



Dairy One News

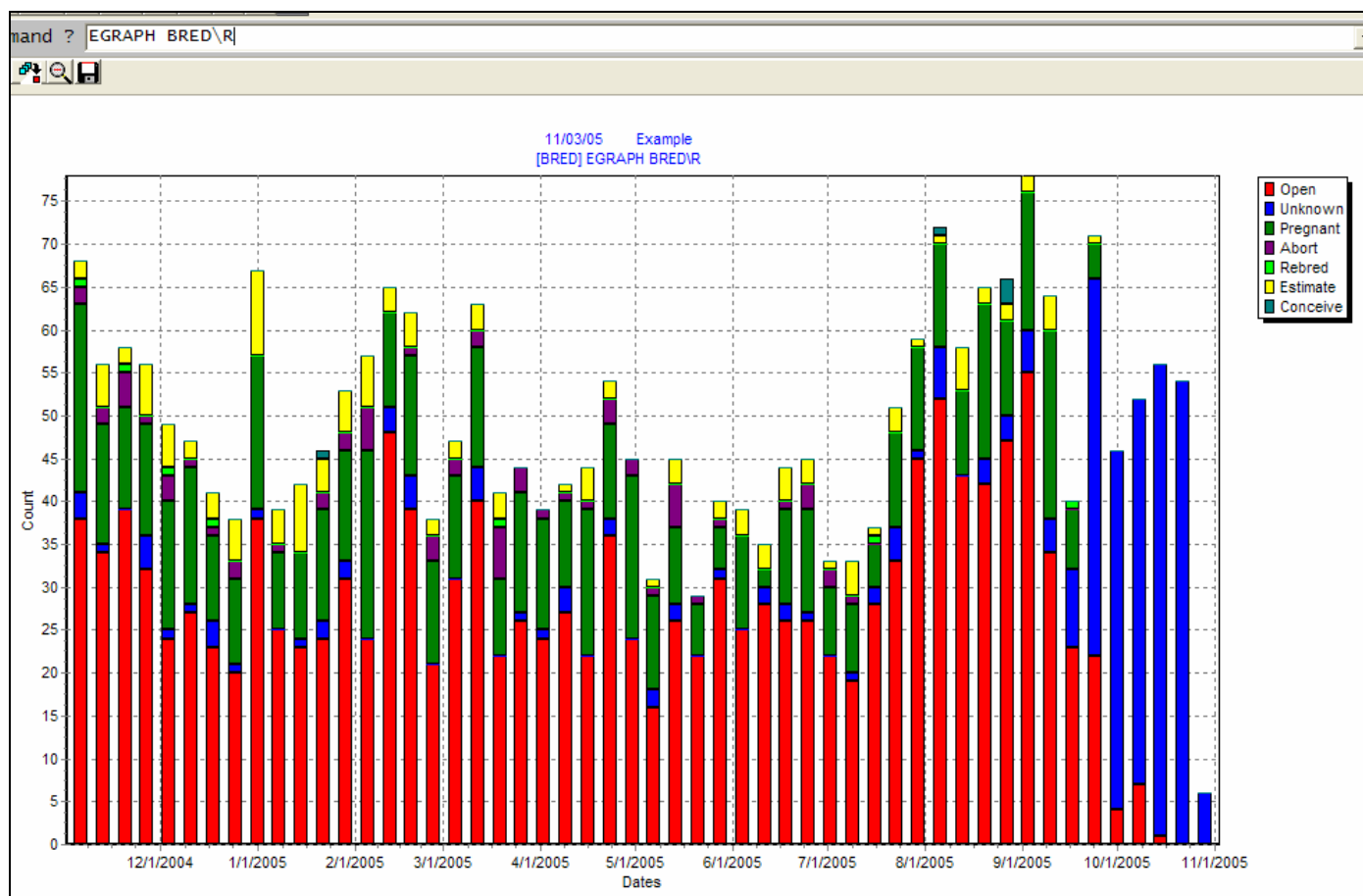
Where Information Creates Opportunity

Dairy Comp 305 Newsletter

Managing/Tracking Synchronization

We spend a lot of time setting up integrated synchronization protocols, tracking compliance, and measuring the results of the programs. One common question is “should I continue to breed visual heats off of my pre-sync shots or just follow the program?” We have seen the breedings from visual heats be effective in some herds, and not so effective in others. There are several commands in Dairy Comp you can use to look for an answer to this question.

- Graphing events with the EGRAPH command can give us many different views of your herd’s breeding patterns.
- Try EGRAPH BRED and you will see a histogram of breedings by week, color coded by breeding number.
- EGRAPH BRED\R will change the color coding by (R)esult of the breeding.

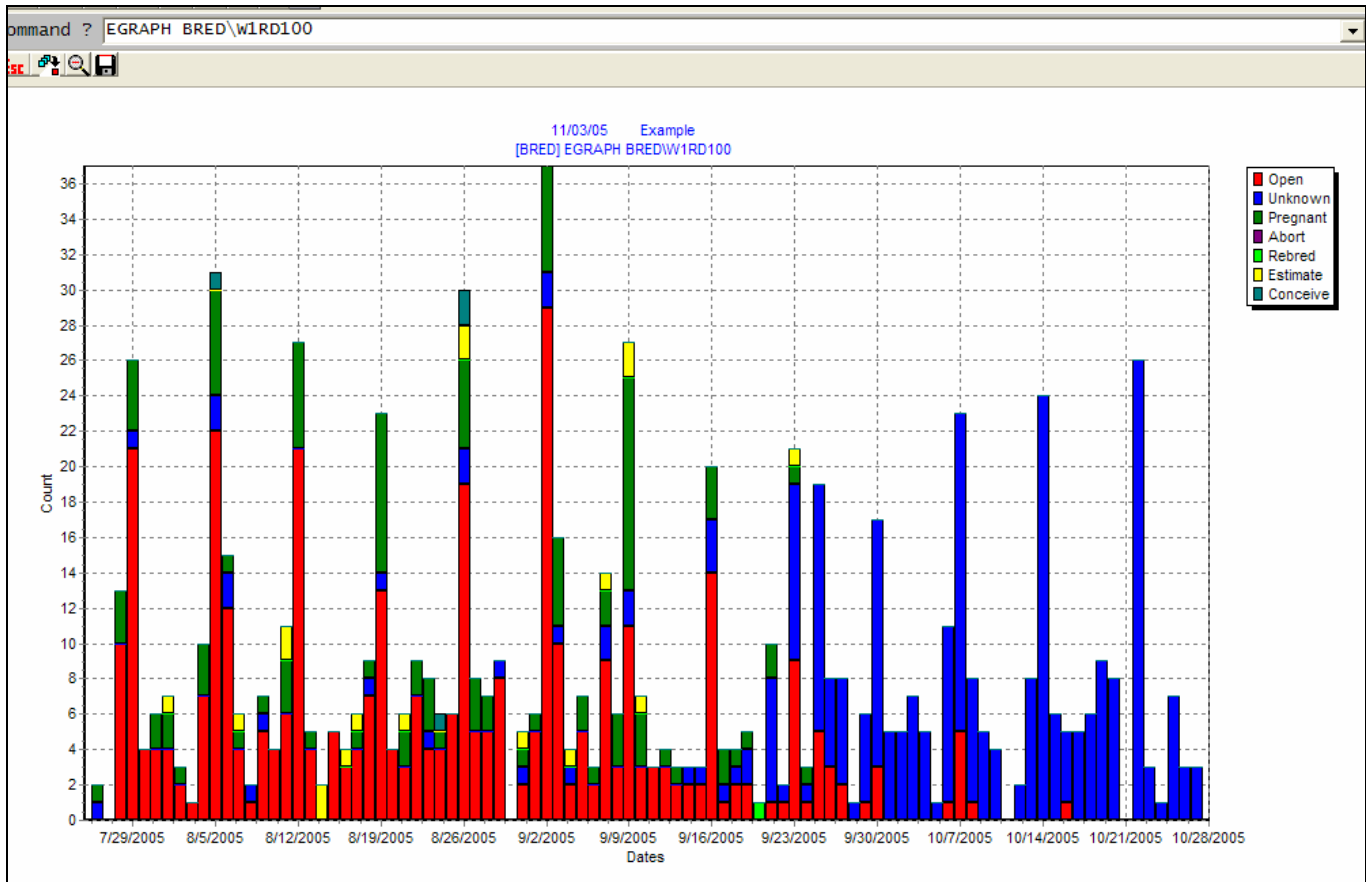


Graph 1: In this we can see number of services each week and the number of pregnancies by week. We can also see this numerically if we use EVENTS for LACT>0 and select the table by month.

You also might look at the breeding pattern by day and result.

EGRAPH BRED\W1RD100

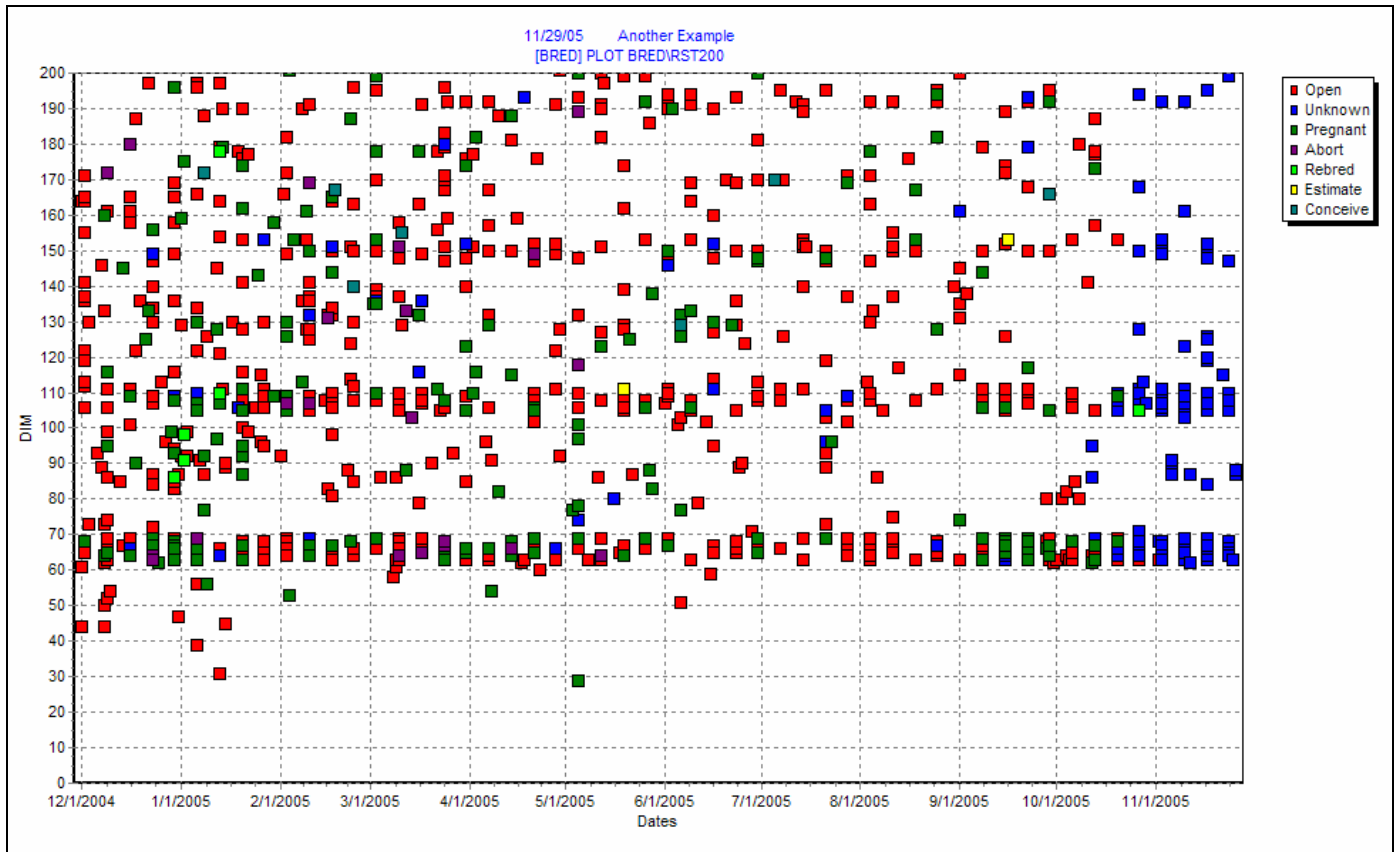
\W1	Sets the (W)idth to 1 day
\R	Sets the color code to (R)esult of the breeding
\D100	Limits it to the last 100 (D)ays. Too many days will make it impossible to distinguish the results color



Graph 2: The most current days are furthest to the right. Are the services from visual heat detection, timed days at those where the bars are consistently higher, not on the timed breeding days getting animals pregnant?

EGRAPH BRED\RST200 will create a scatter graph of breedings.

\S	(S)catter Graph
\R	Color coded by (R)esult of each breeding
\T	Set the (T)op of the graph at 200 days in milk (to spread out the breedings)
\D150	Just look at the last 150 (D)ays (to zoom-in further) is <u>Not</u> on this command



Graph 3: Each dot is a breeding-plotted against DIM of the cow at the time of insemination and calendar day that the breeding occurred. This plot shows a significant increase in pregnancies off their first timed AI beginning in September.

BREDSUM

The broad adoption of timed breeding has increased interest in evaluating technician conception rates based on breeding codes. “Coding” a breeding as Visual or Timed allows better comparing technicians that inseminate primarily timed breedings and those that primarily breed off of visual heats. It’s still hard to get enough numbers, but we are having some success with larger dairies. Dairy Comp now gives us 95% confidence intervals so we can apply a statistical tool to help determine how similar or different various groups are in consideration of normal variation and varying numbers of breedings.

Bredsum “Crosses”

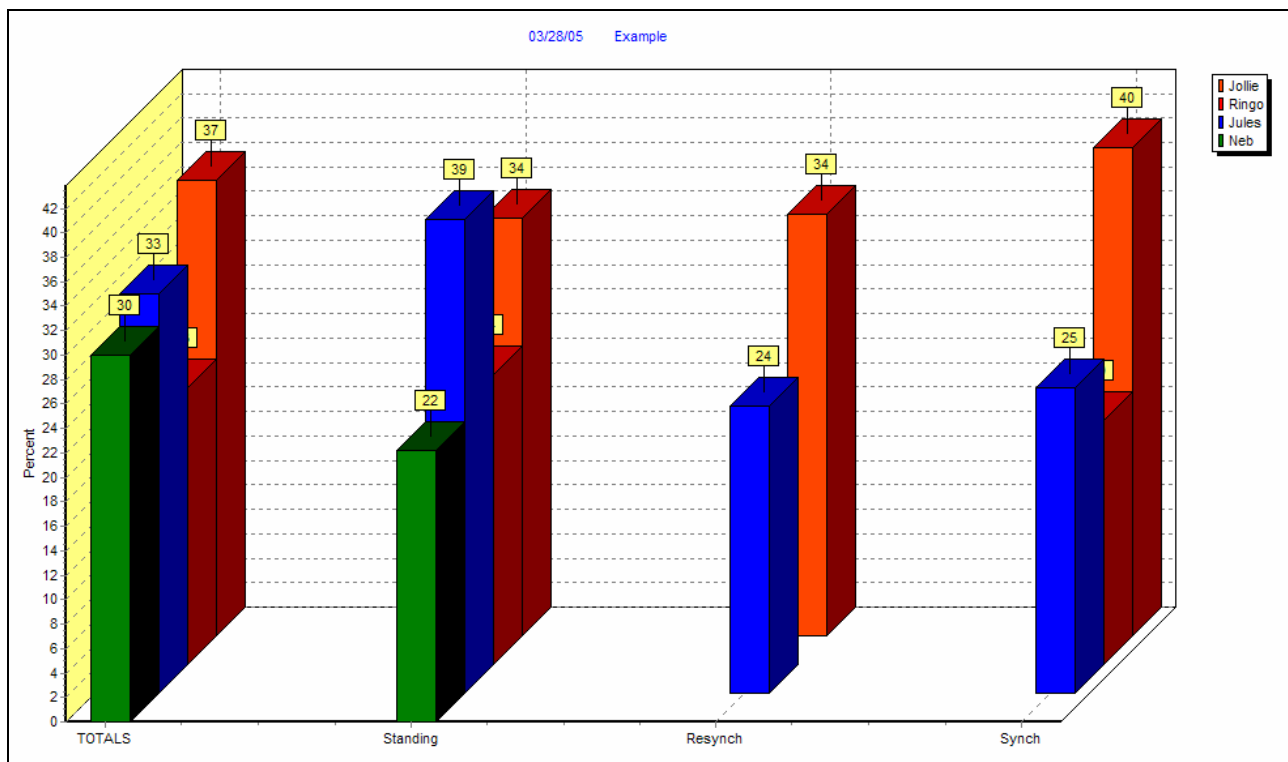
The default (BREDSUMX) is tech and breeding code.

BREDSUM\X						
Technician by Breeding Code	Total	from 2/22/04	through	2/21/05		
95% CI	Total	Standing	Resync	Synch		
=====	=====	=====	=====	=====		
Jollie	33-42	27-42	24-47	34-46		
Ringo	15-33	15-36	-	9-39		
Jules	22-46	24-56	10-47	-		
Neb	11-60	6-55	-	-		
TOTALS	31-38	26-38	23-43	32-44		
Percent						
Jollie	37	34	34	40		
Ringo	23	24		20		
Jules	33	39	24			
Neb	30	22				
TOTALS	35	32	32	38		
Count						
Jollie	470	164	58	248		
Ringo	84	59		25		
Jules	52	31	17	4		
Neb	10	9				
TOTALS	618	265	75	277		

Table 1: shows that Jollie has an overall Conception Rate of 33-42 percent (within a 95% Confidence Range), has averaged 37 % overall with 470 services. The 95% Confidence Range will be smaller, the more services a technician has. Each technician’s data is also listed for Total, Standing, Resync, and Synch breedings respectively.

If you click on the [Graph Tab](#) you will see the respective 3D-chart (below) comparing technicians across breeding codes. Remember to pay attention to the confidence intervals from the table before concluding one's performance is significantly different from another's.

BREDSUMX Graph Tab



Bredsum Switches BREDSUM\

\B	By times bred
\C	By calendar month
\D	Prompt for starting and ending dates for report
\D200	Restrict to the last 200 (D)ays
\E	Pregnancy Risk on AI animals and Voluntary wait period of 50 days
\EVnn	Pregnancy Risk with “nn” day (V)oluntary wait
\EU	Pregnancy Risk for Animals in B(U)ll Pens
\EA	Pregnancy Risk for All animals, AI and Bull Pen
\ER	Show Pregnancy Risk by DIM rather than Calendar
\EC	Shows Pregnancy Risk by Cycle
\I	Breeding summation by heat interval
\N	Breeding summation by cycle number
\O	Breeding summation by user breeding codes
\T	Breeding summation by technician
\W	Breeding summation by day of week
\X	Breeding summary with “crossed” values by technician
\XOC	Codes and Calendar month
\Xab	ab is two bredsum options, Example: <u>BREDSUM\XCT</u> crosses (C)alendar month and (T)echnician

What are the results of your current Pregnancy Check?

SUM BY RPRO FOR PODAT>-7

Will provide you a summary of the animals checked in the last 7 days. The PODAT>-7 is asking for animals with their last Pregnancy\Open determination date in the last 7 days.

-----11/3/05-----			
By	RPRO	%COW	#COW
OK/OPEN		38	9
BRED		8	2
PREG		54	13
=====			
Total		100	24

← **11** comes from combination of OK/Open and Bred.

Table 2: This herd checked 24 animals in the last 7 days. 13 were pregnant, 11 were open, and since the check, 2 have been bred.

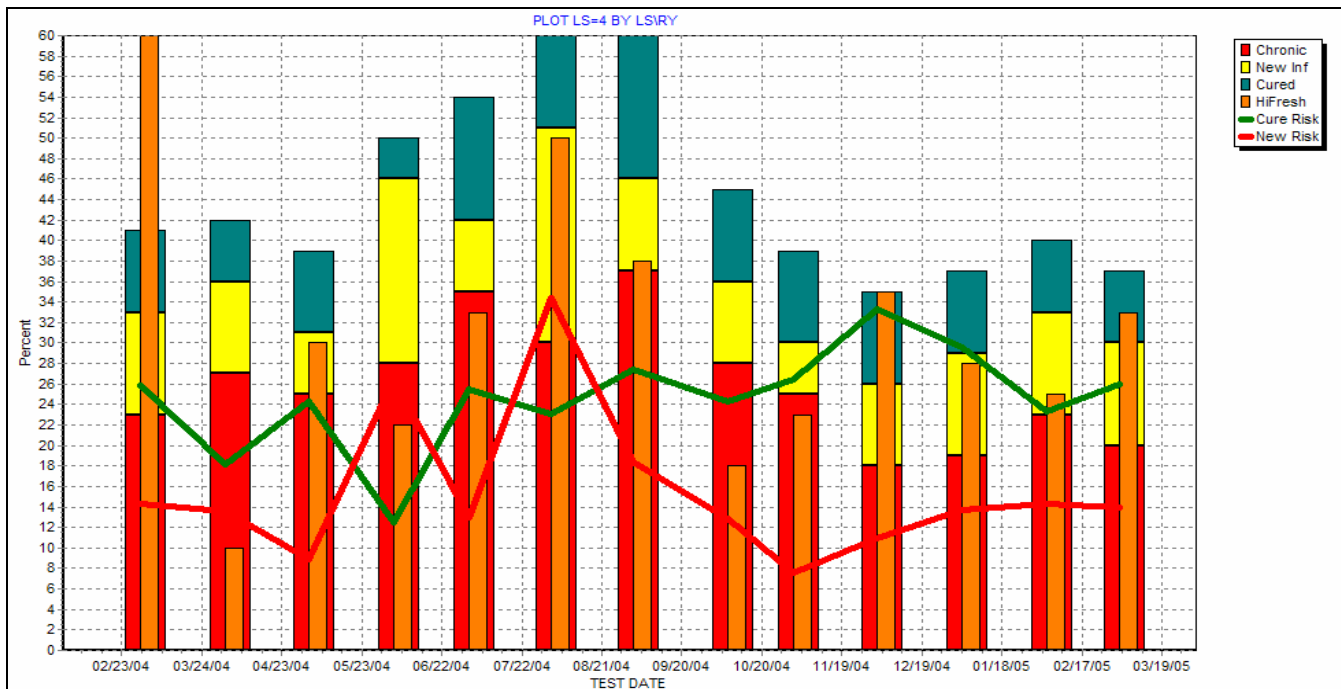
Other variations you might find useful:

- SUM BY RPRO PEN FOR PODAT>-7
- SUM DIM RPRO FOR PODAT>-7

Mastitis Infection Dynamics

We can use SCC information for more than just looking for problem animals. In the correct form, it can tell us how good we are at providing an environment that keeps animals from getting infected and that allows animals to heal if they do become infected.

PLOT LS=4 BY LSRY



Graph 4: In this example above we are declaring an animal infected at a SCC Linear Score of 4 or greater.

Beforehand you just move on to the next segment but look at the Report Tab that goes with this graph. Across the top are Test Dates with the last one being March 3.

LS	T E S T D A T E S												
	3/1	4/2	5/3	6/4	7/2	8/2	9/2	10/7	11/1	12/2	1/3	2/4	3/3
Chronic %	23	27	25	28	35	30	37	28	25	18	19	23	20
#	23	26	26	29	36	29	33	27	23	17	19	25	22
New Inf %	10	9	6	18	7	21	9	8	5	8	10	10	10
#	10	9	6	19	7	21	8	8	5	8	10	11	11
Cured %	8	6	8	4	12	9	14	9	9	9	8	7	7
#	8	6	8	4	12	9	13	9	8	9	8	8	8
Clean %	60	57	61	50	47	40	40	54	61	65	63	60	62
#	61	55	63	51	49	39	36	51	56	62	63	67	67
HiFresh %	60	10	30	22	33	50	38	18	23	35	28	25	33
#	3	1	3	2	2	5	9	2	3	6	5	2	5
LoFresh %	40	90	70	78	67	50	62	82	77	65	72	75	67
#	2	9	7	7	4	5	15	9	10	11	13	6	10
Average	3.3	3.3	3.4	3.7	3.6	3.9	3.8	3.4	3.0	2.9	2.9	3.1	2.8
#	107	106	113	112	110	108	114	106	105	113	118	119	123

Table 3: Example of Test Dates.

Test Dates (Table 3 – Column Category Definitions)

Chronic %	The first two lines are the Percentage and Number of animals chronically infected each testday. Chronically means they had a LS >4 last test and still have a LS >4.
New Inf	The percentage and number of animals that were low last month and are high this month.
Cured %	were high last test and are low this test.
Clean %	were low and are still low.
HiFresh %	Are those that just had their first test after calving and are broken in to low and high (Infected and uninfected)

The graph (page 7) presents the data from the table plus two extra bits of information, the New Infection Risk and Cure Risk. The current month, there is a 26% risk of infected animals curing and a 14% risk of uninfected animals becoming infected.

Controlling Sick Cow Management

Treatment protocols and sick pen management has been another area we have been spending a good bit of time on. Specific treatment protocols are defined in Dairy Comp so that when an animal has a mastitis (for example) recorded, the relevant protocols are displayed and you select one.

This triggers several additional actions:

- Put the respective protocol remark on the Event on the cow card.
- Sets a last treatment date, Milk Withholding Date and Beef Withholding Date.
- Allows track total lactation days in Hospital.
- Can automatically set a follow-up date to re-check the animal for things like Blocks and Wraps.

Then we create work lists that include the animal, the protocol she is on, what day in the treatment she is in, her last treatment date, and the date she can have her milk tested to go back in the tank, and the pen that she was in prior to the disease. Some like to track animals total hospital days.

PEN	PN	ID	DIM	LACT	MILK	DSLH	RPRO	EVT	LTDAT	MKDAT	ID	
11	1	190	110	4	77	13	BRED	MAST	11/24/05	11/27/05	190	
<i>This animal has completed her treatment protocol but is not has not had her milk cleared for the tank.</i>												
11	2	200	5	3	0	0	OK/OPEN	RP	11/27/05	11/30/05	0200	
									11/23	RP	POLY.20	3:5
<i>This animal is on day 3 of her 5 day protocol for an RP.</i>												
11	10	174	6	3	0	0	OK/OPEN	RP	11/28/05	12/ 1/05	0174	
									11/24	RP	POLY.20	2:5
11	2	135	86	4	80	30	BRED	MAST	11/28/05	12/ 1/05	135	
									11/24	MAST	SPEC.RF	2:5
11	3	225	24	1	46	0	OK/OPEN	RESP	11/25/05	11/28/05	225	
									11/21	RESP	LA200	5:5

Table 4: An example of a Treatment List.

Note the item PN – that is the pen the animal was in before going to the sick pen. Also note that all active protocols are included on the list.

While Dairy Comp has had the treatment protocol logic in it for several years, we have more interest this year than in previous years. Many dairies still do not have enough structure to their sick cow diagnosis and treatment protocols to use this feature, but there is more each year.

What else is NEW?

Drug Watch

A companion to the protocol module is “Drug Watch” which is an auxiliary program for tracking drug inventories, and keeping an independent log of all cow treatments.

Networking the Cow Data

Another relatively new development for us is to network together via wire, or wireless networks, Dairy Comp work stations and handheld PC’s that allow just lookup or lookup with data entry and RFID scanning.

Using Milk Culture Results

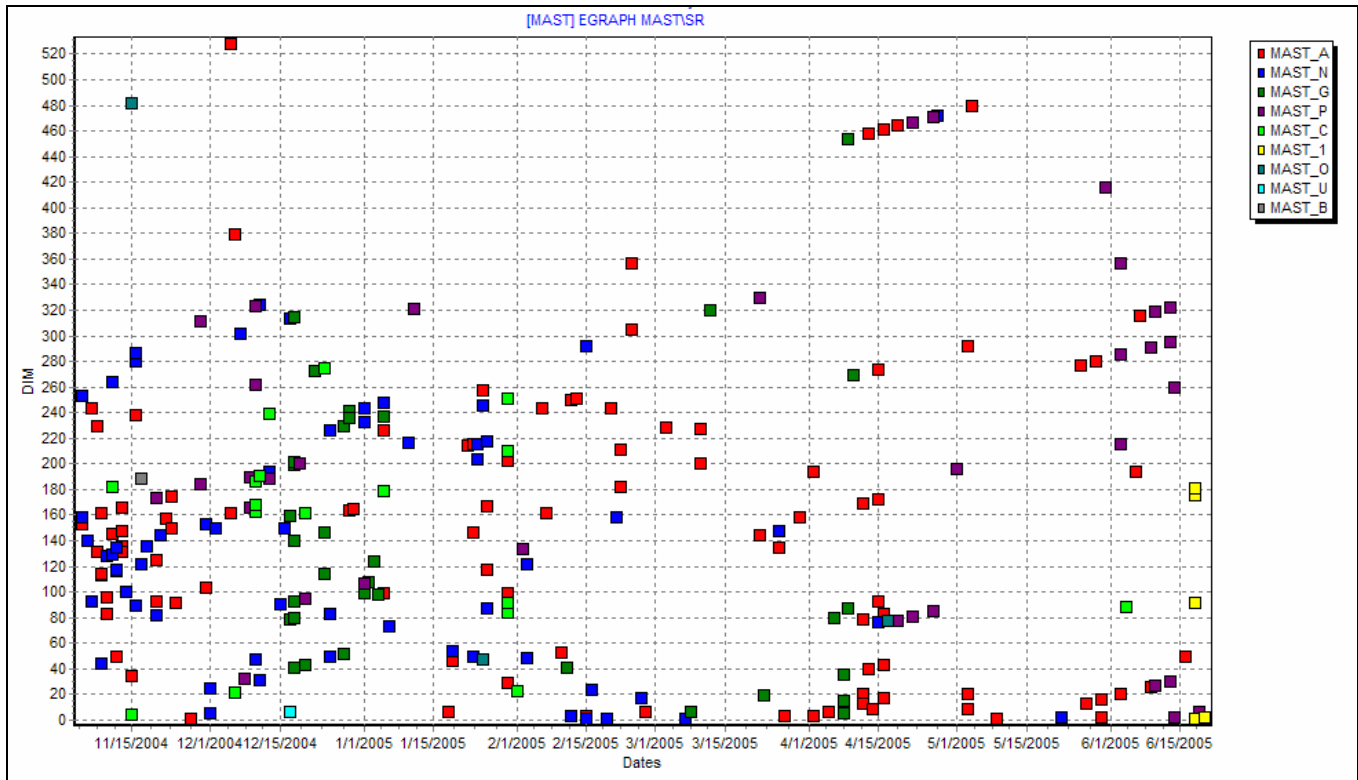
We seen had a pretty significant increase in the number of dairies using a regular culturing program. The most aggressive are culturing all fresh cows, clinical quarters, and high SCC animals. Others are just culturing their clinical animals. All of them want to track the results in a way that will allow them to manage their clinical cases, and review how their culture results are changing over time, and by days in milk. Some dairies just track their mastitis by either the treatment protocol, or by using the mastitis remark to indicate the culture results.

The EGRAPH command also lets us look at clinical Mastitis and at Culture events.

EGRAPH MASTSR

\S	scatter graph, (by days in milk)
\R	color code results by the first character in the Remark of the event. So have the first character of your mastitis be unique to the treatment protocol she is put on, or the result of your culturing.

EGRAPH MASTSR



Graph 5: Each dot is a Mastitis event. The most recent cases are on the right. The higher up on the graph, the later the animal’s days in milk, when she had the clinical. This dairy has changed from a lot of mastitis between 80 and 200 days in milk to some clusters of Fresh cow mastitis and some late lactation mastitis.

Consider comparing the SCC of animals at Dry Off and then their SCC at first calving to watch the success of the dry period at cleaning up old issues and preventing new ones.

To do this we need to set up they cowfile with an item named DRYLS (an Item type 8). Then we change the dry command adding DRYLS=LS. This way we accumulate the last Linear Score before dry off. We now can also go back and load previous DRYLS so you start with data.

Note: If you would like help setting this up for your herd, give us a call at 1.800.344.2697, Dairy Management Resources Support Group (extension 3).

Do animals get “infected” or “cured” in your dry period?

1. This command sets the threshold for infection at a linear score of 4.0.
2. LOG1 may also be named LS1.
3. DryLS may also be called DryLog.

```

- Command : SUM LOG1=4 DRYLS=4 FOR LOG1>0 DRYLS>0 -

```

	DRYLS <4.0	DRYLS ≥4.0	
LOG1 ≥4.0	a 70 12%	b 78 13%	148 25%
LOG1 <4.0	d 272 47%	c 164 28%	436 75%
	342 59%	242 41%	584 100%

Table 5: This “Two By” table summarizes the changes in linear score between when they had their last test before dry-off and then their first test after calving with an infection threshold of 4.0.

(...pertaining to the Table 5)

Became infected

The upper-left quadrant (a) indicates that 70 animals, (12% of the total) had a low DryLS and then on their first test had a high LOG1.

Stayed infected

The top-right quadrant (b) shows that 78 animals are dried off high, and had a first test-day linear score. The far-top-right shows that 148 animals, (25%) of the animals started their lactation high.

Clean

The bottom-left, (d) shows 47%, 272 animals dried off low, and came out of the dry period low.

Cured

The bottom-right shows that 164 animals went into the dry period high, and then started their lactation low.

After looking at this table (Table 5) for all of the animals, for the year, look at it for animals that have calved more recently to see if you are getting better or worse.

```
SUM LOG1=4 DRYLS=4 FOR LOG1>0 DRYLS>0 FDAT>-90
```

Will create the table for animals that have a fresh date in the last 90 days .

Dairy Comp 305 (Version 5) gives you more space!

Convert\V5 on the command line will convert your cowfile to version 5 format. This allows more internal space for commands and bulls, and the ability to track more breeding and technician codes.