



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 troubleshoot SCC problems



DHI Resources & Dairy Comp Tips



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.



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and most importantly...

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



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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



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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.



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Methods of determining pathogens



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



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Dairy Comp[®]

Herd Management Software



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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 SCC Analysis 'ECON\SP'

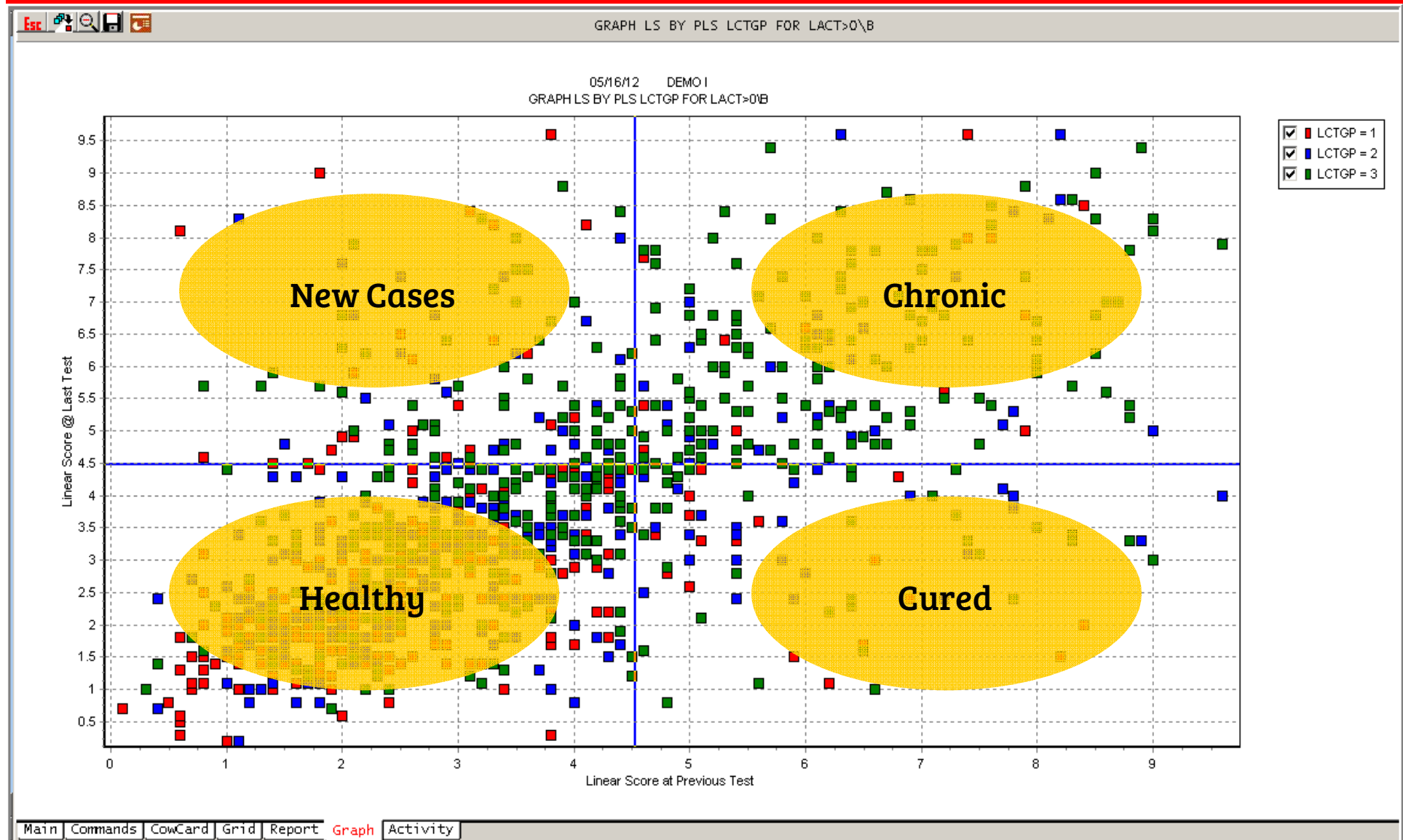
						Bulk Tank after			Bulk Tank after		
						removing only this			removing cow and		
						cow from tank			all cows above it		
ID	#>4 MILK	Value	SCC	%Tank	Price @SCC	Income	Price @SCC	Income	Price @SCC	Income	
=====	====	=====	=====	=====	=====	=====	=====	=====	=====	=====	
3705	4	42	0.00	3831	19.7	0.00	158	0	0.00	158	0
3827	8	43	0.00	2528	13.3	0.00	171	0	0.00	133	0
3739	3	47	0.00	1026	5.9	0.00	185				0
3841	7	34	0.00	1276	5.3	0.00	186				0
3654	2	41	0.00	710	3.6	0.00	190				0
3648	9	33	0.00	701	2.8	0.00	191				0
3762	2	49	0.00	440	2.6	0.00	192				0
3773	6	33	0.00	561	2.3	0.00	192				0
3641	3	49	0.00	360	2.2	0.00	193				0
3835	2	45	0.00	324	1.8	0.00	193				0
3802	5	22	0.00	627	1.7	0.00	193				0
3790	10	37	0.00	334	1.5	0.00	194	0	0.00	84	0
								0	0.00	82	0

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: DEMO 1

Data Checks | Overview | Reproduction | Fresh Cows | Production | Somatic Cell Counts | Mastitis | Parlor | Replacements | Misc | USER

Somatic Cell Counts

[-] Individual Cow SCCs

- Does the level or pattern of elevated SCCs indicate the presence of an excessive number of cows with mastitis infections
- Does the percent of high or very high SCCs indicate the presence of an excessive number of cows with mastitis infections
- Has the percent of infected cows increased over time for the entire herd?
- Has the percent of infected cows for a specific lactation increased over time?
- Are more cows becoming infected recently?
- Does a specific lactation group have a problem with elevated average SCC?

[-] Bulk Tank SCCs

- What is the bulk tank SCC?
- Fresh Cow SCC and SCC Change over Dry Period (SEE Fresh Cow Guide Tab)

'GUIDE': SCC Infections Over Time

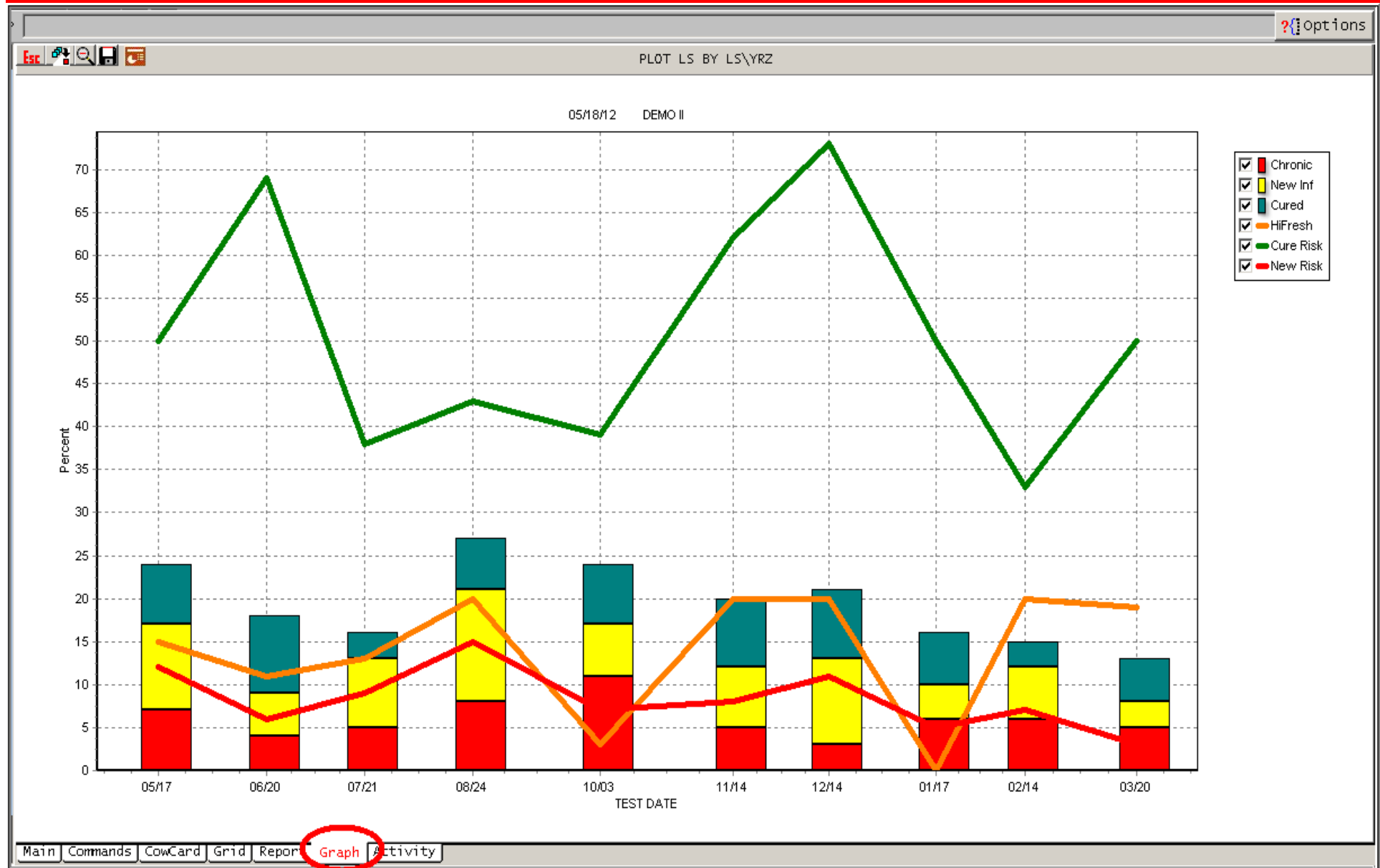


SCC Infection Status

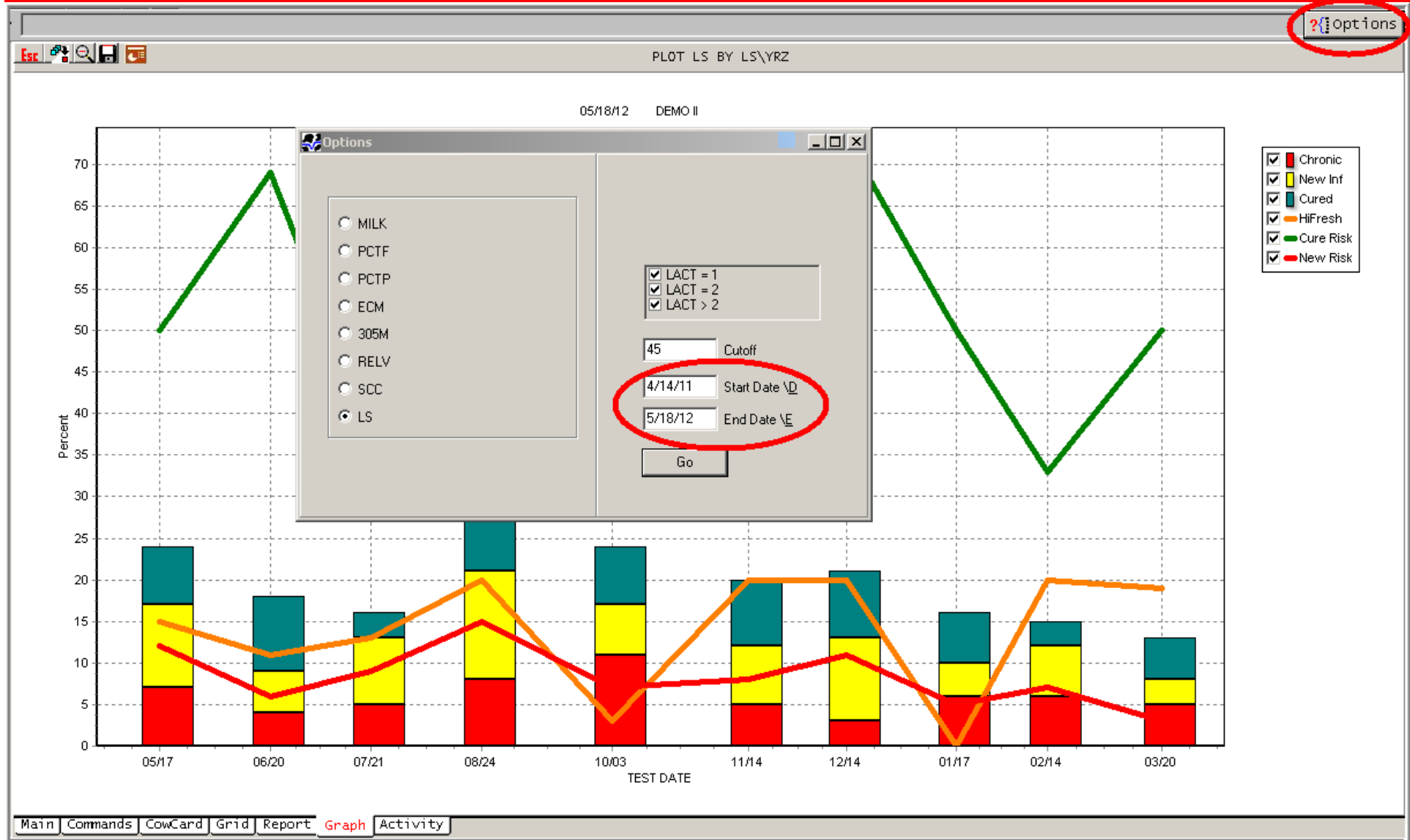
'PLOT LS=4.5 BY LS\YRZ'

PLOT LS 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



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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

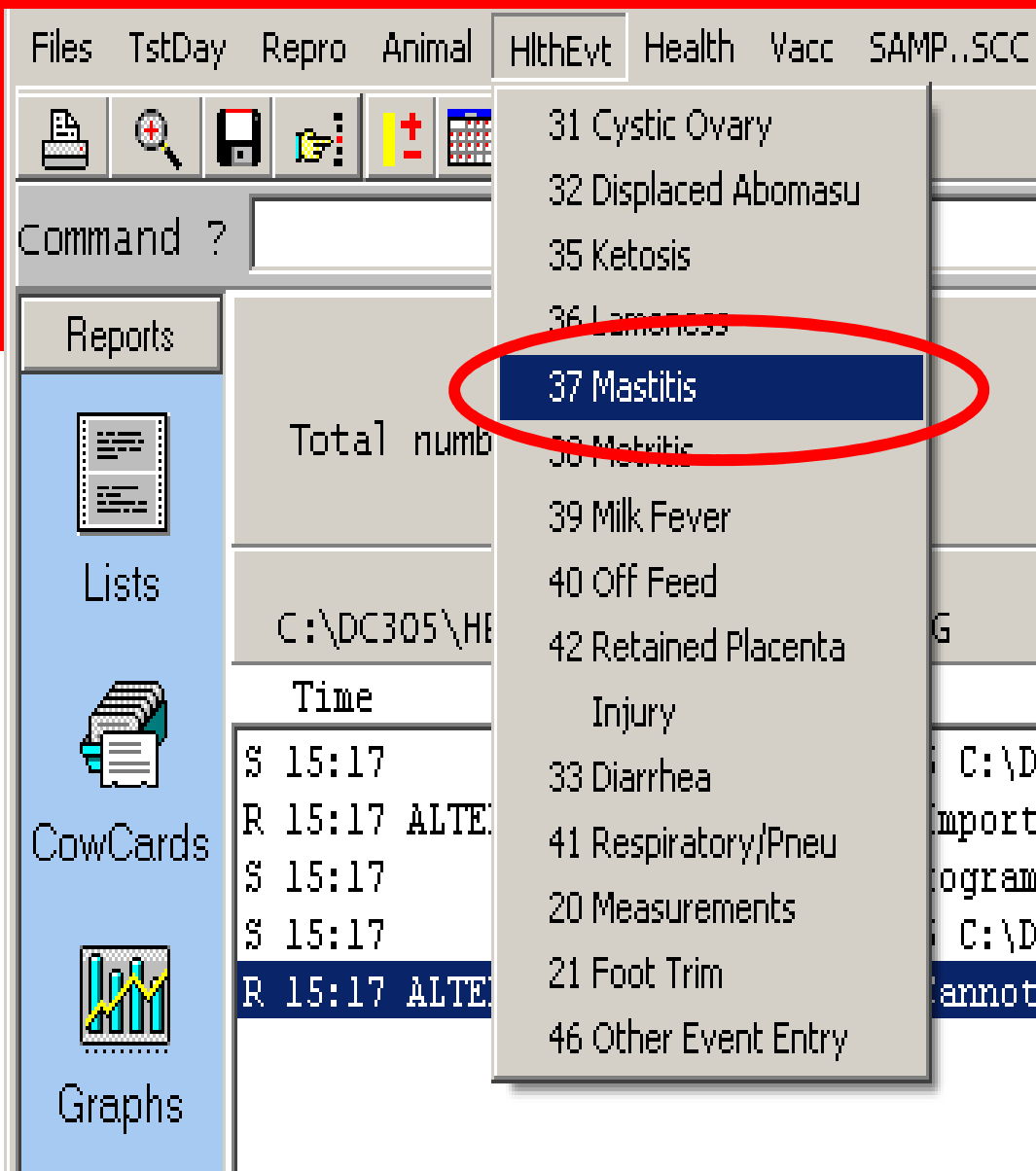
SCC can be skewed by 1 abnormal cow!

Mastitis Events



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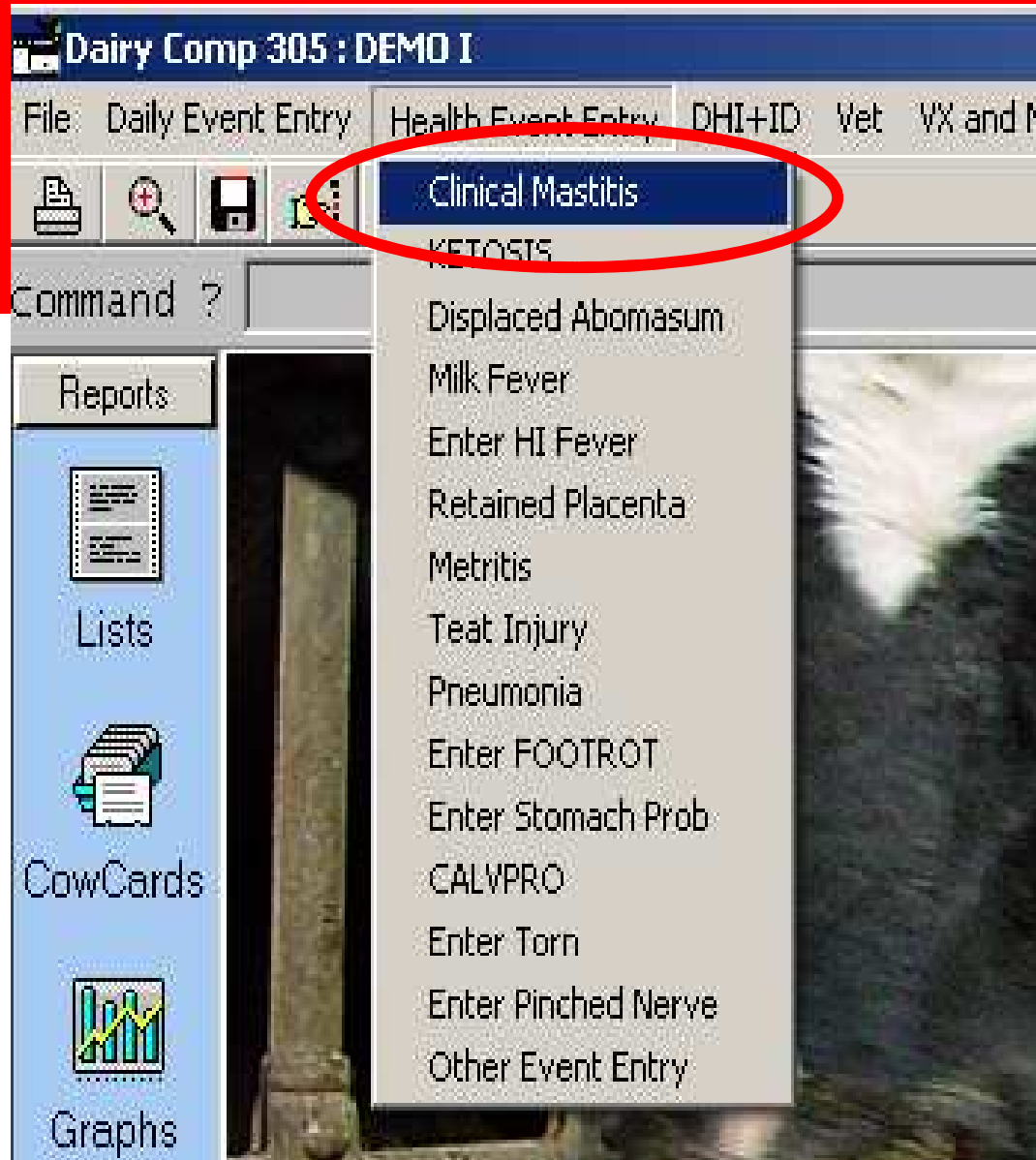


Where to enter a Mastitis Event?

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

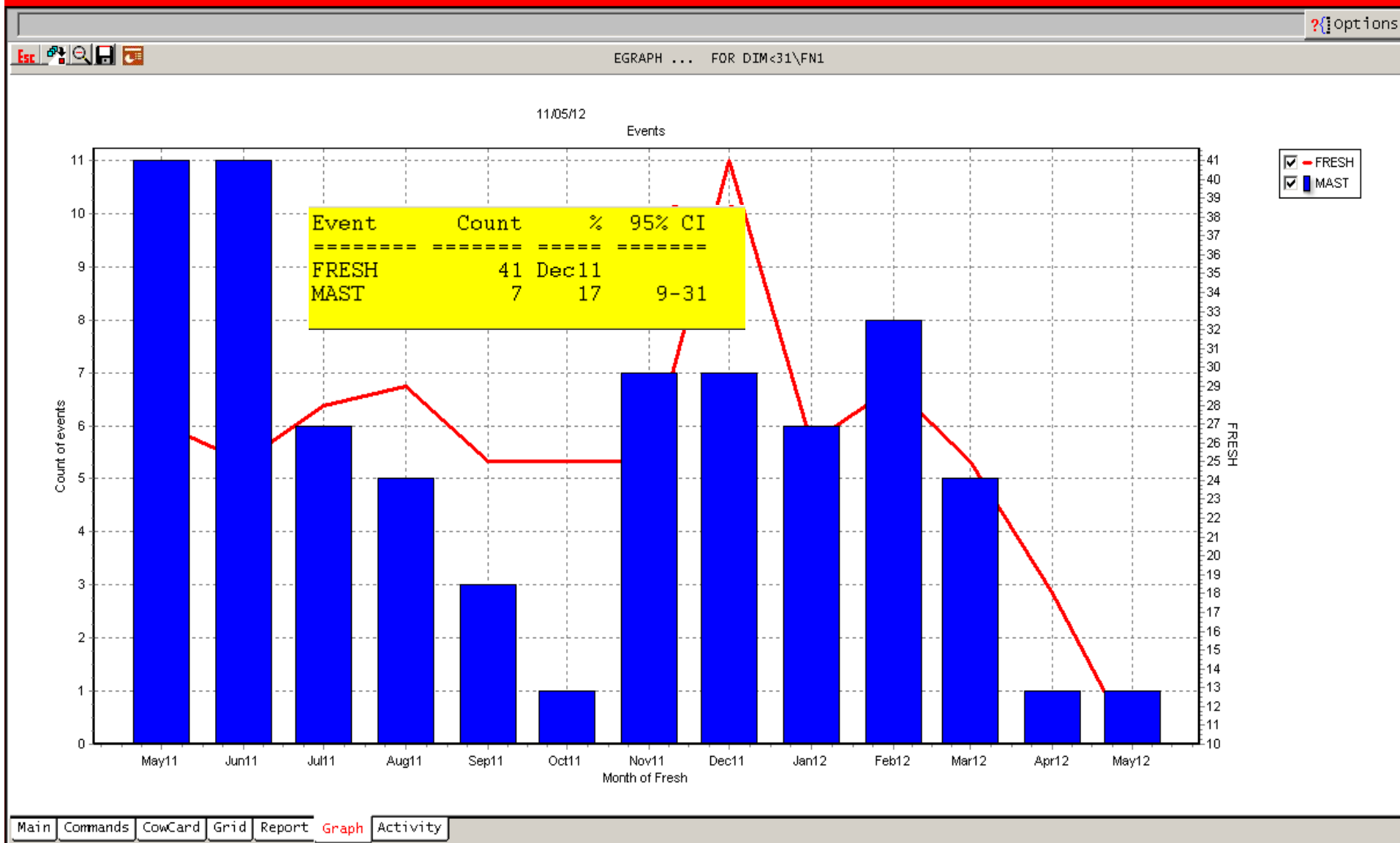
Where to enter a Mastitis Event?

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

ALTER9 : Events

Event Name

Prompt for Event Date ☒

Prompt for Remark ☒

Update REM item ☐

Combination Event Set ☐

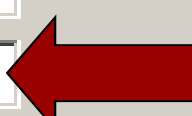
Duplicate event gap

OK

Cancel

Command Content

ENTER EC=37 EDAY REM



Thank You!

