

## Reviewing and Monitoring Herd Performance: Part 1, Herd Production

We are beginning a series of articles which will focus on reviewing and monitoring herd performance. Each month we will examine a different area of herd performance, providing you with key reports or ways to look at the data that we think will make a difference in the management of your dairy business.

When looking at data, whether it be from DHIA, or from herd management software like Dairy Comp, Scout or PCDart, it is helpful to keep the following monitoring points in mind.

1. Measure current performance. All profit begins with actions today and into the future. There is no way we can make money from previous errors. We certainly do not want to re-address a problem that was solved 8 months ago.
2. Error on the side of action vs inaction. Most issues we look for will have large financial implications. The cost of a little further investigation will be small compared to the cost of the issue continuing until we can be certain that our indicators are pointing to a problem.
3. Do not confuse monitoring a herd with describing a herd. While you can accurately say that a herd's average days in milk at first breeding is 120, you can not determine if you should intervene based on that information.

### What is "good" information?

Good information reflects current performance. If the herd had a problem several months ago, but the problem was fixed last month, our "good" information will not suggest we intervene today.

1. Good information reflects a problem very soon, preferably the first day that the problem begins.
2. Good information reflects improved performance very soon, preferably the first day that the problem is solved.
3. Good information tracks herd performance that is directly tied to herd profitability.

### An example of good information

Rather than measure when we got animals first bred a year ago, and feel badly they were bred late, look for animals that should get bred now. Count and list animals more than 70 days in milk and not yet bred, rather than looking at average days to first service. This list of animals more than 70 days in milk is one we can take action on today. The number of cows on the list will be an immediate indicator of how we are doing. Breeding the cows will give us a shorter list, immediately.

### Looking at herd production using milk deviation

We can look at herd production many different ways. A good measure of how the herd is doing one month to the next is to look at milk deviation. Milk deviation or MKDEV is the difference between what the animal gave and what we expected her to give. A positive number, means she was "up" and a negative number means she was "down". We expect the animal to give the amount of milk this month that will result in the same ME305 as she had last month. So, looking at milk deviation will tell us whether the herd is performing better or worse than expected.

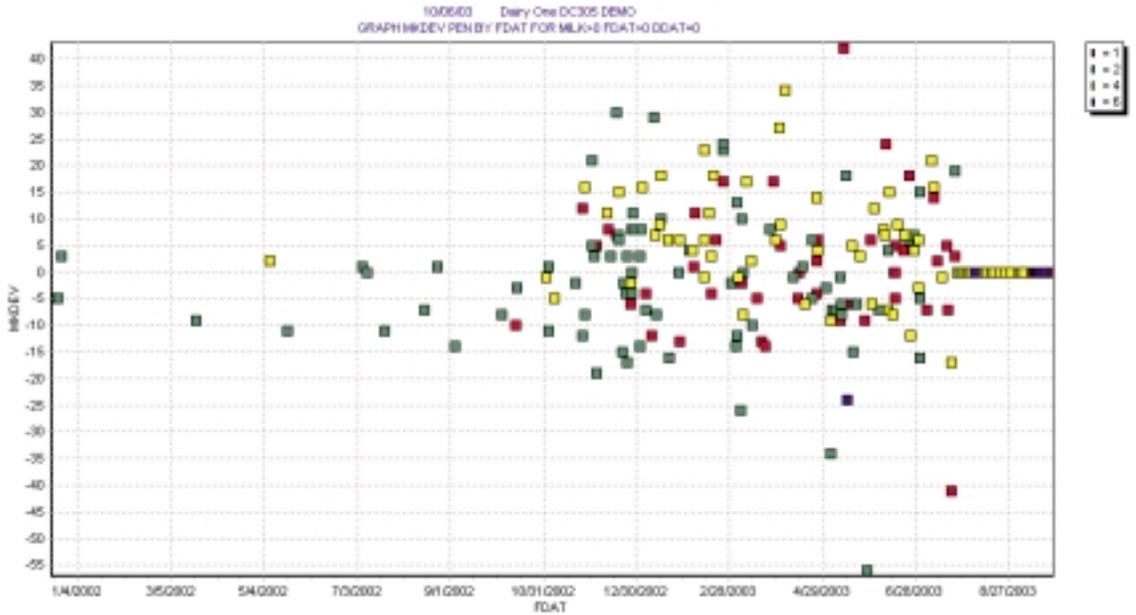
The report below summarizes by pen, the number of cows, average days in milk, average previous test day milk, average current test day milk and average milk deviation. We do include animals with a zero milk deviation in the summary since those animals did exactly as we expected them to. We do not include fresh cows (those less than 60 days in milk) since those animals do not yet have an expected milk value. Notice in several pens the average milk is less than last month's milk but overall, according to MKDEV the cows are up by about a pound.

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- Command : SUM DIM PMILK MILK MKDEV BY PEN FOR EMILK>0 DDAT=0\Z
By PEN %COW #COW Av DIM AvPMILK Av MILK AvMKDEV
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By	PEN	%COW	#COW	Av DIM	AvPMILK	Av MILK	AvMKDEV
	1	25	46	178	83	76	0.9
	2	44	79	262	74	64	-1.5
	4	28	51	195	94	88	6.1
	6	0	1	144	77	48	-24.0
=====							
Total		100	177	220	82	74	1.1

**Scatterplots, Milk Deviation vs. Fresh Date**

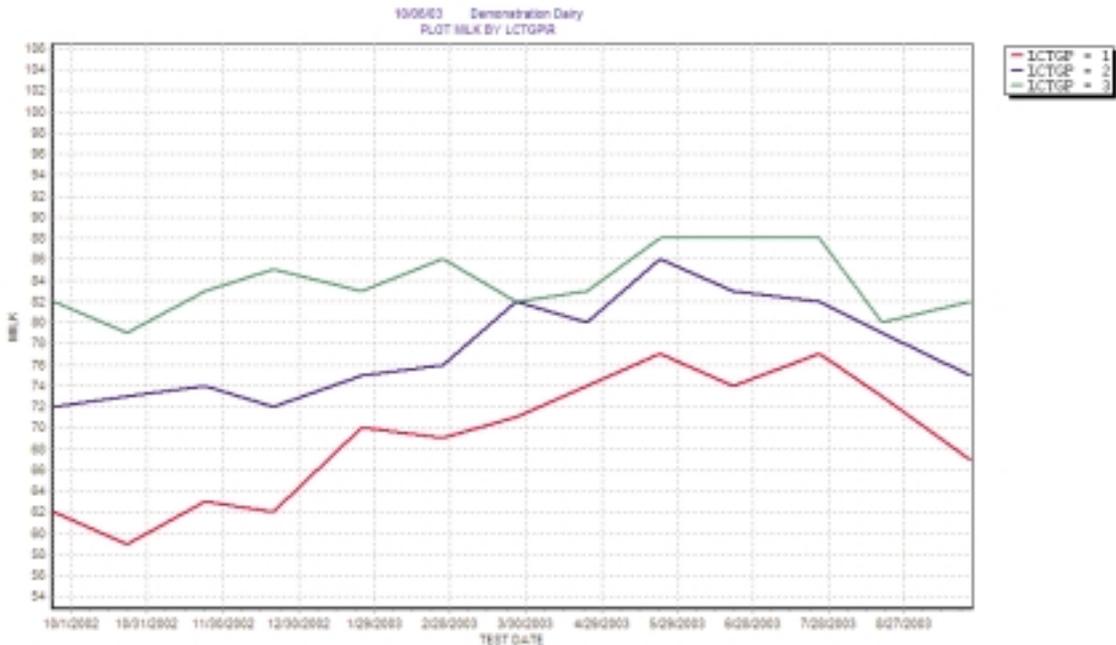
Next, we look at a scatterplot of milk deviation (MKDEV) by Fresh Date. Scatterplots give much more information than a summary. Not only do we see the data, we also see the distribution and variation of the data. In the scatterplot below, each dot is a cow, plotted against MKDEV and Days in Milk. Our goal is for milk deviation to be zero or higher. This chart gives the overall impression that there are more cows above zero than below, but clearly later lactation, pen 6 animals, are “down” this test day.



**Plots, Test Day Average Milk by Test Day and Lactation Group**

We can not make money by intervening on history because we can not do anything about history. However, there are times in which a historical context can give us a picture of how herd production has been changing.

Looking at the graph below, we see that all lactation groups have trended up in production with a recent down turn. To have greater confidence in the production changes we must try to account for changes in age and days in milk shifts. We must be careful when looking at testday information that we line up data by test date and not by test day number. Many traditional lactation curves look at test day number and may lead to incorrect conclusions. By looking at test date we get a better overall snapshot of the herd each month.



**If you have questions or would like more information, please contact your Dairy One Farm Service Technician, or call 1-800-344-2697 extension 3 (email: [dmr@dairyone.com](mailto:dmr@dairyone.com))**