

How to look at nutritional monitoring records from data from NMR or CIS.

Obtain a cdl file from the NMR or CIS websites. You will need a user name and password for these sites and will need a signed consent form from the client. When you download the file it is good to rename it and put it in a specific folder on your computer. When renaming make sure the name starts with 'cdl' and ends in '.exe' for example cdl_jones_May09.cdl.

Load the CDL file into Interherd. You may need to create a new herd (File/New) and then create a herd and select a database. Load the CDL file using File/Import and then select the CDL option.

If it is a new herd you may be asked if you want to create milk yield predictions. Select the option, let the program run and then save the results when asked.

Finally you need to clean up the data a bit to make sure all the most recent calving dates are used. Choose File/Repair and let the program clean up the data.

Look at the milk records by choosing Batch data/Milk recordings. Click on 'List recordings since...'. This will bring up a list of milk recording summaries. Export these to a text file in a specific directory as follows. Right click on the blue title line and select 'Export to text file' and then save the file with a logical name in a logical folder – i.e. milk_summary_Jones_May09.

Analysing the data

The text files can be read into Excel to be analysed and graphed but may need tidying up first.

In Excel choose 'File:open'. You will need to change the 'Files of Type' at the bottom of the 'Open File' window to 'All files (*.*)' to show the text files. Navigate to the folder you want.

Summary file

Select the text file for the herd summary (the basic milk production over several months) you want then 'Open'. This brings up a 'Text import wizard'; just click on finish to open the file. You now have a spreadsheet with the column names across the top and the cows listed below.

Date	No.	Days	Day kg	Fat %
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And so on

These data want copying into the herd_production.xls spreadsheet.

Hold down the left mouse key and drag the highlighted box over all of the cells with numbers in (including the titles starting with 'Date'). Then click the right-hand mouse key and select Copy from the list.

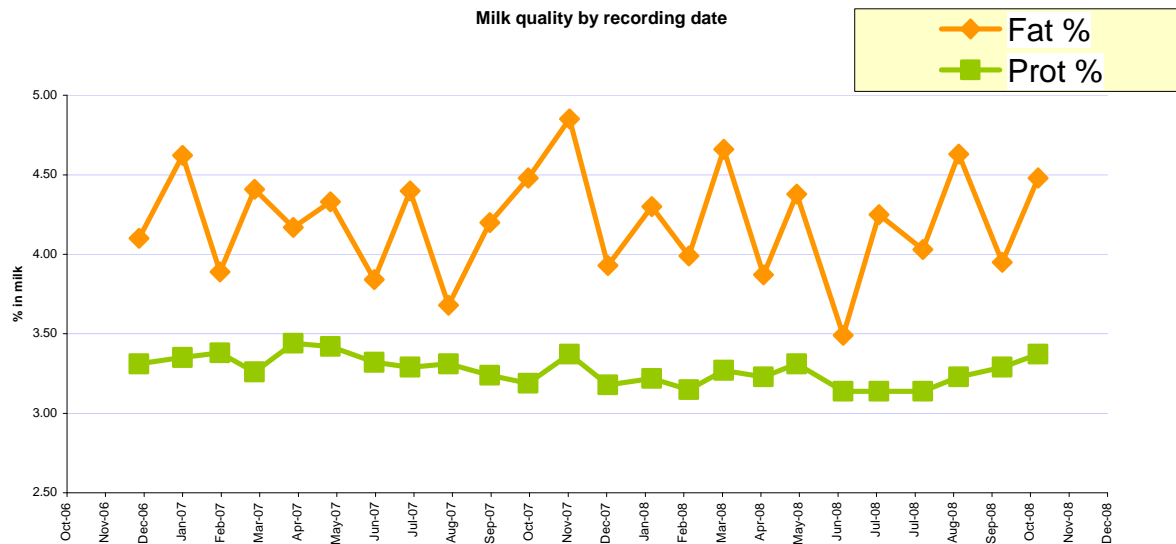
Open up the 'Herd production' spreadsheet and navigate to the first sheet called 'Incoming data'. The data you are copying wants to go in the yellow cells. Just pasting the data will lose the yellow background making future use more difficult; so place cursor in the yellow 'Date' cell (A1) and then select 'Edit' from the top menu followed by 'Paste Special'. If you select 'Values and Number Formats' from the right hand column the yellow background will not be disturbed.

There are now three outputs in separate sheets.

- Milk quality graph – shows milk quality by month
- Herd production graph – shows basic herd details such as days in milk and milk output

- Output table – the basic data you entered in a form suitable for placing in a report.
 - This sheet includes an estimate of the calving interval. This is based on the average days in milk across the past twelve months plus the dry period (which you can alter). This figure is rather historic but it is a start!

Milk quality graph



The butter fat plot often shows a ‘saw tooth’ pattern due to factoring (where the milk recorder takes a single sample at each recording) –as above. Such fluctuations are common but play havoc with fat:protein ratios and so forth. From the graph above we can see that the most recent recording is probably artificially high (at 4.5%) and the one before was low at just under 4.0% and a more truthful figure would be somewhere in between at about 4.25% suggesting that all fat figures need reducing by a factor of 0.95 (4.25/4.5). These sums are done for you on the ‘Output table’ page and can be used in the milk records analysis next.

Monthly milk records analysis

To get the records for an individual recording return to InterHerd and get the Batch data milk recording results as above. Double click on the line (date) you want in the table (avoid clicking on the date).

This will bring up a list of all the cows along with their days in milk, milk yield and composition, predicted performance and cumulative performance. Later stages are easier if you sort this list by days in milk with stale milkers at the top. Right click on the ‘Days’ value for the first cow in the list (not the title this time). Then ‘Sort’ ‘Descending’ to get the stale cows at the top of the list.

Now export this table to a text file. Right click on the blue title line, Export to text file and save somewhere logical with a logical name such as ‘Jones_May_09’. Open this file in Excel as described above. We only want columns for :

ID Days Day kg Fat % Prot %

So delete the rest of the columns; right click on the letter at the top of the column and then select ‘Delete’. By holding down the left mouse key and moving over several column title letters you can delete several columns at once.

Copy these data into the 'Incoming data' sheet. There is a risk that data at the bottom of the columns will not be over-written by incoming data so make sure you delete all the data before copying in the new data.

Move to the 'Input variables' sheet where three variables can be set.

1. Butter fat correction. This can be used to reduce the effects of factoring. Enter the number determined above or enter 1.0 to have no correction.
2. Fat:Pr ratio in cows under so many days. Various authorities will recommend looking at only the fresher calvers to assess ratios
3. Stale milker cut-off. Many farms commonly struggle to formulate rations low enough for stale milkers. Below a certain yield cows are at risk of getting fat. The suggested figure is 2/5's of the peak yield (or 1/500 of the total yield).

The results sheet has six sets of results and then a table of milk composition by stage of calving.

1. Number of cows milked. This is really a 'sanity check' to make sure the data relate to the herd!
2. Fresh calvers with high butterfats. Expressed as the percentage of cows calved 4-3 days with a butter fat over 5%. The cell is 'traffic light' colour coded to aid interpretation.
3. Average amount of milk protein produced per cow per day; again colour coded.
4. Fat : Protein ratio of the group you selected
5. Stale milkers giving too little milk; colour coded
6. Data quality. If too many cows are omitted from the recording this can alter the results and might suggest a hidden SCC problem.

The table below shows the milk production and composition by stage of lactation with the lactation split into 30 day intervals.

The 'Graphs' sheet shows the tabulated data in graph form.

Every effort has been made to make sure these analyses are correct but, given the open structure of spreadsheets each user must satisfy themselves that the results are correct and logical.

Where cells are protected the pass word is 'tom'

Tom Chamberlain, July 2009.