

Guide for Using AgSource's New Udder Health Management Summary[®] and Cow Report[®]

When you receive the new AgSource UHM Summary and UHM Cow Report the first time, there will be a lot of new information to navigate and understand. Don't panic! Just follow the guide below and you will unlock the secrets behind herd udder infection dynamics.

Where should I start?

Always look at Block B first. Risk Group Analysis is a visual representation of the infected populations in the herd. This graphic will tell you which risk group has increased since the last test.

Is the total count of cows with a $SCC \geq 200,000$ increasing or decreasing on the current test compared to the previous months in Block B?

If it is decreasing, you may not want to go any further – just congratulate yourself on a job well done! If it is increasing, look at the relative contribution of the color coded areas to the total count.

Which color coded area has increased the most this month in Block B?

If the red area appears to be expanding, this indicates there are more chronic cows (last 2 tests $\geq 200,000$) this month – new infections that occurred last test have failed to return to below the 200,000 threshold. If the light blue area has expanded, this indicates an increase in new infections $> 40DIM$. If the dark blue area has expanded, fresh cows and heifers are starting their lactations with a high incidence of new infections at 1st test 5-40 DIM.

What should I do when one or more color coded areas is expanding?

Follow the pathways below through the UHM Summary and UHM Cow Reports, depending on color zone.

Red Zone Path

If the red area appears to be expanding, this indicates that there are more chronic cows (last 2 tests $\geq 200,000$) this month and cows are failing to cure from new infections that occurred last test.

You can confirm this by going to the “Chronic $2x \geq 200$ ” column in Block C. Is the “%” column getting bigger? If yes, then the proportion of cows testing $\geq 200,000$ that are chronic is increasing.

This increase could be due to cows failing to cure during lactation, or failing to cure during the dry period.

Look at the “%” column for the Dry Period Failure to Cure – are there a lot of cows emerging from the dry period with infections that have failed to cure? If there are, this could explain the increase in chronic infections. Did this increase occur along with an increase in the dark blue area (Fresh Cow Infections)? If it did, then the user should focus on risk factors for new infections in the dry period. If not, then risk factors for failure to cure during the dry period such as the duration of infections in the prior lactation, the pathogen type involved and the choice of dry cow therapy should be examined.

Next stop would be Block D on page 2 of the UHM Summary. Has there been a shift in the relative proportion of cows in each SCC category? Is there a sudden increase in the ≥ 800 group – indicating an increase in cows with a very high SCC or is there a more modest increase in the proportion of cows in the lower SCC categories? Modest increases over a large population of cows could indicate increased exposure to minor pathogens, more cows entering the later stages of lactation in seasonal herds or general milking procedure issues. Large increases in SCC in a few cows may represent failure to cure after a bout of severe infection with a coliform bacteria for example.

Next, go to Block F in the UHM Report – Response to New Infection. Look at the proportion of last test first time new infections that have returned to an SCC <200 , deteriorated or improved. If a reasonable number of cows are improving, it is likely that the increase in chronic cows will be short term – many will likely be cured by the next test day. However, if there are a large number of cows in the deteriorated category, this represents a more serious problem. This situation should trigger more attention from your milk quality consultant.

Block G allows the user to determine if the current change in SCC is significantly above the annual weighted average SCC (the current month test will be red), and whether the current test is greater than a similar time one year ago.

Once you have identified these trends in the UHM Summary, go to the Chronic Cow List and Dry Period Failure to Cure List in the UHM Cow Report. Identify cows that have more than 3 tests $\geq 200,000$ in the Current Lactation. Then identify the cows that had more than 3 tests $\geq 200,000$ in the previous lactation. If there are a lot of these cows, culling decisions need to be made as it is unlikely these cows will cure. The historical data listed will enable good decisions to be made along with the information from Block A (if the cow is on this list she is one of the highest SCC cows in the herd) and the “Predicted % Contribution to Bulk” milk. Next, identify cows that have only two current lactation tests $\geq 200,000$, and were not a problem last lactation. These cows may need to be examined for treatment if they have not already been identified. Quarter sampling of these cows and culturing (available from AgSource) will help determine the pathogen involved and the chances of cure.

Light Blue Zone Path

If the light blue area expanded, this indicates an increase in new infections $> 40\text{DIM}$. This sometimes occurs in association with an increase in the dark blue area (Fresh Cow Infections) and sometimes in isolation. Where it occurs in isolation, focus on risk factors that affect lactating

cows >40DIM more than fresh cows – such as lactating cow bedding management and milking procedures.

Go to the light blue columns in Block C and examine the new infection rates by “Lactation” and by the “DIM” categories. Determine whether the new infections are evenly distributed between lactation groups and DIM ranges, or is there a pattern weighted towards first lactation or older cows, or earlier or later DIM? Use these data to direct your investigation.

Check column “First New” in Block C. This will tell you how many of the new infections occurred for the first time in each cow’s lactation. If many of the new infections are for the first time, this may represent a change in pathogen control on the farm worthy of investigation. If many of the new infections are repeats – occurring for the second or more time in each cow’s lactation, check on the timing of the increase in the DIM columns in Block C and Block F, then check on the magnitude of the increase in SCC in these cows by identifying them in Block E of the UHM Report. Small increases just above the 200,000 threshold may occur as a result of cows entering the later stages of their lactation – this is a particular problem in a seasonal herd. Large increases are more likely to be due to pathogen exposure. Use mastitis records to determine whether these cows have been identified as suffering from clinical mastitis.

Next, go to Block E of the UHM summary. This graph focuses on the first time during a lactation that a SCC test is $\geq 200,000$. Is the distribution different for 1st lactation than 2nd and greater lactation cows? Is there an increase in mid-lactation or late lactation compared to early lactation cows? Use these data to focus on risk factors specific for these groups.

Dark Blue Zone Path

If the dark blue area has expanded, fresh cows and heifers are starting their lactations with a high incidence of new infection at 1st test 5-40 DIM. If this occurs along with a simultaneous increase in the light blue area, the focus should be on general risk factors that increase the new infection rate in all lactating cows across all stages of lactation as described above. However, if the dark blue area is larger than the light blue area, then risk factors for fresh cow infection and dry period infection should be investigated. These risk factors include bedding management for non-lactating cows, the adequacy of dry cow antibiotic therapy and technique used at insertion, the use of internal and external sealants and vaccination policy.

Identify the monthly rates of 1st test new infections in both first lactation and second and greater lactation cows by viewing the dark blue columns in Block C and examining the “% 1st test”. Has the new infection rate increased in both parity groups or just one? If for example, the problem is focused in the mature cows and there was a common housing system for heifers and cows, then dry cow therapy techniques would top the investigation list.

Next, go to List D in the UHM Cow Report. This list identifies all cows with 1st test 5-40 DIM new infections. These cows may need to be examined and cultured in order to determine the source of the problem.