

MILK COMPONENT VARIATIONS: DHI vs. your plant results.

Milk component variations can sometimes occur when comparing DHI data and components for payment. Variations may occur even when looking at a typical herd without comparing another test such as DHI against the payment data. There are many reasons that contribute to variations in components, and causes may be inconclusive.

Day to day fat variations of plus or minus .4 percent or greater may occur. If the DHI fat percentage is high on test day while a payment test is taken on a low fat day the variation can be significant. This can cause a difference of .3 percent with greater variations to be expected.

Many changes occur on the dairy during the month, and these changes impact milk components. For example, changes in the number of early and late lactation animals may result in component changes. Early lactation animals will generally show a decline in fat as the milk volume increases for several months and then show a gradual increase to the end of their lactation. Feeding changes, especially in spring and fall can change milk components. Seasonal changes, heat and humidity, milking practices, nutrition, proper tank agitation, and a host of other management practices, as well as environmental factors also contribute to variations.

When noticeable variations occur there are a few questions that should be addressed whether one is comparing their DHI test with the payment test or just comparing the payment tests through the month.

1. Was the same milk sampled? If not, how many days were there between tests? Fat varies from day to day and there is little chance of obtaining identical results from milk obtained on a different day. A DHI tank sample is often taken as a comparison between the average of the cows and the bulk tank. Differences between the two results could indicate improper tank agitation, a problem in sample handling, or a laboratory analyzer problem that was not detected.
2. When comparing two tank samples taken on the same day were the samples obtained from splitting a larger sample or were two separate samples obtained from the tank? Are proper procedures followed? Taking two separate samples from the bulk tank does not guarantee identical results. It is best to take a pint of milk from the tank, agitate it, and then pour off two samples.
3. Who took the sample? The only "official" sample is the one obtained by a licensed and certified individual who is properly trained to obtain them.
4. When comparing the individual cows in a herd what type of test are you on? Today, the majority of dairy producers on DHI are on an AM/PM testing program where the AM and PM milking are alternated every month. Depending on the milking interval the PM milk will generate less milk but a greater fat test while the AM milking is the opposite. Are there 1, 2, 3, or 4 milkings in the tank that was sampled? The number of milkings and tank pickup time will also affect results.
5. Did the regular person sample the tank or cows? Changes in sample takers or someone new in the barn can influence milk components and production.
6. What type of metering or sampling device is used? Insufficient agitation can result in an incorrect sample being taken, even with bulk tank milk.
7. Does it take you longer to milk on test day? The highest fat percentage is obtained from the last of the cow's milk and you may be spending more time milking to obtain this high fat milk.
8. Are all of the cows going into the tank? It does not take too many high producing cows to change milk component averages including somatic cell counts. This is particularly true in smaller or averaged sized herds.

In general, comparing DHI and plant tests will show similar results. Understanding the above information will help explain test variations if and when they do occur.



Please contact one of the laboratory managers below if you have questions or would like more information.

(image is from the milk lab at Dairy One, State College, PA)

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State College, PA - dixie.burris@dairyone.com

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Dairy One offers NEW service for dairies who only want lab results

At some time or another, most dairies just want some additional information on a specific cow, or group of cows. Perhaps it is somatic cell counts on fresh cows, or culture results for a pathogen presence that is causing clinical mastitis. Whatever the reason, the new Tech Only program is available for dairies on a regular DHI testing program as well as those who just want to test a few cows at irregular intervals.

For Dairy One technicians, it is an easy process to test all or part of the herd for components or pathogens. The technician inputs the data, then uploads a file to one of our labs. A report similar to the one below, is mailed, faxed, or e-mailed back to the dairy. If technicians include milk-weights with the samples, they will be displayed on the report as well.

For more information, contact your local Dairy One Farm Service Technician.



730 Warren Road, Ithaca, New York 14850 800-498-3344 Fax: 607-257-6808 www.dairyone.com

Test Herd
RD 1

Date Sampled: 09/30/2005
Date Received: 10/09/2005
Date Analyzed: 10/09/2005

Ithaca NY 14850

Tech: 14

Analyzers: 4041

Account: 21520247

Sampled: 09/30/2005

03/04/2005

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ID	Sample No.	Fat %	True Prot%	SCC X1000	ID	Sample No.	Fat %	True Prot%	SCC X1000
0000	TANK	3.64	3.03	398	542	542	3.22	2.90	95
2	1	3.66	2.92	51	548	548	4.18	3.22	42
3	TRIPPE	3.69	3.22	68	553	553	3.68	3.56	65
146	381	2.92	2.50	1090	554	554	3.30	3.25	74
264	409	2.82	2.68	52	555	555	3.65	3.29	136
442	442	3.89	2.67	101	556	556	3.62	3.37	606

Sample report for dairies who only want laboratory results - milk weights are included if the information is available.

The mission of Dairy One is to create and deliver data and information which will be used to make profit enhancing decisions for members of the agricultural community.