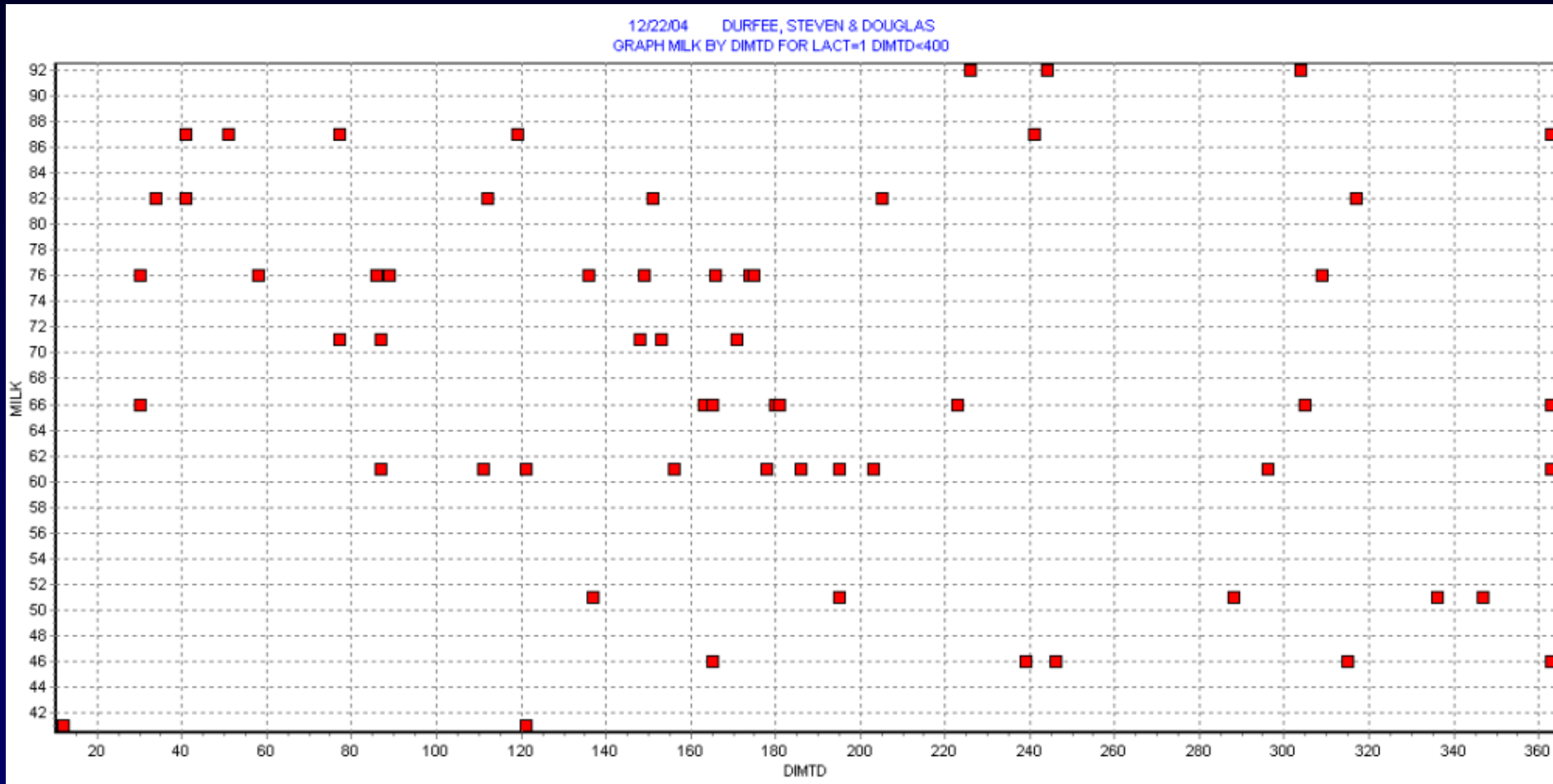
**2004 was one of those years when you say goodbye to a block of older cows. 20 of 52 cows culled had 4 or more lactations.*

Milk by DIM for the entire herd

12/22/04 DURFEE, STEVEN & DOUGLAS
GRAPH MILK BY DIMTD

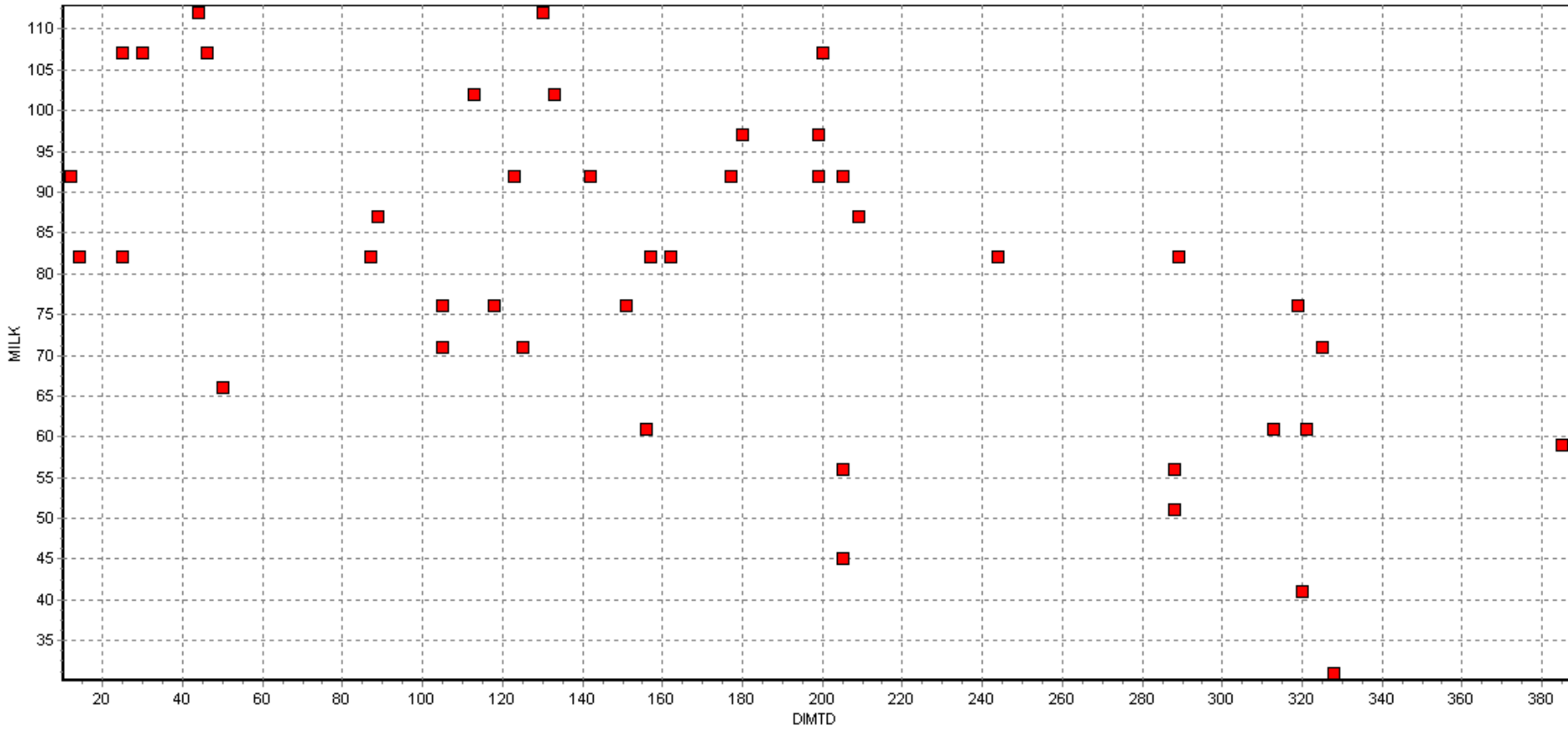


Lact = 1 Milk by DIM



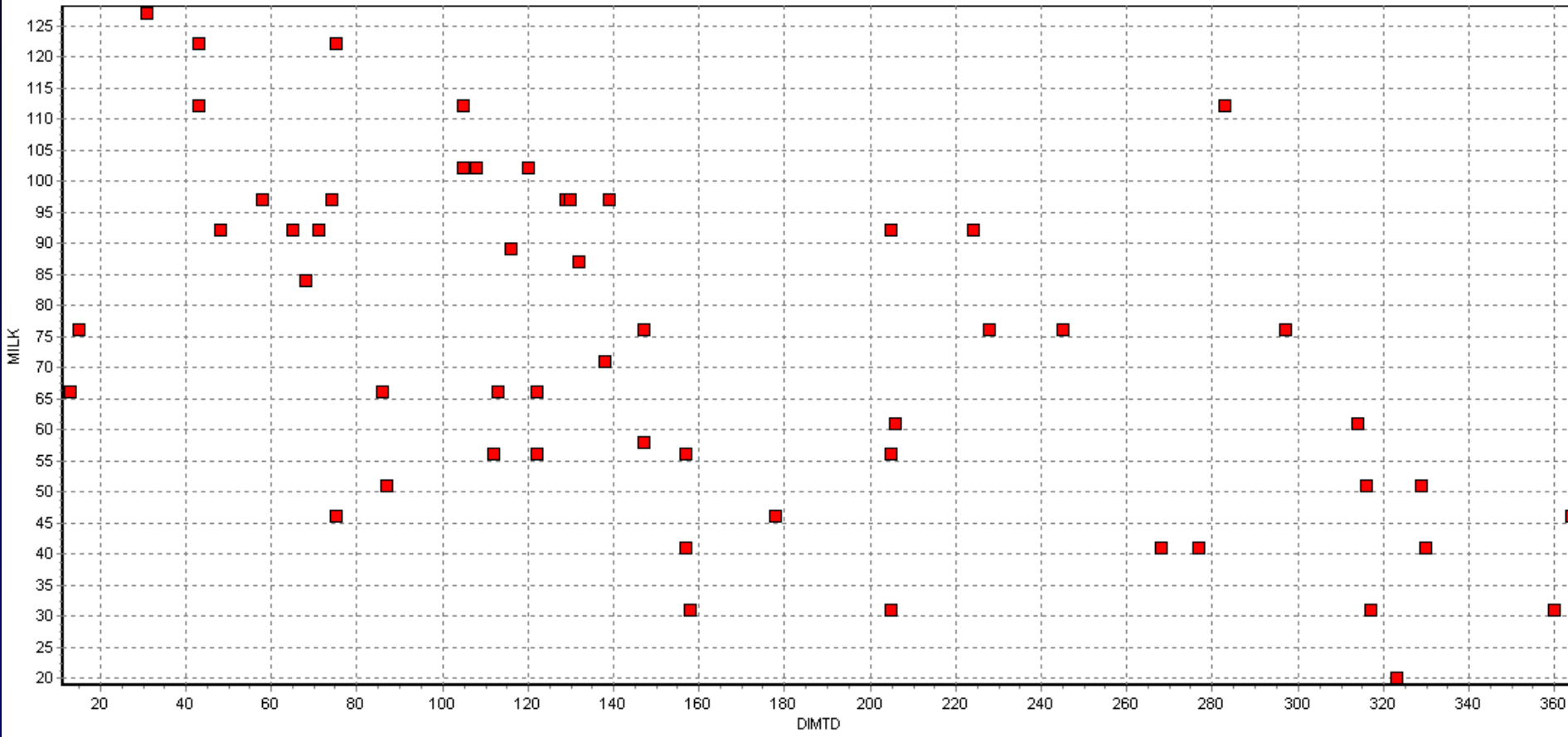
Lact = 2 Milk by DIM

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

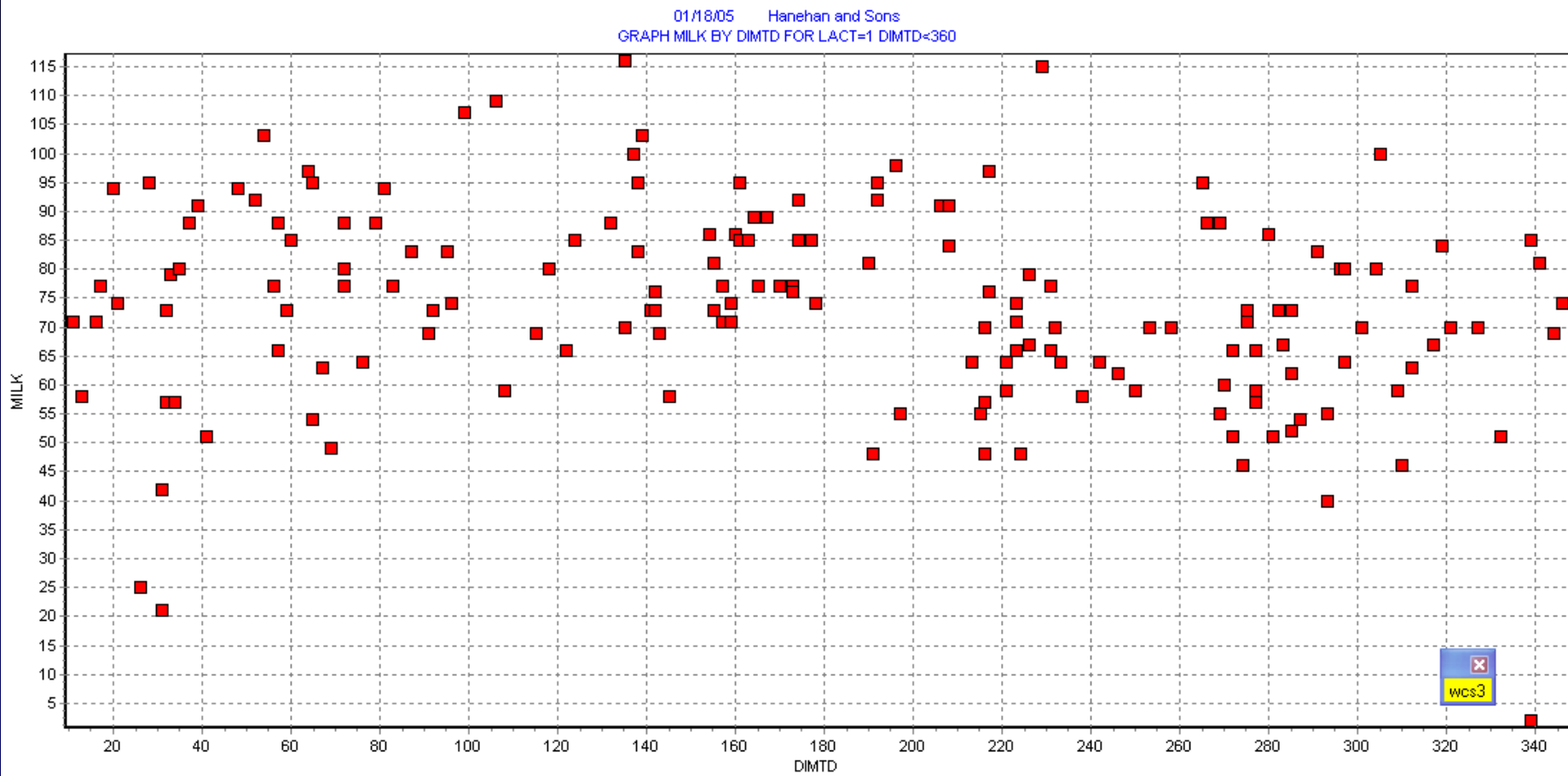


Lact > 2 Milk by DIM

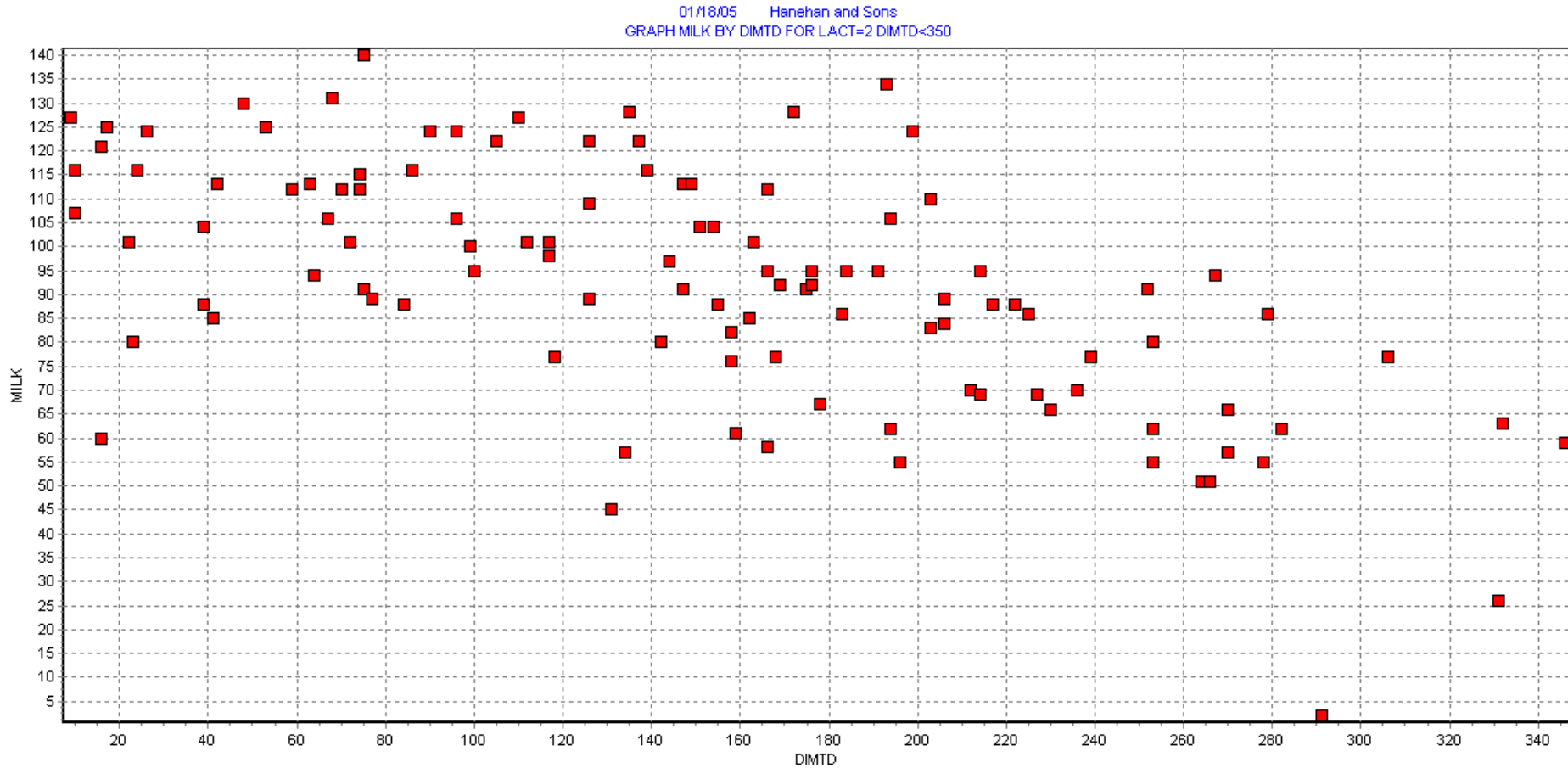
12/22/04 DURFEE, STEVEN & DOUGLAS
GRAPH MILK BY DIMTD FOR LACT>2 DIMTD<400



Lact = 1 Milk by DIM

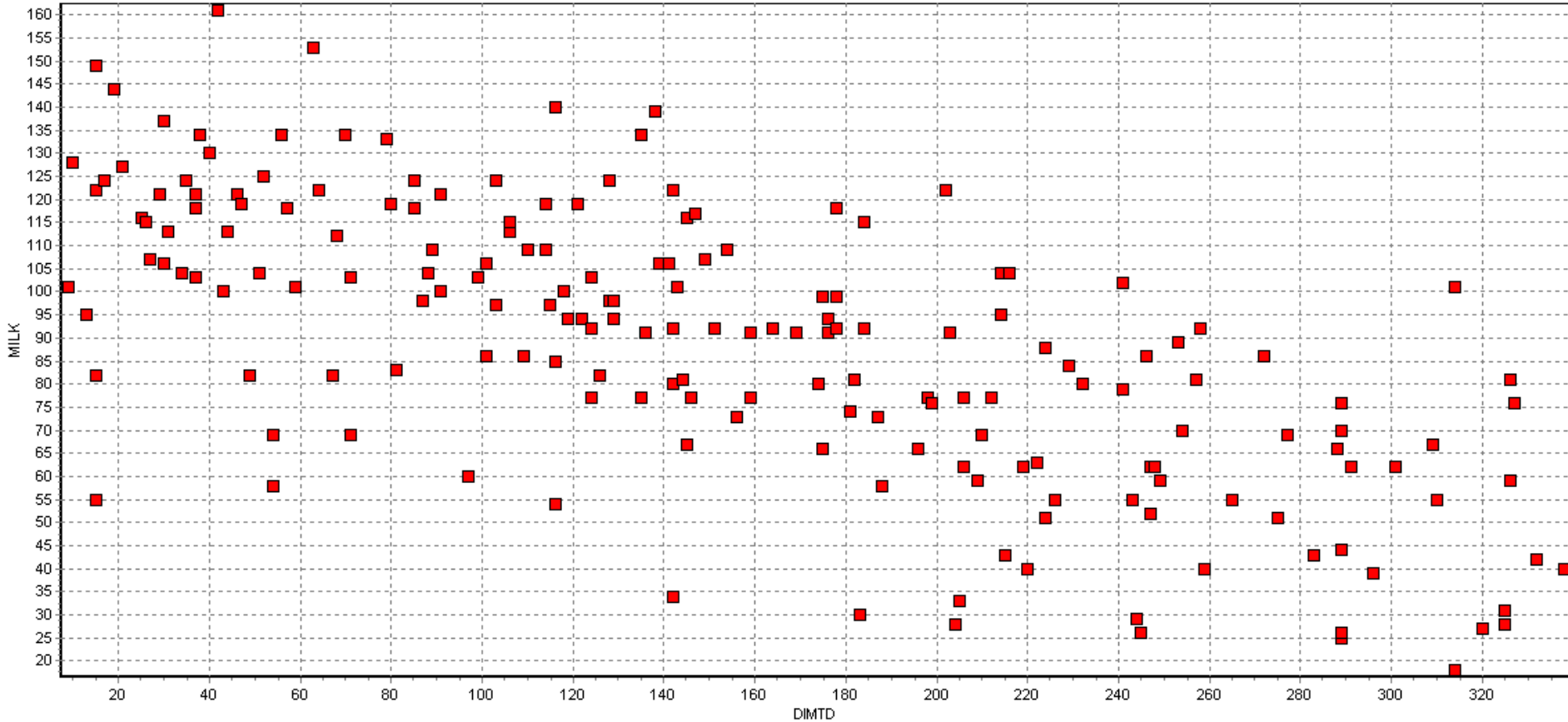


Lact = 2 Milk by DIM



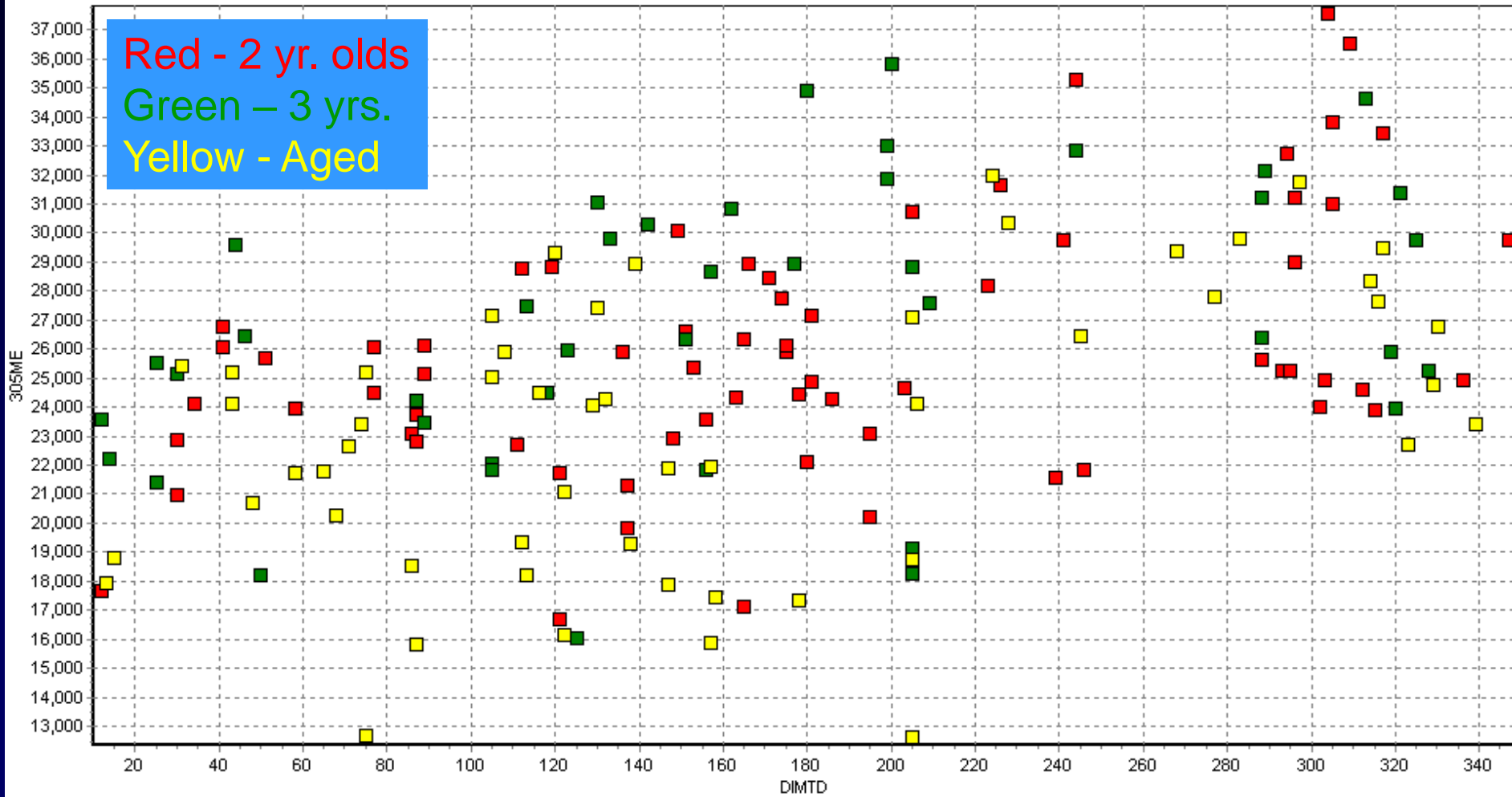
Lact > 2 Milk by DIM

01/18/05 Hanehan and Sons
GRAPH MILK BY DIMTD FOR LACT>2 DIMTD<350



305ME by DIM

12/22/04 DURFEE, STEVEN & DOUGLAS
GRAPH 305ME BY LCTGP DIMTD FOR DIMTD<350 305ME>0



When they left the herd...

Event	Total	<30	60	90	120	150	180	210	240	270	300	330	>330
SOLD	60	15	5	3	4	6	1	2	0	1	4	6	13
TOTALS	60	15	5	3	4	6	1	2	0	1	4	6	13

197 cows (milking and dry) in herd
 $60/197 = 30\%$ cull rate

$(15 + 5)/60 = 33\%$



EVENTS ... FOR LACT>0\BIS

ID	Event	DIM	Date	Remark
705	SOLD *	13	02/05/04	DCAR6 Severe cold
486	SOLD *	18	02/09/04	DCAR1
443	SOLD *	4	02/10/04	DCAR6
685	SOLD	2	02/16/04	DCAR5
290	SOLD	23	03/03/04	DCAR5
546	SOLD *	14	07/14/04	DCAR6
661	SOLD *	29	07/17/04	DCAR5
641	SOLD	11	08/16/04	DCAR5
671	SOLD *	13	09/01/04	DCAR7 Mastitis
880	SOLD *	12	09/08/04	DCAR6 Stall injury
469	SOLD	3	09/14/04	DCAR6
129	SOLD	27	10/08/04	DCAR5
354	SOLD *	2	10/15/04	DCAR6
664	SOLD *	11	11/25/04	DCAR6 Slipped/Split
286	SOLD	21	12/06/04	DCAR5

Cows with ID numbers less than 500 are five or more lactations. 286 was in her 10th!

(Cows that sold/died* < 30 dim)

Date	Ht Elig	Heat	Pct	Pg Elig	Preg	Pct	Aborts
12/10/03	57	29	51	54	7	13	4
12/31/03	50	30	60	47	9	19	1
1/21/04	44	21	48	41	6	15	0
2/11/04	48	32	67	46	7	15	1
3/03/04	45	21	47	44	7	16	0
3/24/04	53	20	38	53	9	17	2
4/14/04	60	24	40	59	3	5	0
5/05/04	60	37	62	57	12	21	0
5/26/04	46	20	43	45	5	11	0
6/16/04	46	14	30	44	7	16	0
7/07/04	47	16	34	45	3	7	0
7/28/04	51	25	49	49	7	14	0
8/18/04	61	14	23	58	2	3	0
9/08/04	68	40	59	64	18	28	0
9/29/04	61	21	34	59	9	15	0
10/20/04	61	28	46	55	6	11	0
11/10/04	58	35	60	0	0	0	0
12/01/04	43	28	65	0	0	0	0
Total	858	392	46	820	117	14	8

Cow Repro Results

Goal:
> 20% PR

Pregnancy Rate

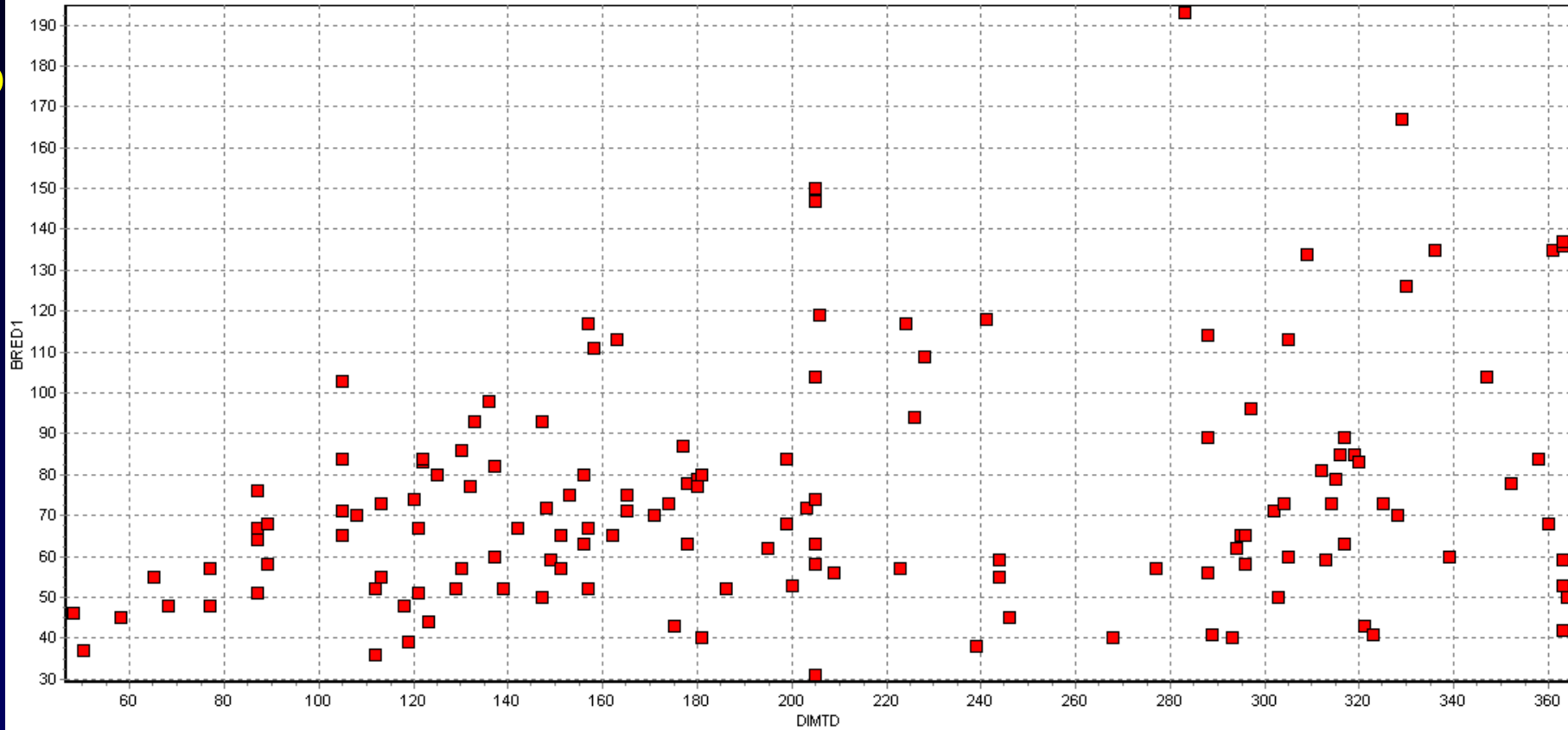
31% CR

Heat Detection Rate



DIM at first breeding

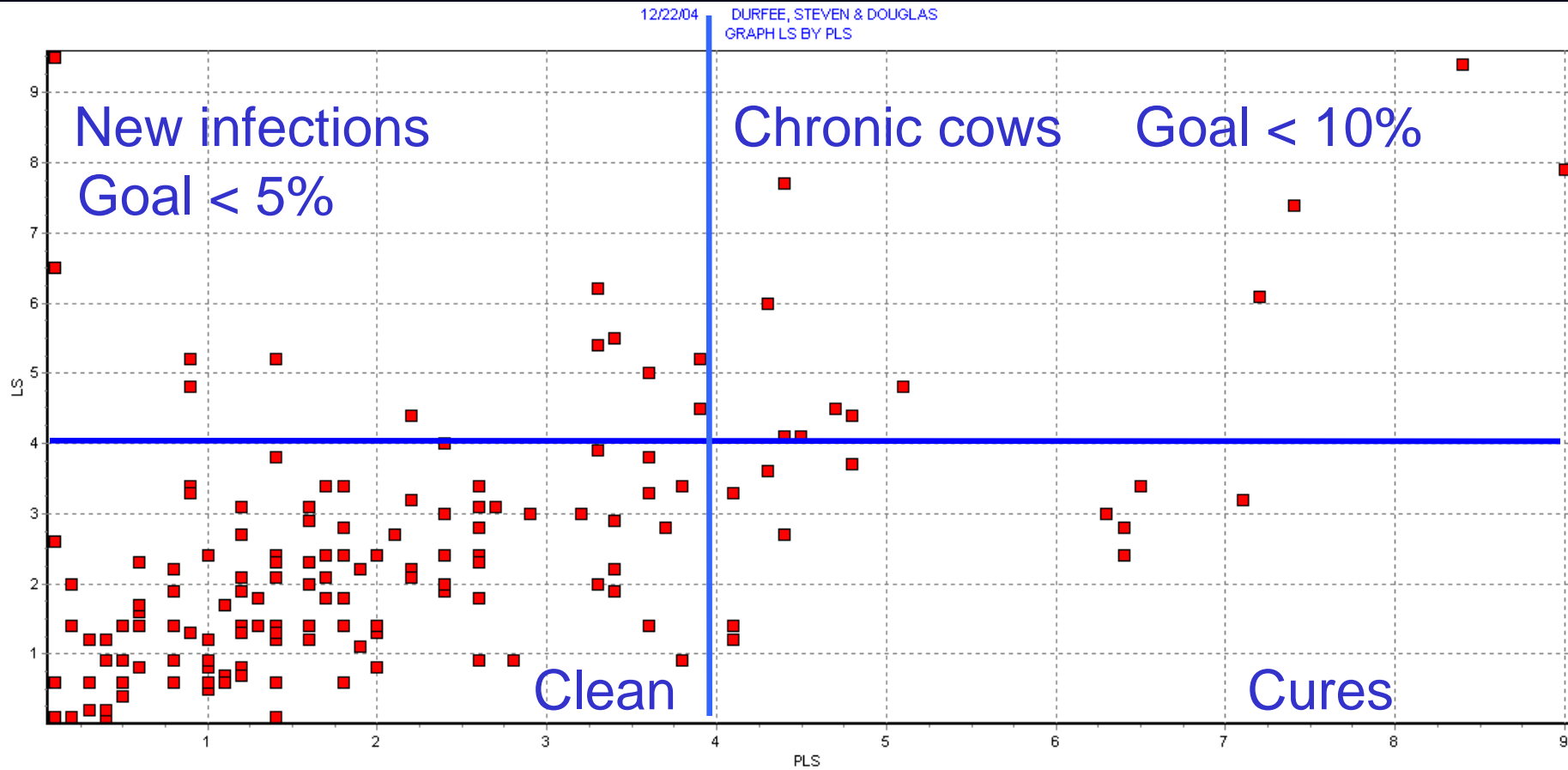
12/22/04 DURFEE, STEVEN & DOUGLAS
GRAPH BRED1 BY DIMTD FOR BRED1>0 DIMTD<365



DIM at 1st breeding

DIM

Udder Health – Previous LS by LS



#COW	Av	LS	Av	PLS
173		2.4		2.2

Parameter	Value	
Cull Milk	53	
Replacement	900	
Heifers	213	
To Sell	39	
To Keep	158	
Average	CWVAL	648
Open	94	
Average	PGVAL	223
Preg	103	
Average	PGVAL	912

$39/197 = 20\%$

ID	CWVAL	PGVAL	LACT	DIM	MILK	RELV	LS	PLS	RPRO
601	-1308	-1309	3	204	31	48	2.0	3.3	PREG
662	-979	-980	3	157	31	67	5.2	0.9	PREG
616	-876	-877	3	156	41	61	3.2	7.1	PREG
621	-769	-176	3	86	51	61	2.0	2.4	BRED
887	-635	-440	1	120	41	64	4.4	4.8	BRED
389	-546	-112	7	121	56	62	2.1	1.4	BRED
840	-471	-178	1	164	46	66	3.9	3.3	BRED
730	-458	-316	2	204	45	70	4.8	0.9	BRED
612	-445	-935	4	74	46	48	2.4	1.4	FRESH
9766	-399	244	2	49	66	70	0.9	1.0	BRED
458	-389	-129	5	204	56	72	3.0	6.3	BRED
881	-377	291	1	136	51	82	0.9	2.6	BRED
626	-369	-238	4	177	46	67	6.2	3.3	BRED
454	-362	-76	6	85	66	71	0.6	0.3	FRESH
712	-327	-328	2	319	41	92	4.1	4.5	PREG
9758	-315	-51	4	112	66	70	0.4	0.5	BRED
382	-284	83	7	121	66	81	1.3	2.0	BRED
677	-275	115	3	111	56	74	3.7	4.8	PREG
467	-267	-47	5	156	56	84	2.0	2.4	PREG
564	-229	-259	4	468	36	78	2.4	6.4	BRED
607	-209	-77	3	146	58	69	0.0	2.4	PREG
867	-159	175	1	238	46	83	1.8	1.8	BRED
485	-139	160	4	315	51	106	3.3	4.1	BRED
744	-112	-5	2	124	71	61	0.8	1.0	BRED
766	-111	313	2	155	61	84	1.3	0.9	BRED
396	-104	192	5	415	56	106	3.0	2.4	BRED
877	-88	408	1	110	61	87	1.7	0.6	FRESH

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

Why has Durfee Dairy grown this past year?

- Average performance in several areas
 - Stillborns, calf mortality, reproduction
- Excellent udder health

- Don't have to sell many cows; hold on to some that perhaps should be sold