SCC Trouble-Shooting Tools:
DHI Resources & Dairy Comp Tips

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Outline

DHI Resources
- Individual Cow SCC
- Mastitis3 test

Dairy Comp
- Using Dairy Comp to trouble-shoot SCC problems

SCC is a Great Tool!

- SCC is one of the ***best indicators*** of intramammary infections (i.e. mastitis).

- **Rule of Thumb:** 85% of cows with an SCC level >200,000 cells/ml are infected with a mastitis-causing pathogen.

DHI Resources & Dairy Comp Tips

and most importantly...

...as SCC increases, so do **milk production losses.**

Clinical
- Diagnosis
- Treatment
- Discarded Milk
- Labour
- Premature Culling

Financial Losses Associated with Mastitis

Subclinical
REDUCED MILK PRODUCTION

Area of focus for DHI's SCC service (Mastitis3)

Managing Mastitis Requires Information

Short communication: Bulk milk somatic cell penalties in herds enrolled in Dairy Herd Improvement programs

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In conclusion, we demonstrated a benefit of being enrolled in a DHI program and having access to cow-level SCC to manage BTSCC, such that DHI herds **were 30% less likely to exceed BTSCC penalty thresholds.**

While extremely useful, SCC _**does not**_ tell you _which_ pathogen is causing the infection.

Methods of determining pathogens

MASTITIS 3
CONTAGIOUS MASTITIS ID

- PCR test
- Identifies 3 contagious pathogens
  (*Staph. aureus, Strep. agalactiae, Mycoplasma bovis*)
- Uses DHI test day milk sample
- Convenient and easy

CANWEST DHI

DHI Resources & Dairy Comp Tips

Dairy Comp

Dairy Comp ®

Herd Management Software

DHI Resources & Dairy Comp Tips

Dairy Comp ®

Bulk Tank SCC Analysis
'ECON\SP'

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Econ SCC Report
Analyzing 139 cows
 Test Date 26/ 3/12

|-- Bulk Tank Today --|
Total Milk      5291
Average Milk      38
Bulk PctF       3.56
Bulk PctP       3.10

Bulk Tank SCC     187
```
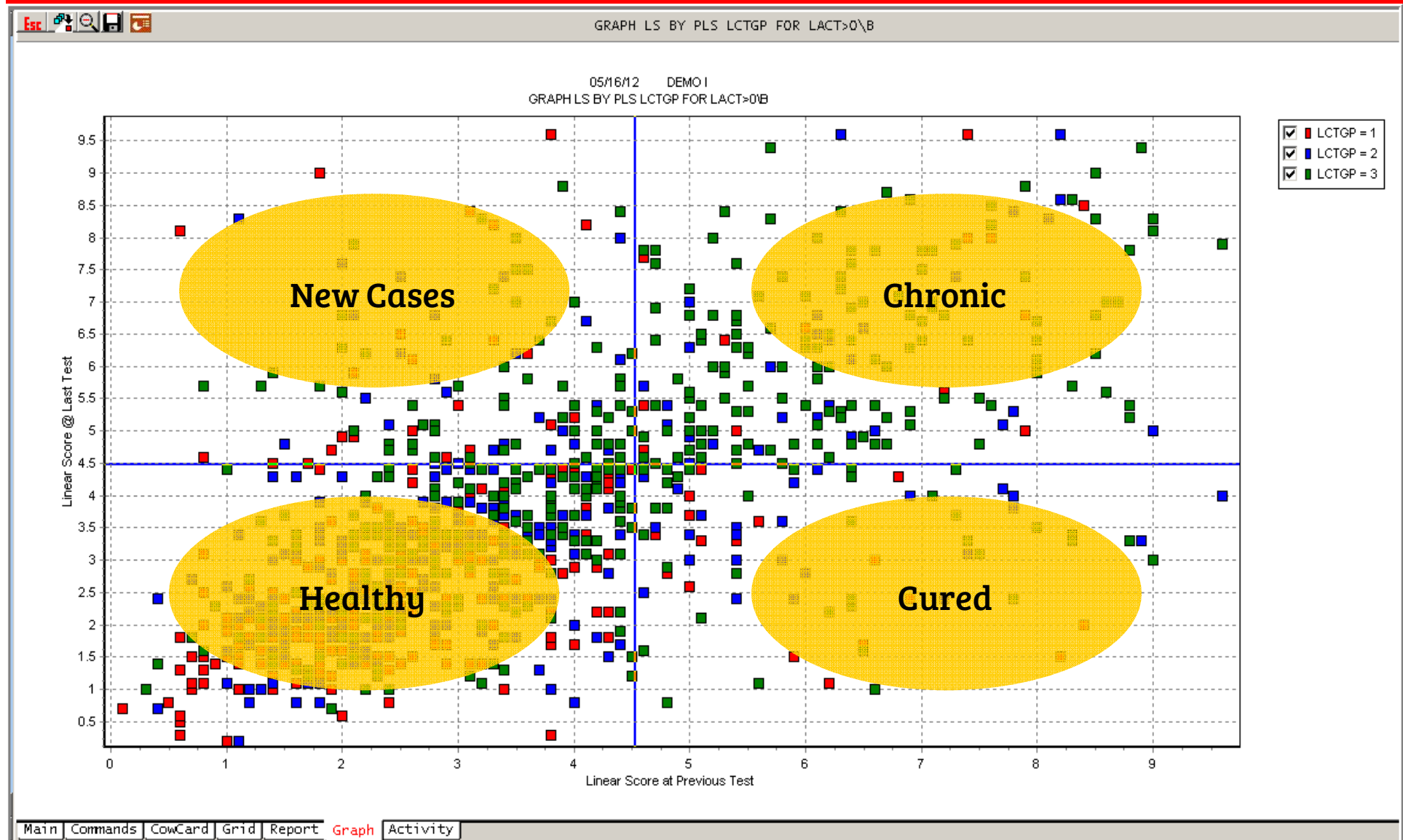
						Bulk Tank after removing only this cow from tank			Bulk Tank after removing cow and all cows above it		
ID	#>4	MILK	Value	SCC	%Tank	Price	@SCC	Income	Price	@SCC	Income
=====	===	====	=====	====	=====	=====	====	=======	=====	====	=======
3705	4	42	0.00	3831	19.7	0.00	158	O	0.00	158	O
3827	8	43	0.00	2528	13.3	0.00	171	O	0.00	133	O
3739	3	47	0.00	1026	5.9	0.00	185				O
3841	7	34	0.00	1276	5.3	0.00	186				O
3654	2	41	0.00	710	3.6	0.00	190				O
3648	9	33	0.00	701	2.8	0.00	191				O
3762	2	49	0.00	440	2.6	0.00	192				O
3773	6	33	0.00	561	2.3	0.00	192				O
3641	3	49	0.00	360	2.2	0.00	193				O
3835	2	45	0.00	324	1.8	0.00	193				O
3802	5	22	0.00	627	1.7	0.00	193			0.00	84	O
3790	10	37	0.00	334	1.5	0.00	194			0.00	82	O

Select Date

```
1   7/13/2011
2   9/15/2011
3   11/14/2011
4   1/7/2012
```

Linear Score vs. Previous Linear Score
'GRAPH LS BY PLS LCTGP FOR LACT>0\B'

'GUIDE' command

'GUIDE': SCC Infections Over Time

SCC Infection Status
'PLOT LS=4.5 BY LS\YRZ'

		5/17	6/20	7/21	8/24	10/ 3	11/14	12/14	1/17	2/14	3/20
LS											
Chronic %		7	4	5	8	11	5	3	6	6	5
	#	7	5	7	13	17	9	5	10	9	8
New Inf %		10	5	8	13	6	7	10	4	6	3
	#	10	6	13	21	9	12	16	7	9	4
Cured %		7	9	3	6	7	8	8	6	3	5
	#	7	10	5	9	11	14	13	10	4	8
Clean %		76	82	84	73	75	79	79	83	86	87
	#	78	93	130	118	112	130	128	130	131	136
HiFresh %		15	11	13	20	3	20	20		20	19
	#	4	2	2	3	1	2	2		2	3
LoFresh %		85	89	87	80	97	80	80	100	80	81
	#	23	17	13	12	29	8	8	13	8	13
Cure Risk		50	69	37	42	38	61	72	50	33	50
New Risk		11	5	8	15	7	8	11	4	6	3

SCC Infection Status - Graph
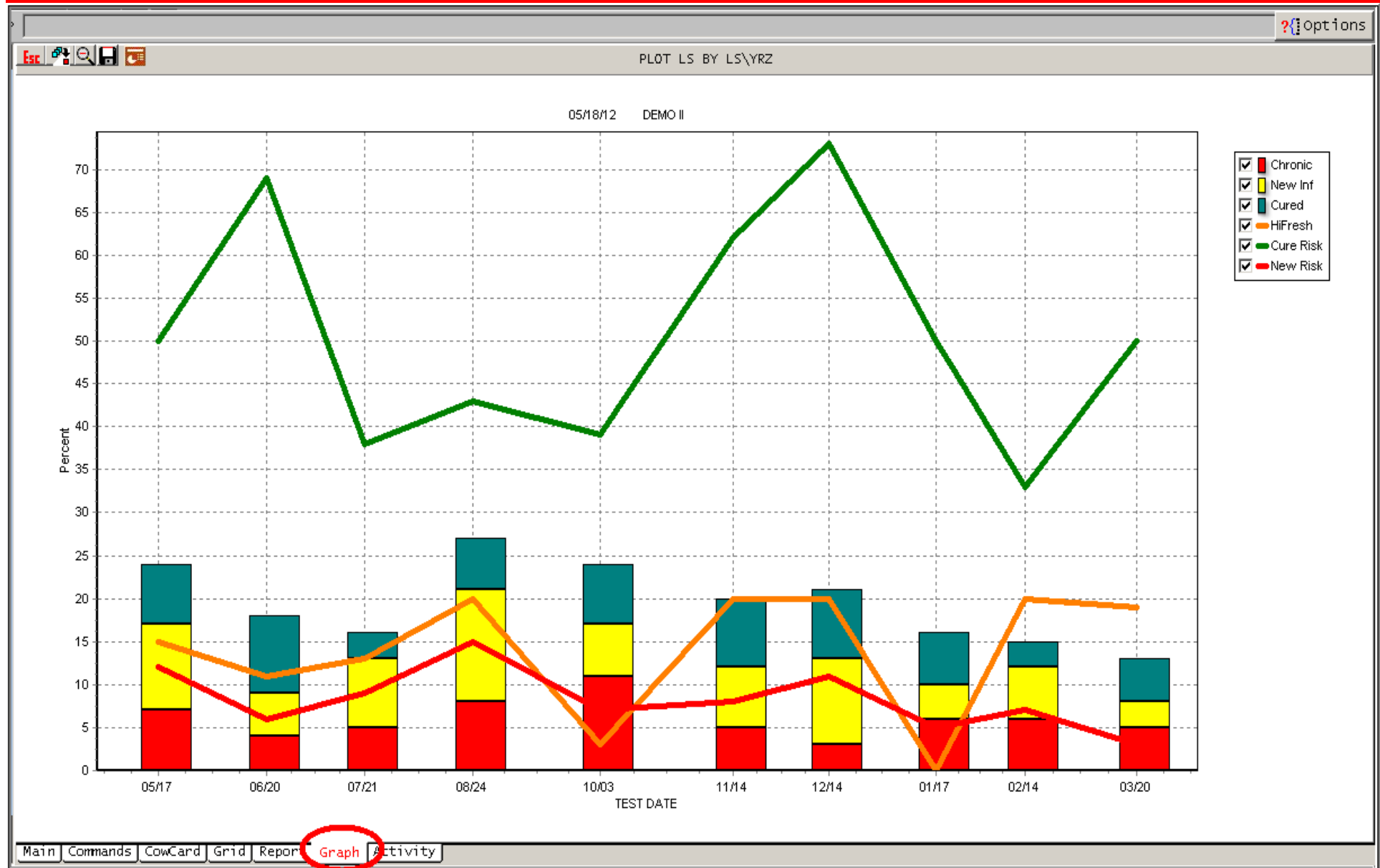
SCC Infection Status - Graph
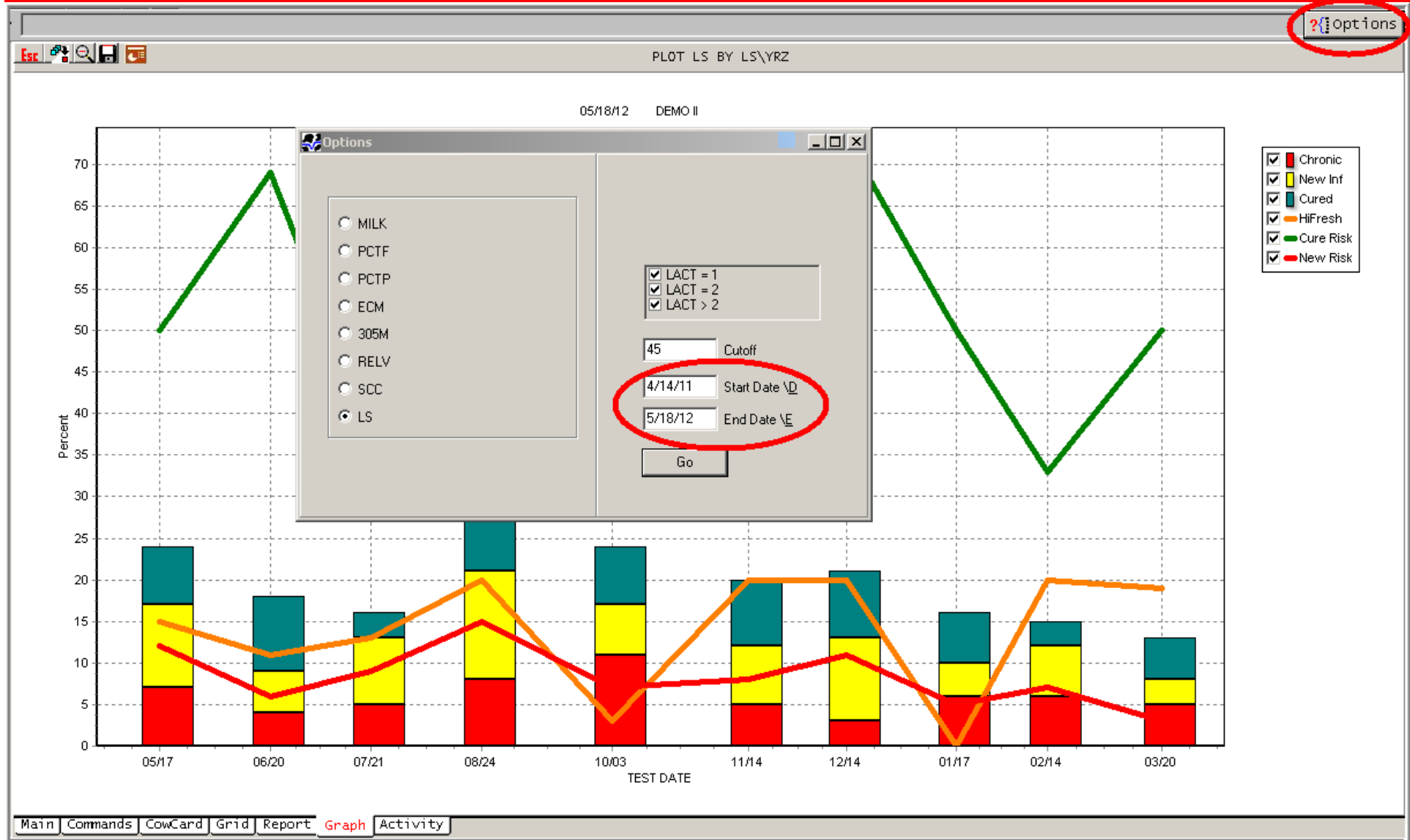
Linear Score vs. SCC Averages

LS vs. SCC Averages

Group 1			Group 2	
SCC	LS		SCC	LS
250	4.2		50	2.0
185	3.9		75	2.5
375	4.8		125	3.2
235	4.1		35	1.4
310	4.6		110	3.1
250	4.2		50	2.0
225	4.1		50	2.0
100	3.0		100	3.0
265	4.3		1600	7.0
244	**4.2**		**244**	**2.9**

- 1 herd has a 'cow' problem
- 1 herd has a 'herd' problem

Same SCC average but different LS average

SCC can be skewed by 1 abnormal cow!
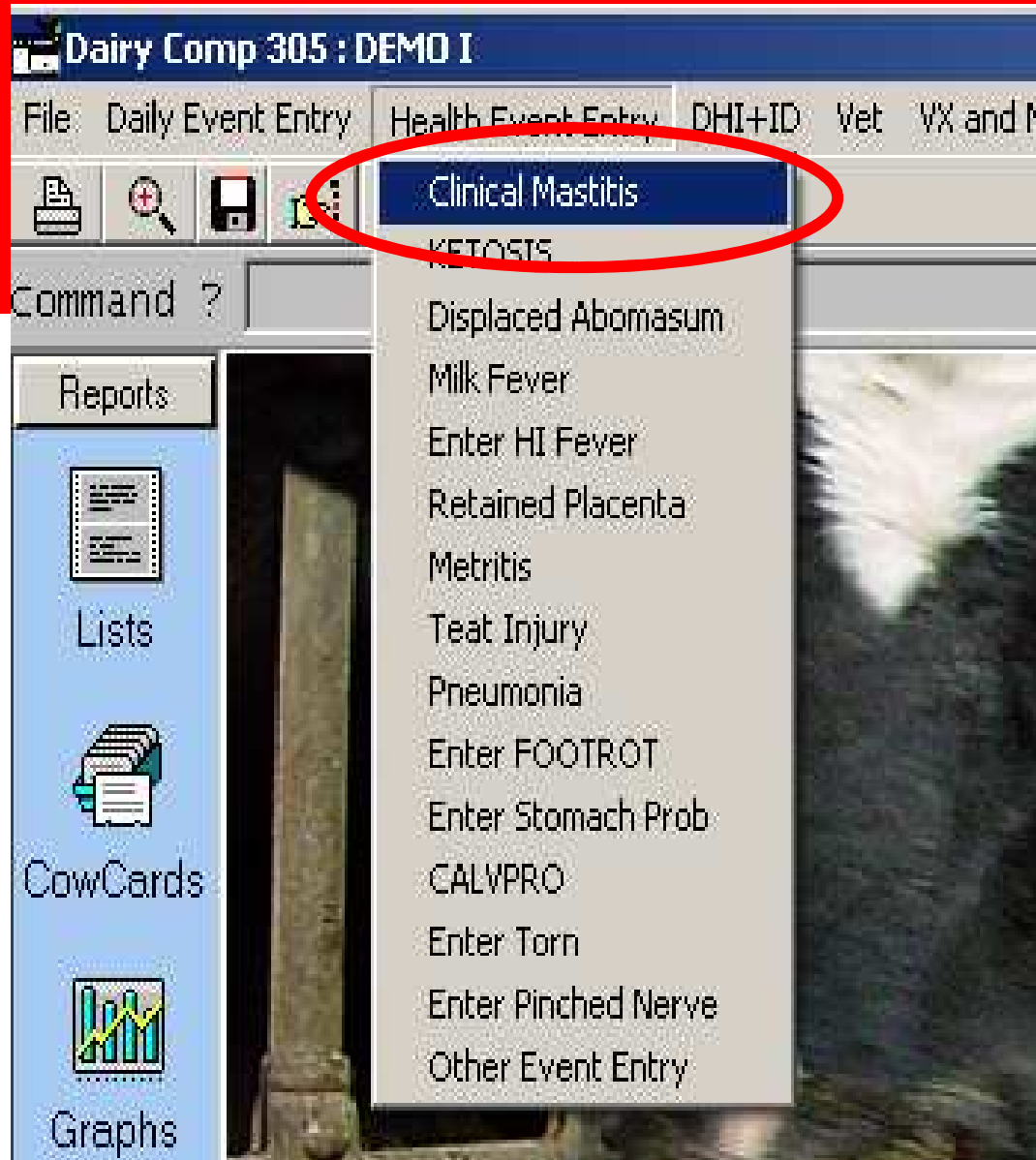
Mastitis Events
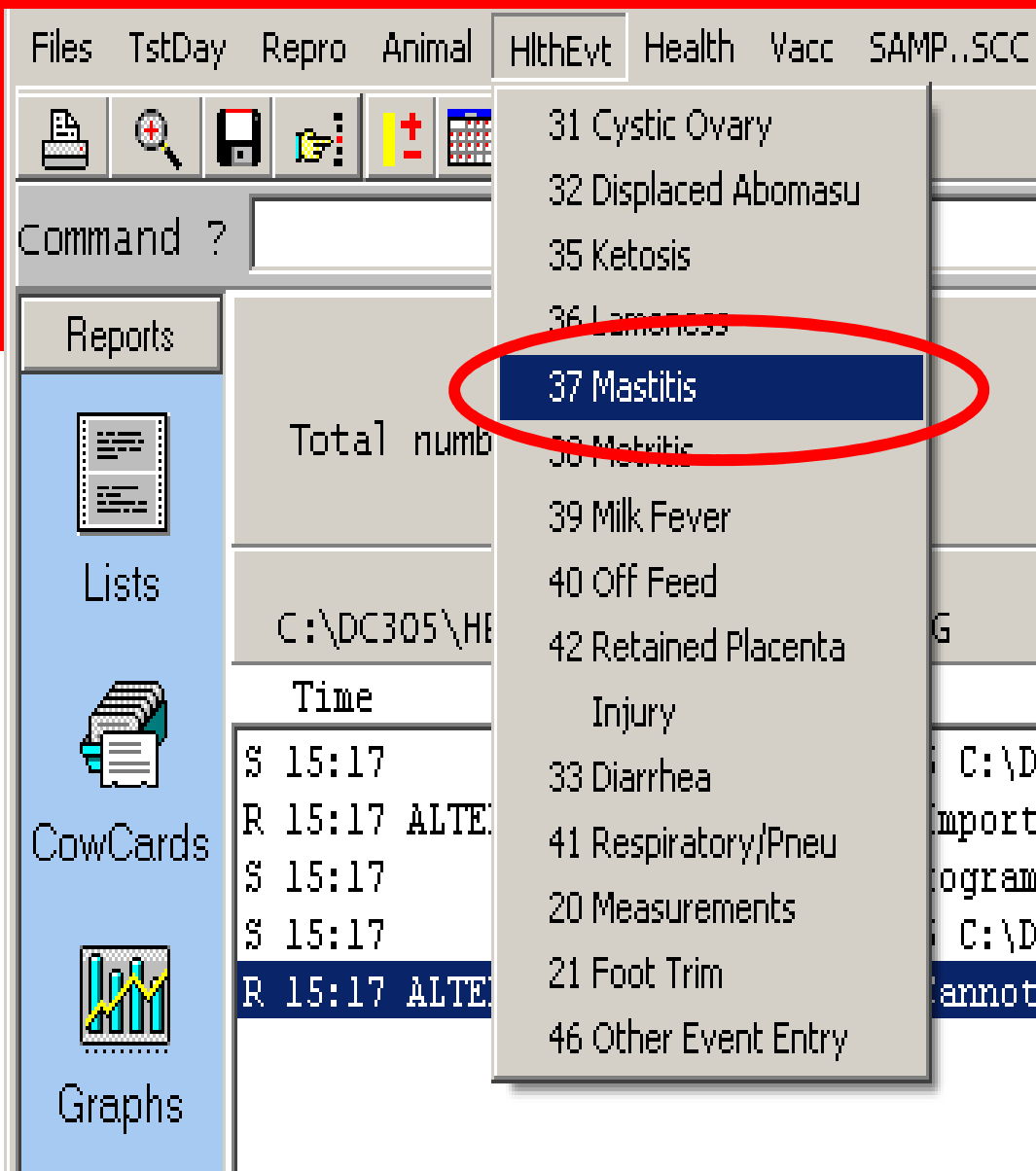
Where to enter a Mastitis Event?

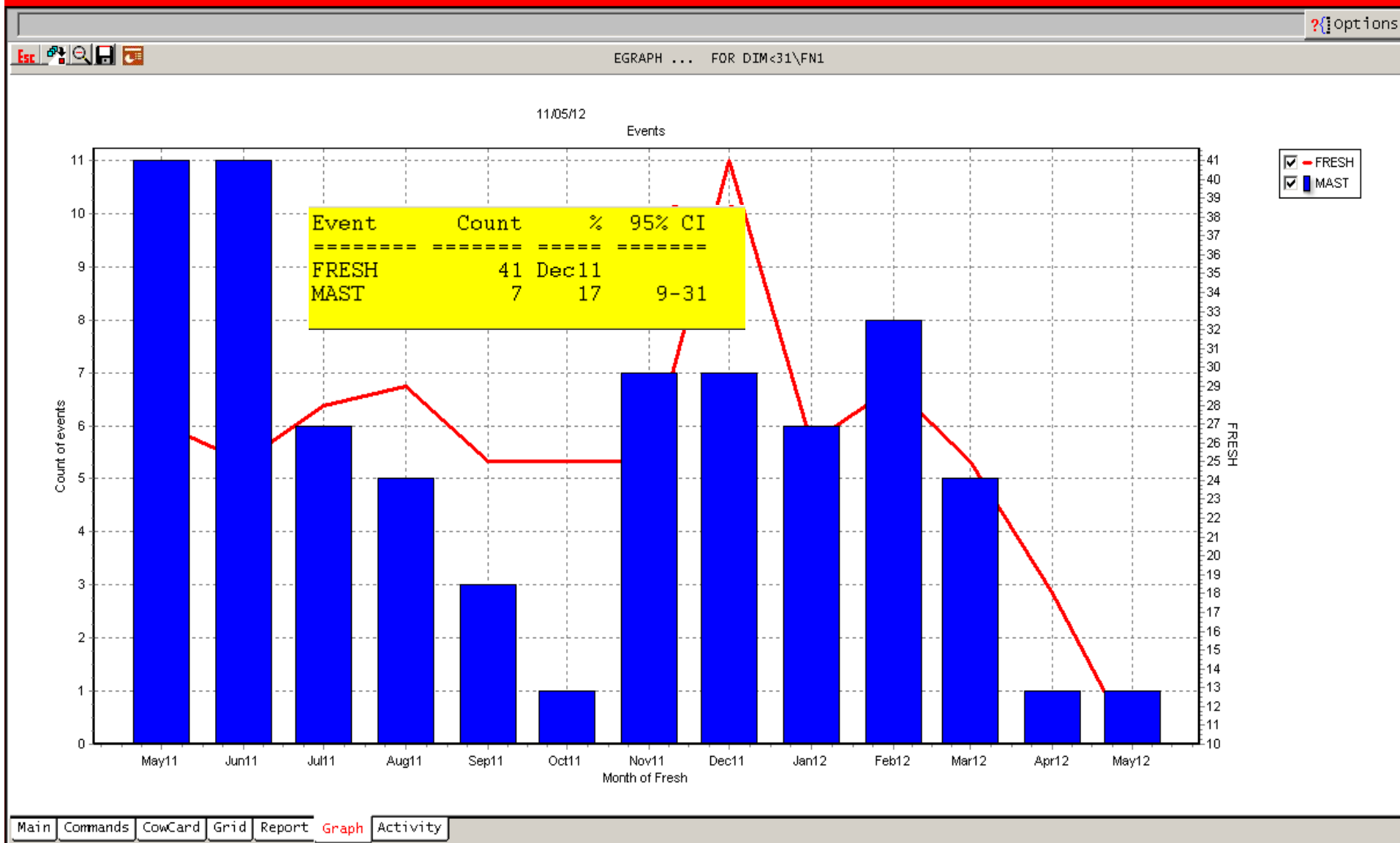CSR's can add an Event on test day into the FTECH program.

Where to enter a Mastitis Event?

Producer can enter the Event on day of mastitis treatment.

Mastitis in Fresh Cows
'EGRAPH MAST FRESH FOR DIM<31\FN1'

On the same page - what classifies a Mastitis 'Event'?

- What is **YOUR** definition of clinical mastitis?

- What is the **PRODUCER'S** definition of clinical mastitis?

- Large differences in detection between farms:
  - Differences in *definition*
  - Differences in *detection methods*

Duplicate Event Gap
ALTER\9 – Event Definition and Gap

Thank You!