CONSERVATION INNOVATION GRANTS
Biannual Progress Report

Grantee Name: Robert Boldt #108
Project Title: Compost Bedded Pack Barns- an environmentally friendly combination of waste storage and animal housing for use by dairy cows
Contact Information: Scott Boldt 585-322-0957 Candida Luders 585-322-7431
Period Covered by Report: May, 2007 - October, 2007
Project End Date: August, 2009

In May 2007 the south compost bedded pack barn is ready for cattle to be moved into. The east end of the pack barn will be used for one of the test areas for alternative bedding sources.

We were able to move cows from the north barn so it wouldn't be overcrowded any more. We were able to observe a increase in milk with the decreasing in pack stocking density. We also saw a decrease in metabolic disorders.

We were able to clean out the north barn and start over with new sawdust. We left about 6-8 inches of bedding on top of the clay base. We found that the kiln-dry sawdust worked the best of any bedding material because it would absorb more moisture and keep the pack drier. The drier pack also allowed the compost process to begin. We were tilling the pack twice daily when cows were milked. We figured that the cost of tilling was approximately 40 to 50 cents per cow per day.

During the six month period of May 2007 to November 2007 there was not a significant increase in production. We did see an increase in components, (ie. Milk fat and protein). We did see a small decrease in Somatic Cell count to around 200-220,00. See attached Milk Quality Report and DHI Somatic Cell Report.

The health of cows was improving. We had one displaced abomasum during this time. We also saw a decrease in metabolic disorders. There was

a 25% decrease in milk fevers and 35% decrease in ketosis.

After using the different bedding mixes from May 2007 to November 2007 we were able to come up with some data that would help to determine if they would compost. We were able to take temperatures of the compost pack every couple weeks with a 18" compost thermometer.

Date	Temps for 100% sawdust	Temps for 50/50 sawdust Ground pallets
6/11	102	110
6/20	113 (south barn 112)	115
6/27	117	113
7/19	116	119
8/6	118 (s. barn 112)	119
8/20	111	112
9/12	120 (s. barn 117)	116
9/21	135	114

With this data it is clear that using 100% sawdust and a mix of 50/50 sawdust and ground pallets will both work in a CBP barn. The two bedding materials were able to attain and maintain high enough temperature to be partially composted at the time of clean out in October 2007.

In November 2007 we began a third bedding source test. This was a 50% sawdust and 50% chopped soybean straw. The bean straw was chopped through the forage harvester to lengths of about ¾ to 1 ½ inch. Preliminary observations are favorable that this mix will work in a compost bedded pack barn. These tests along with the pallet mix are being done to help extend the sawdust supply when it is low.

We have run nutrient analysis on the compost manure. See attached sheets for analysis.

With regards to the small pile of compost that we wanted to have finish composting, it went through a couple of turns that had temperatures up to 135-145 degrees for several days. The finished product is like potting soil. We have had several inquires about this product from landscapers, organic vegetable crop growers, nurseries and organic crop farmers. We

with that we would have more of it to sell. This can become a value added product to the dairy farm.

The cost of bedding per cow per day stayed about the same at between 75 to 80 cents per day. The cost of sawdust has risen per load but we are able to buy more large loads and less small loads. We did see the need to stockpile loads to have enough on hand to restart the barns at cleanout as it was difficult to attain a large number of loads in a short window of time.

Lameness in the cows continue to decrease and we are having less abscesses and foot blocks. We did see about the same number of hoof warts during the winter months. This result was attributed to the compost pack staying a little wetter in the winter time. See Hoof Care Chart

HOOF CARE CHART

		Wraps	Blocks	Foot
Jan. '08 to April '08	105 cows	33%	8	.018%
Mar. '07 to Dec. '07	275 cows	18%	20	2%
Jan '06 to Dec. '06	220 cows	14.4%	42	5%

From January 2008 to April 2008 we had 105 cows had feet trimmed and there were 140 hoof warts that were wrapped or 33% of those trimmed and there were only 8 hoof blocks put on for abscesses or .018%.

In March 2007 through December 2007 we had 275 cows feet trimmed with only 18% needing a foot wrap for warts. There were a few more blocks but this was still only 2% of the cattle trimmed.

January 2006 through December 2006 we had 220 cows trimmed at the Luders freestall barn. They had 14.4% of the cattle with a foot wart and wrap. There was a higher incidence of abscesses and blocks at 6%.

In summary, because cows feet are damper warts seem to be more abundant than in the freestall barn but the foot abscesses are decreasing.

In a management perspective, with the previous housing in a freestall barn the alley was scraped twice a day the composted bedded pack barn is scraped once. Footbaths were run at twice the rate in the freestall barn. A change in management, of more frequent scraping and running the footbath a little more frequently than we are at present, we could see a decrease in this trend.

The incidence of warts is less in the summer than winter due to the dryer pack conditions also the ability to run a footbath more often because of warmer conditions.

There was a decrease in the use of foot blocks for abscesses for the first part

of 2008. Our hoof specialist is impressed by the overall health of the cows feet. He is seeing laminitis in older freestall cows clearing up and no new indications of laminitis. The warts that are present do not cause extreme lameness as they would in the freestall, because of the softness of the pack they are walking on. He indicated that general maintenance of hoof trimming (trimming the length of the toes only, not treating for lameness) might increase for the fact that there will be little wearing down of the hoof because of the absence of concrete.

50:50 mix

DAIRY ONE Forage Analysis Laboratory
730 Warren Rd. Ithaca, NY 14850
Telephone: 607-257-1272 Ext. 172 Fax: 607-257-1350

MANURE ANALYSIS REPORT

Sample Number: 11843670

Date Sampled: 10/17/2007
Date Received: 11/14/2007
Date Mailed: 11/15/2007
Description:
Statement ID: COMPOST BEDDED PACK BARN 50:50 mix

CCE WYOMING COUNTY
BRUCE TILLAPAUGH
401 NORTH MAIN
WARSAW, NY 14569

Components	As Received	Lbs / Ton	Lbs / 1000 Gal
Nitrogen (N)	.807%	16.1	40.9
Ammonia Nitrogen	.124%	2.5	6.3
Organic Nitrogen	.683%	13.7	34.6
Phosphorus (P)	.147%	2.9	7.4
Phosphate Equivalent (P205)	.337%	6.7	17.0
Potassium (K)	.802%	16.0	40.6
Potash Equivalent (K20)	.966%	19.3	48.9
Total Solids	42.47 %		
Density	.61 kg/l	37.88 Lbs/CuFt	5.06 Lbs/Gal

	lbs/T	lbs/1000g
Inorganic (Ammoniacal) Nitrogen	2.5	6.3
Organic Nitrogen	13.7	34.6

There fore:

mineralized N.	[per Ton]	[per 1000 g]
1st yr	4.8	12
2nd yr	1.6	4
3rd yr	0.7	2

The compost analysis was taken from six different test sites in the north barn. The north barn is divided into two different groups or sections. The samples were taken starting from the east end moving toward the west. Three samples were pulled from each pack section.

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(814) 863-0841 Fax (814) 863-4540
Agricultural Analytical Services Laboratory
The Pennsylvania State University
University Park PA 16802

Analysis Report For:	Copy To:
Bruce P Tillapaugh Field Crop Specialist, Cornell University 401 N. Main St. Warsaw NY 14569	Marvin Luder 2805 Wing St. Bliss NY 14024

LAB ID:	SAMPLE ID:	REPORT DATE:	SAMPLE TYPE:	FEEDSTOCKS	COMPOSTING METHOD	COUNTY
C02653	Back 1	10/18/2007	Feedstock			

COMPOST ANALYSIS REPORT

Compost Test 1B

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.5	—
Soluble Salts (1:5 w:w)	7.79 mmhos/cm	—
Solids	42.4 %	—
Moisture	57.6 %	—
Organic Matter	38.5 %	90.8 %
Total Nitrogen (N)	0.71 %	1.7 %
Organic Nitrogen[1]	0.68 %	1.6 %
Ammonium N (NH_4-N)	304.6 mg/kg	718.7 mg/kg
Carbon (C)	17.5 %	41.4 %
Carbon:Nitrogen (C:N) Ratio	24.9	24.9
Phosphorus (as P_2O_5)[2]	0.28 %	0.66 %
Potassium (as K_2O)[2]	0.66 %	1.56 %

[1]See comments on back of report.

[2]To convert phosphorus as (P_2O_5) into elemental phosphorus (P), divide by 2.29. To convert potassium (as K_2O) into elemental potassium (K), divide by 1.20.

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LAB ID:	SAMPLE ID:	REPORT DATE:	SAMPLE TYPE:	FEEDSTOCKS	COMPOSTING METHOD	COUNTY
C02654	Back 2	10/18/2007	Feedstock			

COMPOST ANALYSIS REPORT

Compost Test 1B

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.4	—
Soluble Salts (1:5 w:w)	8.68 mmhos/cm	—
Solids	41.2 %	—
Moisture	58.8 %	—
Organic Matter	36.6 %	88.9 %
Total Nitrogen (N)	0.71 %	1.7 %
Organic Nitrogen[1]	0.65 %	1.6 %
Ammonium N (NH_4-N)	604.7 mg/kg	1468.1 mg/kg
Carbon (C)	17.2 %	41.8 %
Carbon:Nitrogen (C:N) Ratio	24.2	24.2
Phosphorus (as P_2O_5)[2]	0.25 %	0.60 %
Potassium (as K_2O)[2]	0.66 %	1.60 %

[1]See comments on back of report .

[2]To convert phosphorus as (P_2O_5) into elemental phosphorus (P), divide by 2.29. To convert potassium (as K_2O) into elemental potassium (K), divide by 1.20.

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Analysis Report For:	Copy To:
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LAB ID:	SAMPLE ID:	REPORT DATE:	SAMPLE TYPE:	FEEDSTOCKS	COMPOSTING METHOD	COUNTY
C02655	Back 3	10/18/2007	Feedstock			

COMPOST ANALYSIS REPORT

Compost Test 1B

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.6	—
Soluble Salts (1:5 w:w)	9.14 mmhos/cm	—
Solids	40.8 %	—
Moisture	59.2 %	—
Organic Matter	36.6 %	89.5 %
Total Nitrogen (N)	0.62 %	1.5 %
Organic Nitrogen[1]	0.57 %	1.4 %
Ammonium N (NH_4-N)	541.6 mg/kg	1325.8 mg/kg
Carbon (C)	17.3 %	42.4 %
Carbon:Nitrogen (C:N) Ratio	27.9	27.9
Phosphorus (as P_2O_5)[2]	0.24 %	0.59 %
Potassium (as K_2O)[2]	0.67 %	1.64 %

[1]See comments on back of report.

[2]To convert phosphorus as (P_2O_5) into elemental phosphorus (P), divide by 2.29. To convert potassium (as K_2O) into elemental potassium (K), divide by 1.20.

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The Pennsylvania State University
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Analysis Report For:	Copy To:
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LAB ID:	SAMPLE ID:	REPORT DATE:	SAMPLE TYPE:	FEEDSTOCKS	COMPOSTING METHOD	COUNTY
C02656	Front 1	10/18/2007	Feedstock			

COMPOST ANALYSIS REPORT

Compost Test 1B

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.4	—
Soluble Salts (1:5 w:w)	8.42 mmhos/cm	—
Solids	47.1 %	—
Moisture	52.9 %	—
Organic Matter	43.3 %	92.0 %
Total Nitrogen (N)	0.84 %	1.8 %
Organic Nitrogen[1]	0.83 %	1.8 %
Ammonium N (NH_4-N)	63.2 mg/kg	134.1 mg/kg
Carbon (C)	21.1 %	44.8 %
Carbon:Nitrogen (C:N) Ratio	25.2	25.2
Phosphorus (as P_2O_5)[2]	0.31 %	0.66 %
Potassium (as K_2O)[2]	0.79 %	1.68 %

[1]See comments on back of report .

[2]To convert phosphorus as (P_2O_5) into elemental phosphorus (P), divide by 2.29. To convert potassium (as K_2O) into elemental potassium (K), divide by 1.20.

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The Pennsylvania State University
University Park PA 16802

Analysis Report For:	Copy To:
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LAB ID:	SAMPLE ID:	REPORT DATE:	SAMPLE TYPE:	FEEDSTOCKS	COMPOSTING METHOD	COUNTY
C02657	Front 2	10/18/2007	Feedstock			

COMPOST ANALYSIS REPORT

Compost Test 1B

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.3	—
Soluble Salts (1:5 w:w)	6.62 mmhos/cm	—
Solids	49.2 %	—
Moisture	50.8 %	—
Organic Matter	45.6 %	92.7 %
Total Nitrogen (N)	0.81 %	1.6 %
Organic Nitrogen[1]	0.78 %	1.6 %
Ammonium N (NH_4-N)	245.6 mg/kg	499.6 mg/kg
Carbon (C)	22.1 %	45.0 %
Carbon:Nitrogen (C:N) Ratio	27.4	27.4
Phosphorus (as P_2O_5)[2]	0.25 %	0.50 %
Potassium (as K_2O)[2]	0.61 %	1.25 %

[1]See comments on back of report .

[2]To convert phosphorus as (P_2O_5) into elemental phosphorus (P), divide by 2.29. To convert potassium (as K_2O) into elemental potassium (K), divide by 1.20.

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LAB ID:	SAMPLE ID:	REPORT DATE:	SAMPLE TYPE:	FEEDSTOCKS	COMPOSTING METHOD	COUNTY
C02658	Front 3	10/18/2007	Feedstock			

COMPOST ANALYSIS REPORT

Compost Test 1B

Analyte	Results (As is basis)	Results (Dry weight basis)
pH	8.4	—
Soluble Salts (1:5 w:w)	6.97 mmhos/cm	—
Solids	49.7 %	—
Moisture	50.3 %	—
Organic Matter	46.0 %	92.6 %
Total Nitrogen (N)	0.73 %	1.5 %
Organic Nitrogen[1]	0.69 %	1.4 %
Ammonium N (NH_4-N)	384.5 mg/kg	773.7 mg/kg
Carbon (C)	23.3 %	46.8 %
Carbon:Nitrogen (C:N) Ratio	31.9	31.9
Phosphorus (as P_2O_5)[2]	0.34 %	0.69 %
Potassium (as K_2O)[2]	0.72 %	1.45 %

[1]See comments on back of report.

[2]To convert phosphorus as (P_2O_5) into elemental phosphorus (P), divide by 2.29. To convert potassium (as K_2O) into elemental potassium (K), divide by 1.20.

From Producers

11/30/07

PAGE # 1

DHI SOMATIC CELL REPORTS
I. HERD SUMMARY DHI-240

Dairy One

HERD CODE 21-55-0780 EAGLEVIEW DAIRY LLC.

TYPE OF TEST DHI-AP

DATE SAMPLED 10/25/07

DISTRIBUTION OF COWS BY LINEAR SCORE

ESTIMATED INFECTIONS

Sample Dates	Herd Avg LS	<=3 NO.	<=3 PCT	4 NO.	4 PCT	5 NO.	5 PCT	6 NO.	6 PCT	7-9 NO.	7-9 PCT	New NO.	New PCT	Chronic NO.	Chronic PCT	100 Lbs Milk Lost Herd/30 Days
10/25/07	3.0	180	64	47	16	27	9	18	6	9	3	21	7	50	17	130
9/21/07	3.1	173	63	45	16	27	9	13	4	14	5	17	6	58	21	138
8/22/07	3.1	176	64	31	11	31	11	14	5	19	7	18	6	53	19	136
7/21/07	3.0	179	63	47	16	30	10	13	4	15	5	18	6	54	19	127
6/25/07	3.3	169	59	42	14	26	9	26	9	20	7	31	10	51	18	167
5/29/07	3.0	170	63	38	14	24	8	23	8	14	5	25	9	39	14	122
4/10/07	3.1	168	64	33	12	32	12	9	3	20	7	13	4	47	17	134
3/12/07	3.4	147	57	48	18	26	10	18	7	18	7	24	9	46	17	165
1/10/07	3.8	133	47	53	18	43	15	22	7	31	10	48	17	43	15	237
11/17/06	4.4	50	39	21	16	16	12	16	12	24	18	8	6	28	22	141
10/30/06	4.3	46	36	23	18	20	16	13	10	23	18	47	37	14	11	133
9/25/06	3.8	59	49	22	18	15	12	11	9	13	10	13	10	17	14	100

LINEAR SCORE DISTRIBUTION BY LACTATION NUMBER AND STAGE

PREVIOUS SAMPLE

Lac. No	Less Than 41 Days: No. Cows	LS. Avg.	LS 5+ Pct.	41-200 Days: No. Cows	LS. Avg.	LS 5+ Pct.	More Than 200 Days: No. Cows	LS. Avg.	LS 5+ Pct.	Avg. LS.
1	11			52	2.3	5	46	3.0	13	2.3
2	11			28	3.0	10	25	3.5	16	2.6
3+	15			54	3.2	24	37	4.0	29	3.0
AVERAGE				134	2.8		108	3.4		2.6

CURRENT SAMPLE

Less Than 41 Days: No. Cows	LS. Avg.	LS 5+ Pct.	41-200 Days: No. Cows	LS. Avg.	LS 5+ Pct.	More Than 200 Days: No. Cows	LS. Avg.	LS 5+ Pct.	Avg. LS.
10	2.3		53	2.2	5	44	2.7	2	2.4
10	2.0		28	3.8	25	27	3.6	14	3.4
22	2.3		54	2.9	22	41	3.9	17	3.1
AVERAGE 2.2			135	2.8		112	3.3		2.9

cc to our extension unit

Cornell University

Quality Milk Production Services
Animal Health Diagnostic Center
4530 Millennium Drive
Geneseo, NY 14454
t. 585.243.1780
f. 585.243.1713

AUG 20 2007

August 17, 2007

Mr. Marvin Luders & Mr. Scott Acomb
Eagleview Dairy, LLC.
2805 Wing St.
Bliss, NY 14024

Dear Marvin & Scott:

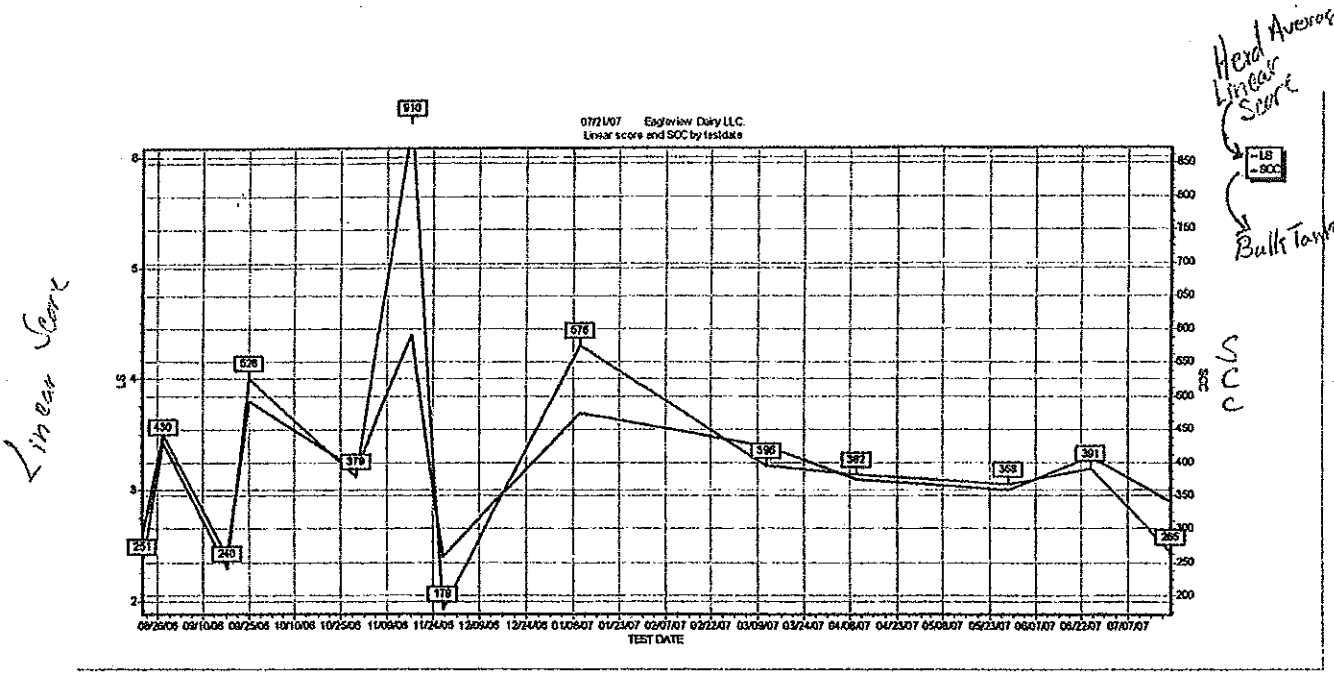
Thank you both for having us come to your dairy to check your milking equipment and assess your mastitis prevention practices. Our primary intent is to assist you in identifying mastitis risk areas, then to offer cost effective mastitis prevention recommendations. This letter will be divided into two main sections: first, I'll assess the DHI data as it pertains to mastitis in the herd, then I'll look at the information that Scott Steiner, our senior field technician gathered while he was on the dairy on 8/8/07. As you know, Scott took the graphs from the pulsators to the Empire Farm Days and showed them to several different people to see what they thought of the unusual graphs. More on that in a bit.

Summary:

1. **Get the pulsators up correctly so that each unit has the same ratios front to rear, and at the same "stagger" rate.**
2. **Consider changing the milking routine.**
3. **Consider decreasing to one person milking.**

DHI Data – the Bulk Tank

First, let's see what the records can show us over time. This first graph looks at the Bulk Tank Somatic Cell Counts [BTSCC] and the herd average Linear Scores [LS] over the past year.



We can see the variability in the BTSCC and LS both last fall when you were assembling the dairy cows, and when the pack was just starting up. Both counts stabilized, then began improving this past spring, achieving good results at 265,000 this past test.

The following chart looks at the same basic data, but splits the data by LS, and by stage of lactation.

	TEST DATES	8/21	8/28	9/18	9/25	10/30	11/17	11/27	1/10	3/12	4/10	5/29	6/25	7/21
LS														
Chronic	%	11	14	8	19	14	31	5	12	11	12	12	14	14
	#	13	13	12	19	36	38	7	29	23	29	28	35	37
New Inf	%	3	10	5	12	12	12	5	20	12	9	10	9	5
	#	4	9	8	12	30	15	8	47	26	20	24	23	13
Cured	%	11	14	7	9	4	11	5	9	13	8	8	6	9
	#	13	13	10	9	11	14	8	22	28	18	20	15	24
Clean	%	75	63	80	60	69	45	85	59	63	71	70	70	72
	#	90	59	117	61	172	55	129	139	133	165	166	173	188
HiFresh	%	22	78	11	31	15	33	15	36	16	21	23	31	27
	#	6	7	1	4	5	1	2	14	7	6	7	11	6
Lofresh	%	78	22	89	69	85	67	85	64	84	79	77	69	73
	#	21	2	8	9	29	2	11	25	38	23	24	25	16
Average		2.6	3.5	2.4	3.8	3.2	4.4	2.4	3.7	3.4	3.1	3.0	3.3	2.9
	#	147	103	156	114	283	125	165	276	255	261	269	282	284

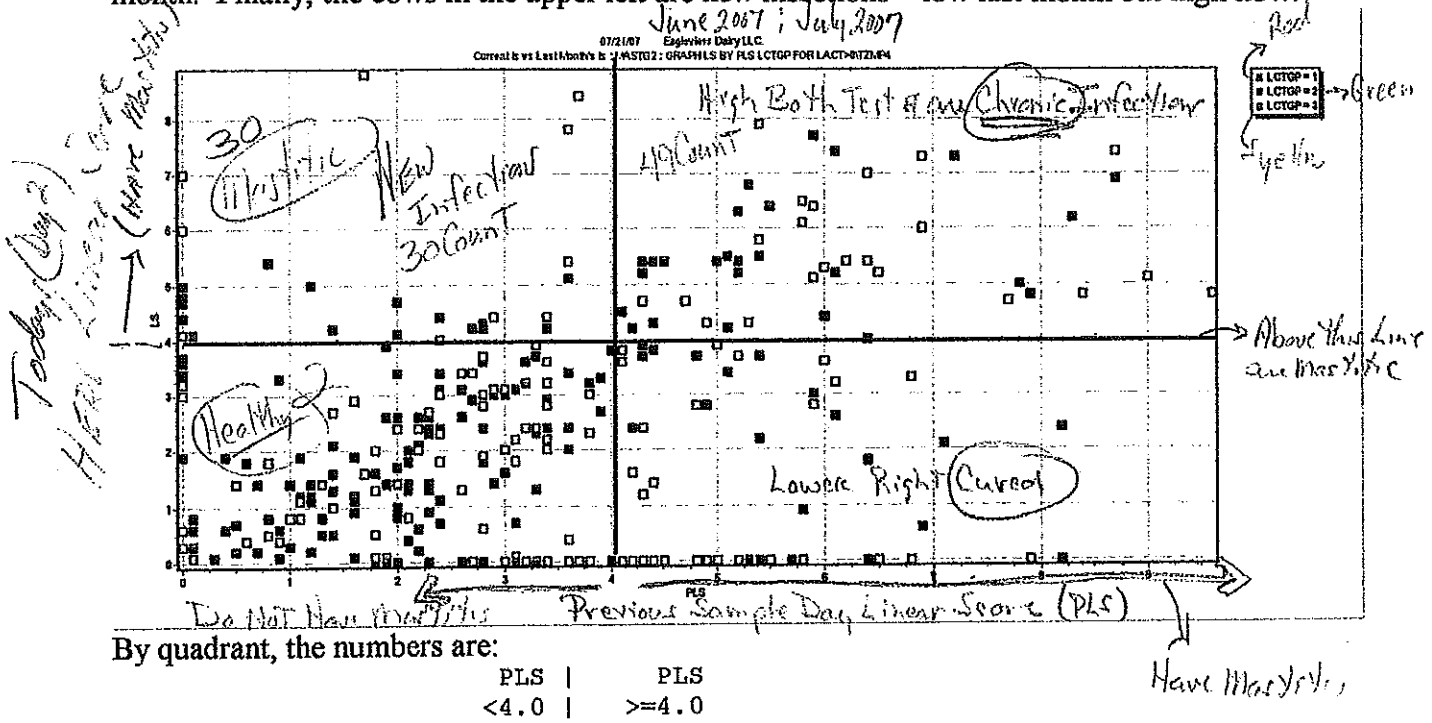
Because the herd is relatively new, there is not much reason to look at the oldest data on this set, so let's focus on the last five test dates. I've drawn a red line through the data set between the 1/10 test data and the 3/12 data. I've also done some highlighting to make the data easier to follow. The chronic infections [cows with high SCC for two months in a row] are highlighted in yellow. At 11-14% [23-37 cows], this is actually pretty good compared to other herds. I would like to see this number drop, because the percent chronic mastitis really does correlate to lower BTSCC's. Both the New Infections and HiFresh cows in grey add to the BTSCC every month. This past month, both of these parameters were significantly better than in

months before. A total of 19 new infections occurred this month, down from 34 and 31 in the two previous months. The Cures, LoFresh cows in green and the high SCC cows that are dried off every month actually lower the BTSCC. These numbers have been quite good at between 40-44 cows per month, so the average LS in blue reflects both the additions and subtractions from the herd every month.

Scatter Graphs

This Month versus Last Month

I often find graphs easier to understand than the numbers, once I know what the graph is trying to cover, and I hope this is true for you as well. The following scatter graph plots this month against the previous month, looking at relatively short term changes. Each cow in the herd that has 2 tests, in this case, current sample day Linear Score [LS], and previous sample day linear score [PLS] can be plotted. The graph is divided into 4 quarters with the dividing line at LS = 4.0 and PLS = 4.0. This is because most cows with LS above 4.0 have mastitis [Somatic Cell Count > 200,000] and most with LS below 4.0 do not. So, cows in the lower left corner are the good ones – both tests were low. Cows in the upper right were high both tests, and have chronic infections. Those cows in the lower right are "cured" – high last month, but low this month. Finally, the cows in the upper left are new infections – low last month but high now.



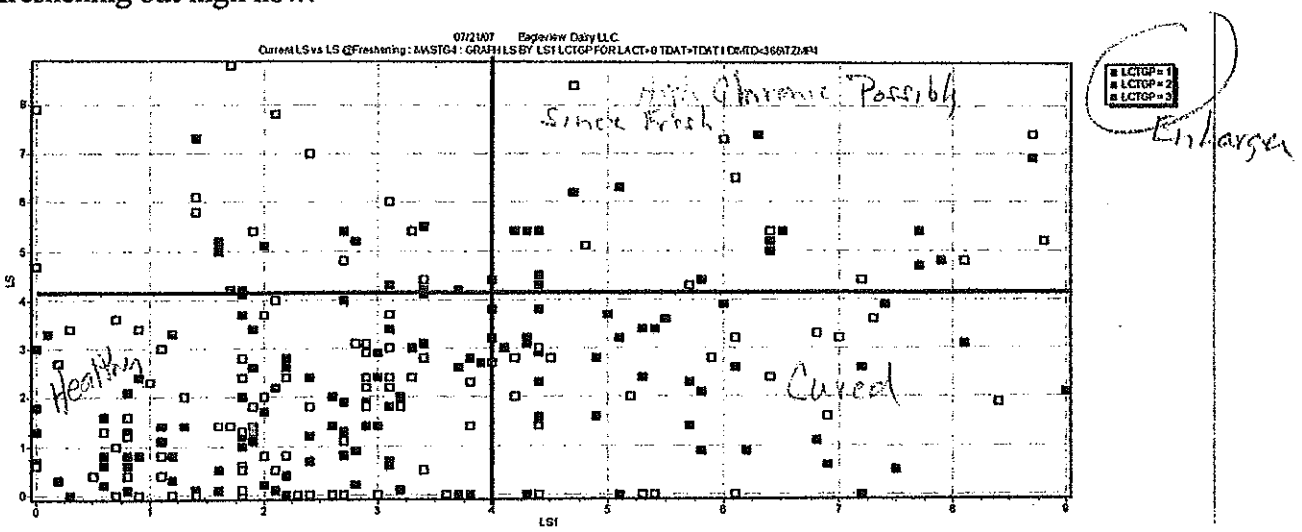
By quadrant, the numbers are:

	PLS <4.0	PLS >=4.0	
LS >=4.0	30	49	79
	9%	15%	24%
LS <4.0	194	63	257
	58%	19%	77%
	224	112	336
	67%	34%	100%

These numbers are slightly different from the ones in the graph, but the relative proportions are good. The 49 Chronic infections in the upper right are added to by 30 new infections in the upper left, the total number of high LS cows are diminished by the 53 cures in the lower right. So, that is what is happening this month, but it does not say much about what parts of management might be problematic.

This month LS versus LS at Freshening

The following scatter graph looks at each cow's Linear Score at freshening whenever that was versus her current sample day Linear Score. As before, the graph is divided into 4 quarters with the dividing line at LS = 4.5 and LS1 = 4.5. So, cows in the lower left corner are the good ones – freshened low and are still low. Cows in the upper right were high both tests, and may have been high since freshening. Those cows in the lower right are "cured" – high at freshening, but low this month. Finally, the cows in the upper left are new infections since freshening – low at freshening but high now.



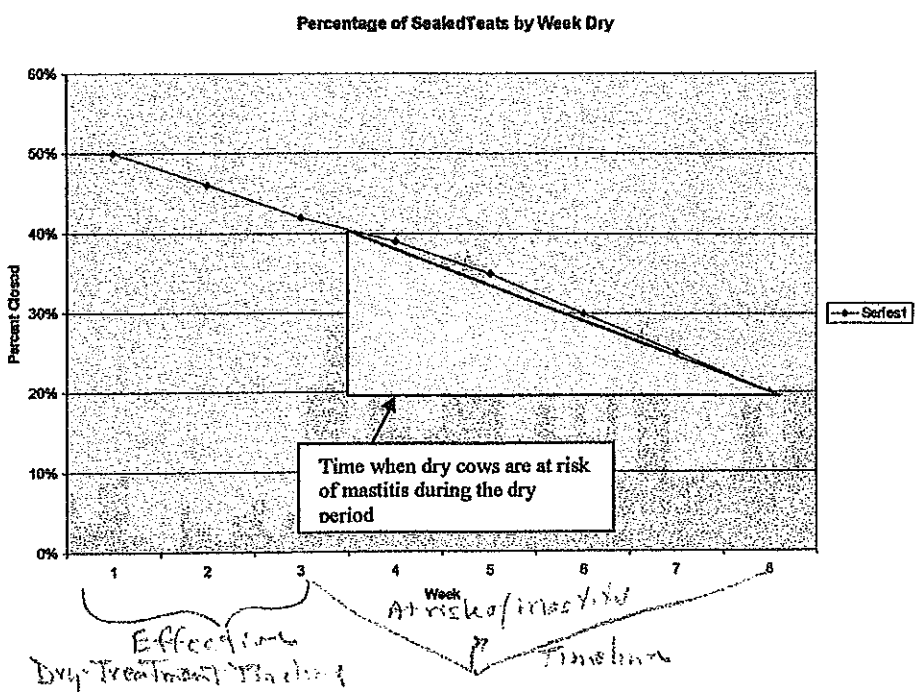
Again, by quadrant,

	LS1 <4.0	LS1 >=4.0	
LS >=4.0	35 10%	44 13%	79 23%
LS <4.0	187 56%	70 21%	257 77%
	222 66%	114 34%	336 100%

Again, we have 79 high LS cows, total. Of those, 44 or 56% of the high LS cows freshened with high SCC's, and 44% got their mastitis during the lactation. Also of interest, a total of 114 cows have freshened high in the past lactation. This number might seem astronomical, but believe it or not, this is the norm! An incredible number of cows and heifers

freshen with high LS: many cure their infections on their own, but others go into clinical mastitis.

There are a number of reasons for this. First, dry treatment only lasts in the udder at effective levels for 2-3 weeks. Also, only 50% of cows have "plugged" their teats with keratin by 7 days post dry off, and a full 20% NEVER plug their teats! So, 30-40% of cows are at major risk of mastitis during the dry period because they are not protected.

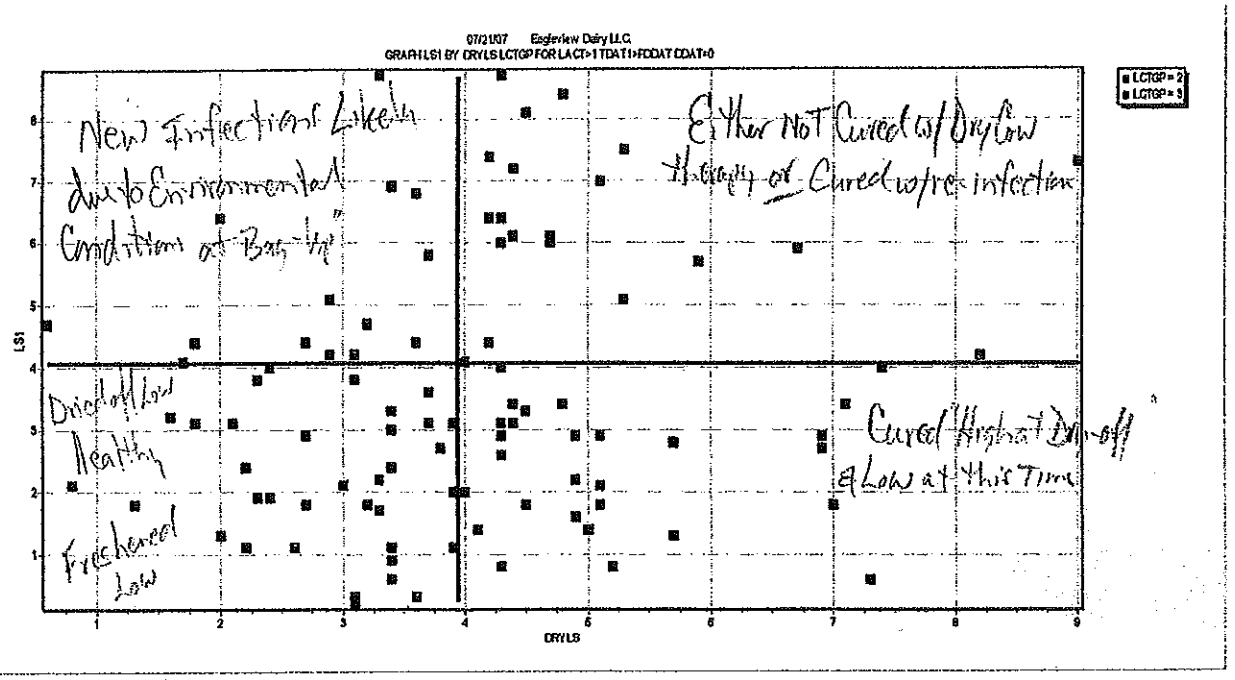


You can see from this graph just how much of an increase in risk this represents compared to what we used to think.

Dry Treatment Cure Rates

Before we move on, let's look at dry treatment cure rates, and at just how effective the dry treatment is. This next "scatter graph" looks cows with more than one lactation and looks at each cow's Linear Score at freshening [LS1] versus her Linear Score at dry off [DRYLS]. As before, the graph is divided into 4 quarters with the dividing line at DRYLS = 4.5 and LS1 = 4.5. So, cows in the lower left corner are the good ones – dried off low and freshened low. Cows in the upper right were high both tests, and may have either not cured with dry cow therapy, or were cured but got another infection during bag up. Those cows in the lower right are "cured" – high at dry off, but low this test at freshening. Finally, the cows in the upper left are new infections most often due to environmental conditions during bag up. To determine dry cow therapy cure rates, we need to know the new infection rates on "uninfected" cows at dry off [cows that dried off low and freshened high divided by cows that dried off low and freshened low].

Cows w/ Other Infection
Dry Cow Cured



By quadrant, the numbers are:

	LS1 <4.0	LS1 >=4.0	
DRYLS >=4.0	15	19	34
	15%	19%	34%
DRYLS <4.0	36	27	63
	36%	27%	63%
	51	46	97
	52%	47%	99%

So, before we assess the dry treatment success or failure rate, we need to know the "background" mastitis rate for the dry cows. A total of 51 cows dried off with low LS. Of these, 15 or 30% freshened with high LS. So, of the 46 cows that dried off with high LS, if all of them cured, I would expect 30% or 14 cows to freshen with mastitis. We see that 19 cows freshened high from this group, so only 5 or 6 of those can be considered dry treatment failures, or 11-13% failure rate. With any *Staph aureus* in the herd, this would not be a bad rate. We know that some of that is present in the herd, so one long term goal would be to reduce that number.

The High LS C