

Mastitis Pattern Tool



Contents

- 3 How to use the Mastitis Pattern Analysis (MPAT) tool**
- 8 How to obtain a CDL file from your Milk Recording Organisation**
- 11 How to install the CDL converter for MPAT**
- 14 How to use the CDL Mastitis Data Converter Tool**

For further information contact dmcp@qmms.co.uk

How to use the Mastitis Pattern Analysis (MPAT) tool

1. Download the tool from dairy.ahdb.org.uk/mastitis-pattern-tool
2. Data needs to be in the correct layout and, for automatic import, in .CSV file format. This can be obtained from:
 - A CDL (common data layer) milk recording file (available from CIS, NMR, QMMS) using converter software developed and made available free of charge by QMMS Ltd. and SUM-IT computing. This can be downloaded at: sum-it.co.uk/CDL_MCP_Converter/CDL_MCP_Converter_Update.exe (see pages 11–13 for full details)
 - Total Vet software from total-vet.co.uk (Use View Advanced Reports; Mastitis Rates – CSV Export)

Note: The Pattern Analysis Tool report will cover the 18 months prior to the date selected when saving the input file.

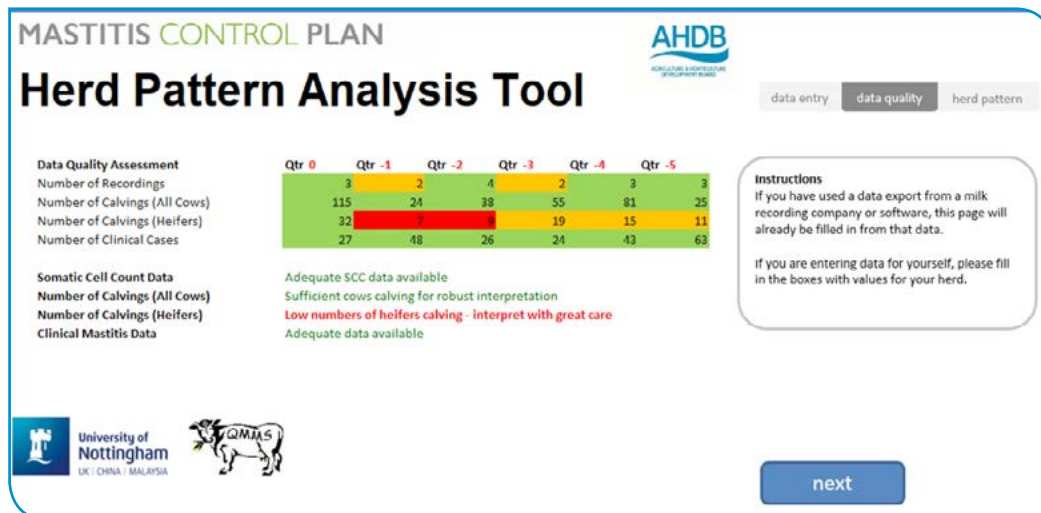
3. Open the Pattern Analysis Tool Excel file.

4. Import data – click the ‘Import CSV’ button and browse to the required file (or type data manually in green boxes). The data screen will then be populated from the .CSV file.

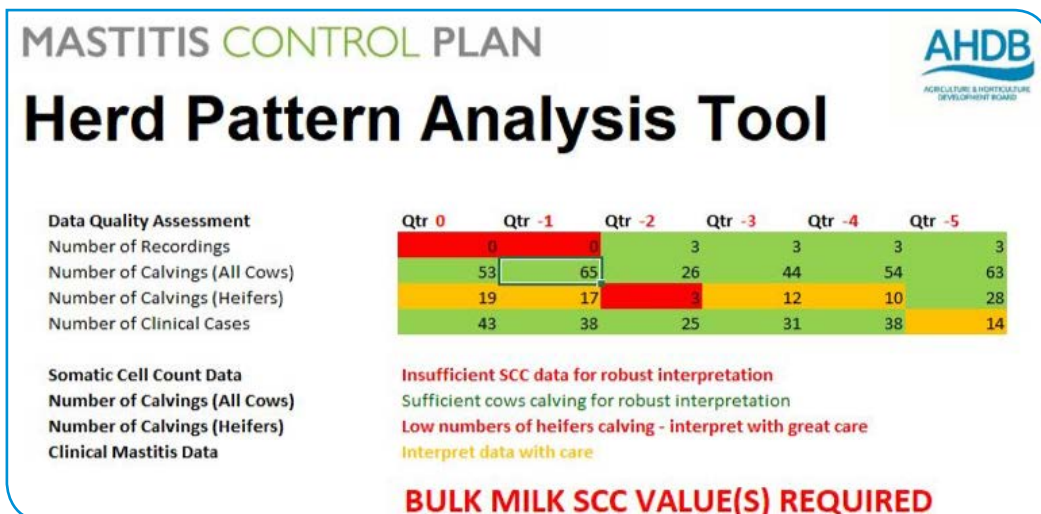
	Qtr 0	Qtr -1	Qtr -2	Qtr -3	Qtr -4	Qtr -5
All cows - lactations 1+						
BMSCC (,000 cells/ml)	225	202	160	128	150	199
% Chronic	9.4	13.5	10	6.3	6.2	15.8
% >200K	17.2	17.7	16.8	11.1	12.8	21.2
Lactation New IMI (%)	6.8	5	6.9	5.9	7.3	6.4
Dry Period New IMI (%)	12	6.7	9.7	12.5	26.5	20.8
'Apparent' Dry Period Cure (%)	77.3	85.7	80	75	87	100
Dry Period Origin CM Rate (in 12)	0.26	0.95	0.56	0.22	0.47	0.91
Lactating Period Origin CM Rate (in 12)	1.84	3.39	1.4	2.05	3.25	3.17
Qrt CMIR (/100 cows/year)	27	48	26	24	43	63
Cow CMIR (/100 cows/year)	27	48	26	24	43	63
Clinical Mastitis Cure Rate (1st Case)	52	61	61	55	54	57
Heifers - lactation 1 only						
Dry period new IMI (%)	6.30	0.00	18.20	7.70	41.70	7.70
Dry Period Origin CM Rate (in 12)	0.13	0.00	0.00	0.00	0.00	0.46

5. Click NEXT.

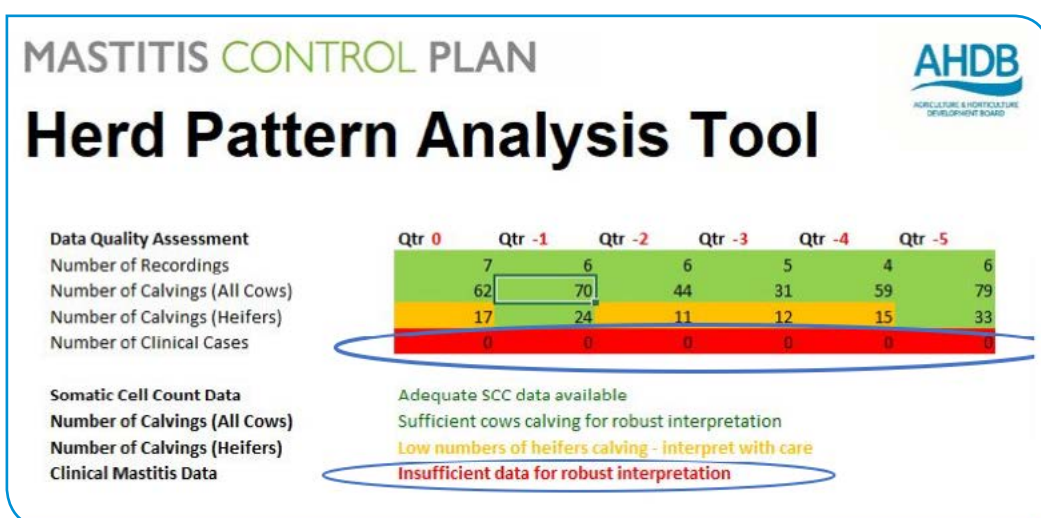
6. Data quality assessment messages will be displayed in red – these give warnings regarding the quality of the data. For example, here is a warning about low numbers of heifers calving.



Here is a warning about insufficient somatic cell counts – 6 months with no recordings and no bulk milk SCC values.



Here is a warning of no clinical data:



7. Click NEXT and the report on the pattern is displayed.

The 'traffic light' system indicates the influence of contagious (cow-to-cow) transmission, dry period environmental origin (new infections from the environment during the dry period) and lactating period environmental origin (new infections from the environment during lactation). Please note that the numbers on the reports have no meaning in themselves, but serve to show the relative importance of different influences.

These influences are reported for the 'current period' (the last 3 months), the 'recent period' (the past 12 months) and a 'historic period' (12–18 months ago) – all dates working back from the date specified when creating the .CSV file.

The involvement of heifers in each period is indicated under 'Specific Heifer Management'.

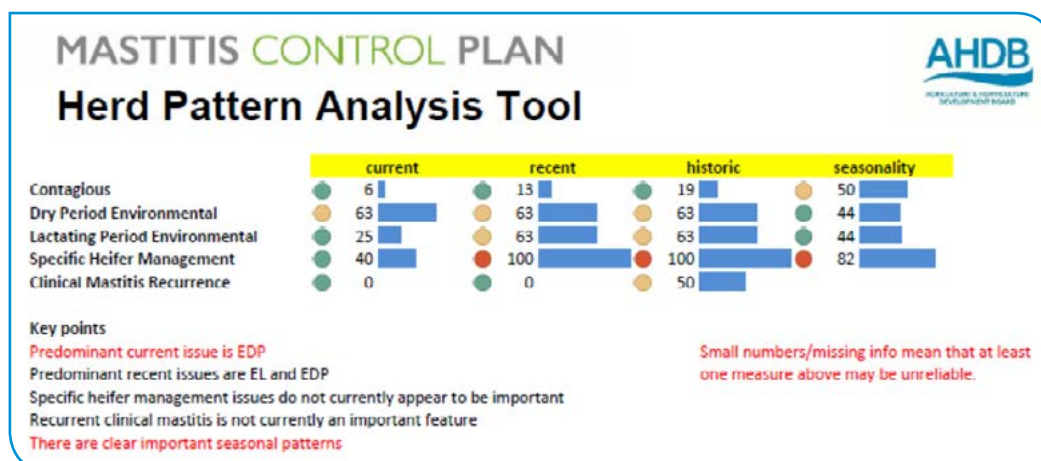
The importance of recurrence of clinical mastitis is also indicated.

The right-hand column shows whether there is a seasonal effect on each of these influences (red indicates a strong seasonal effect).

Key points (below the graphic) highlight the predominant patterns in the current and recent periods.

In the event of an equal score, or very high score, for two or more patterns, the text message below the diagram in the tool will indicate a 'mixed' pattern.

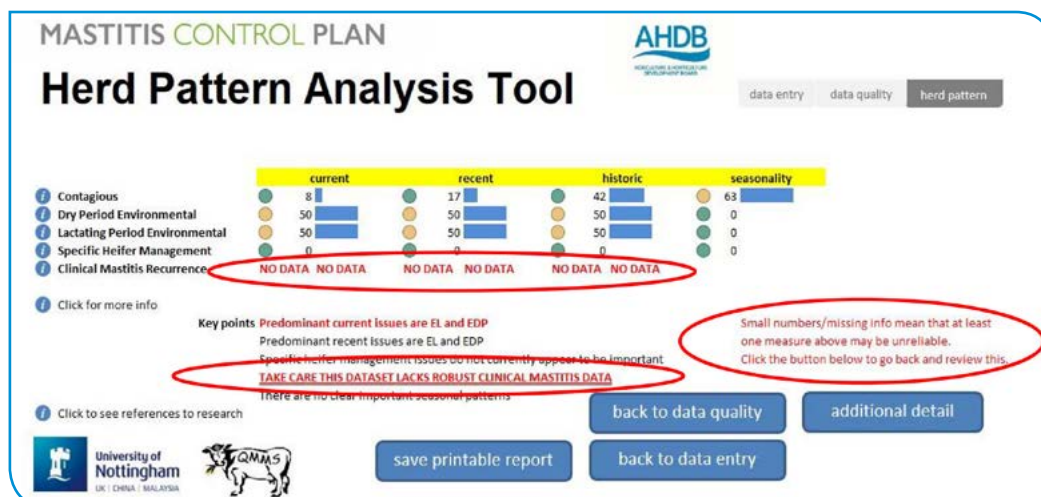
For example, in the report below, although over the last three months (current), the dry cow environment was most influential, in the 'recent' period (last 12 months), and historically (12–18 months ago), environmental effects in the dry period and lactation were equally important.



Remember

Take note of any warnings on the implications of poor data quality.

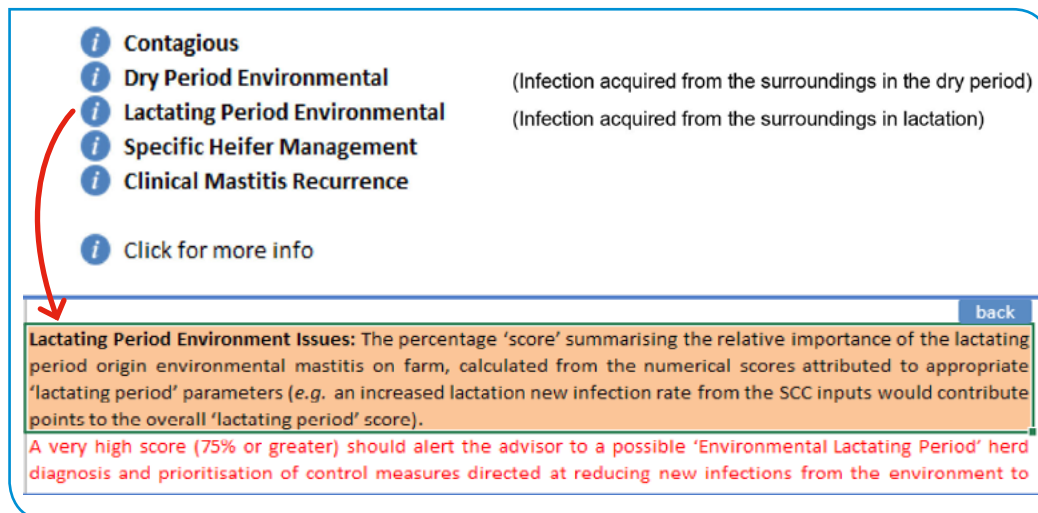
Note: In the absence of clinical data the findings are not reliable.



- Click to save a printable report (pdf) or for additional detail.

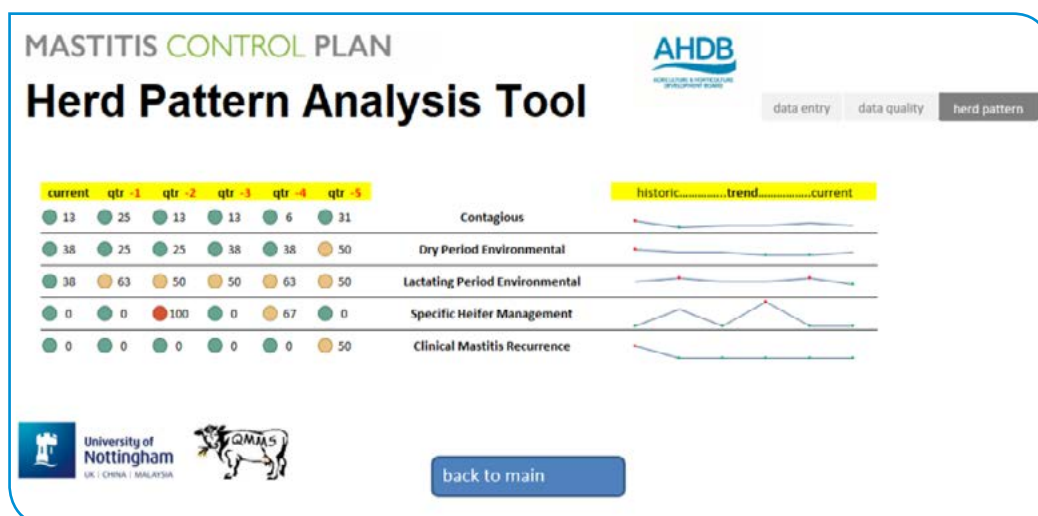


- Further details about the individual patterns can be found by clicking the individual information buttons.

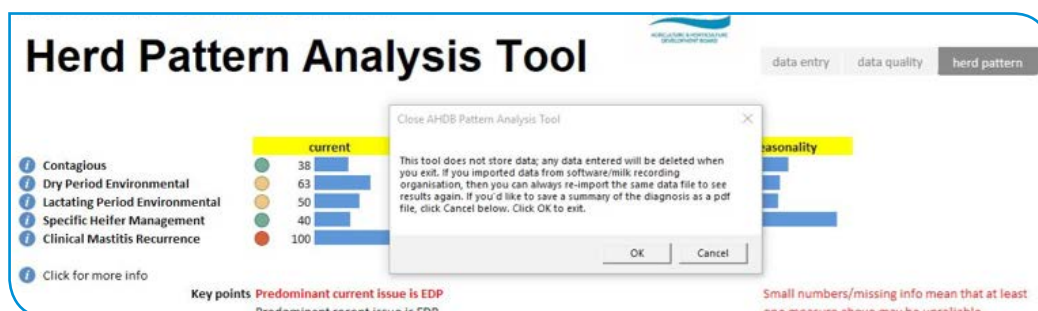


Some suggestions of relevant control measures follow. To return to the diagnosis screen, click BACK button.

- Use the additional detail screen to see the various parameters over time.



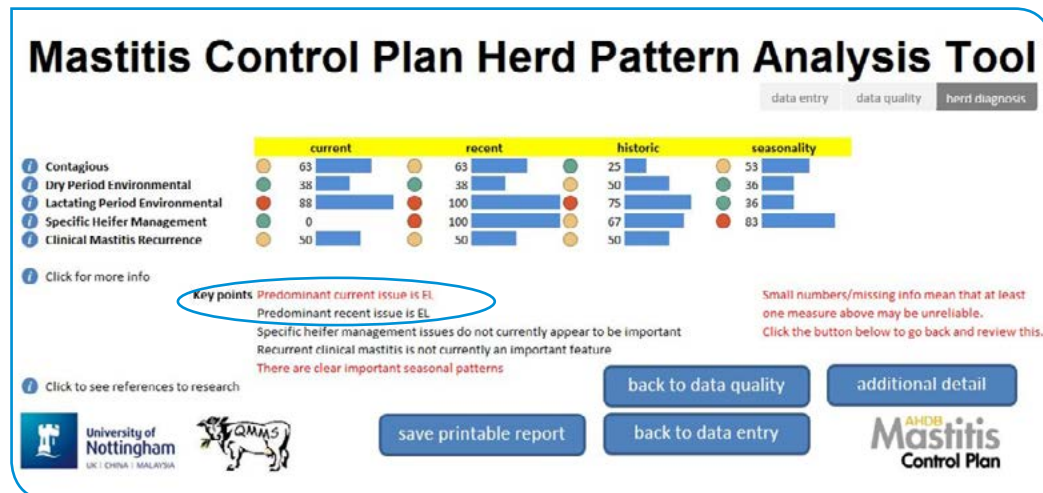
- Close Excel or close the file to exit the tool.



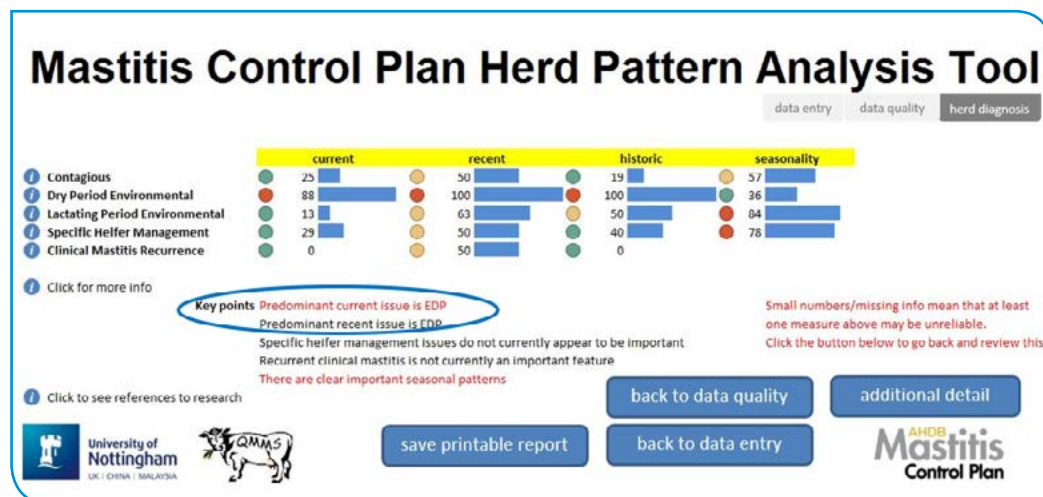
Note: No data can be saved in the tool, but the .CDL file can easily be loaded again.

Example Mastitis Pattern Reports

Herd Diagnosis Consistent Lactating Period Environmental (red lights and high scores)

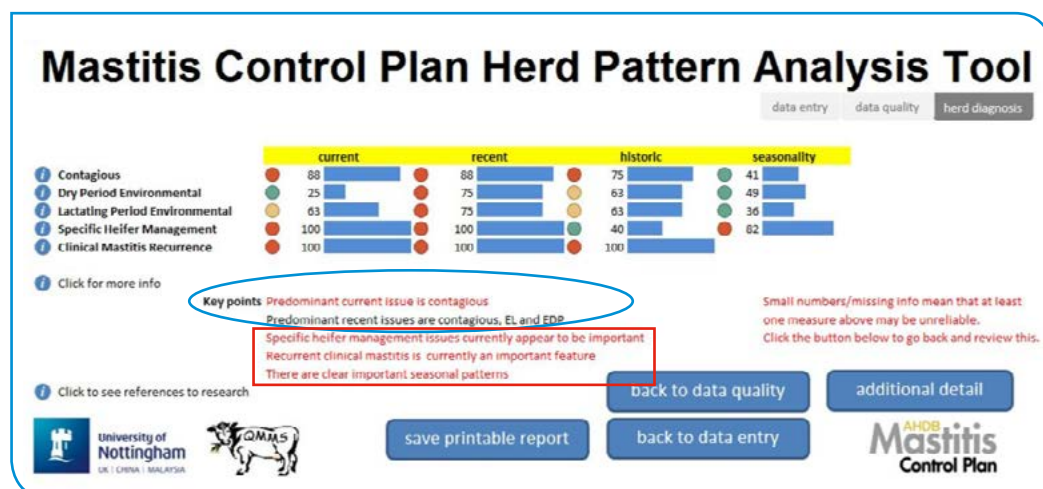


Herd Diagnosis Consistent Environmental Dry Period (red lights and high scores)



Herd Diagnosis Contagious (with recent environmental issues also)

A contagious pattern is indicated currently and in the past. Over the last 12 months ("recent" period) there have also been environmental influences.



The tool also indicates if mastitis in heifers or recurrent mastitis are particular problems, and whether problems are seasonal. In the example above, there have been issues in the past 3 and 12 months with heifers, which are seasonal. Also, recurrence is a longstanding problem (typical of contagious mastitis).

How to obtain a CDL file from your Milk Recording Organisation

CDL files containing milk-recording data are available from the Cattle Information Service (CIS), National Milk Records (NMR) and Quality Milk Management Services (QMMS Ltd.). CDL stands for Common Data Layer – the layout of data is the same in files from all three organisations.

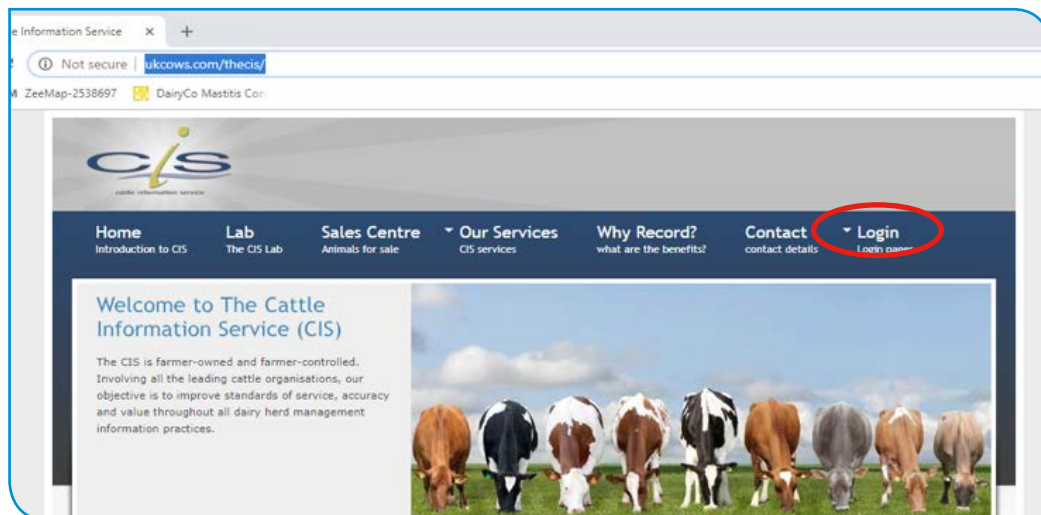
CIS

1. If you are not already registered for data download, contact info@thecis.co.uk or ring 01923 695319. You will receive your herd number and PIN.

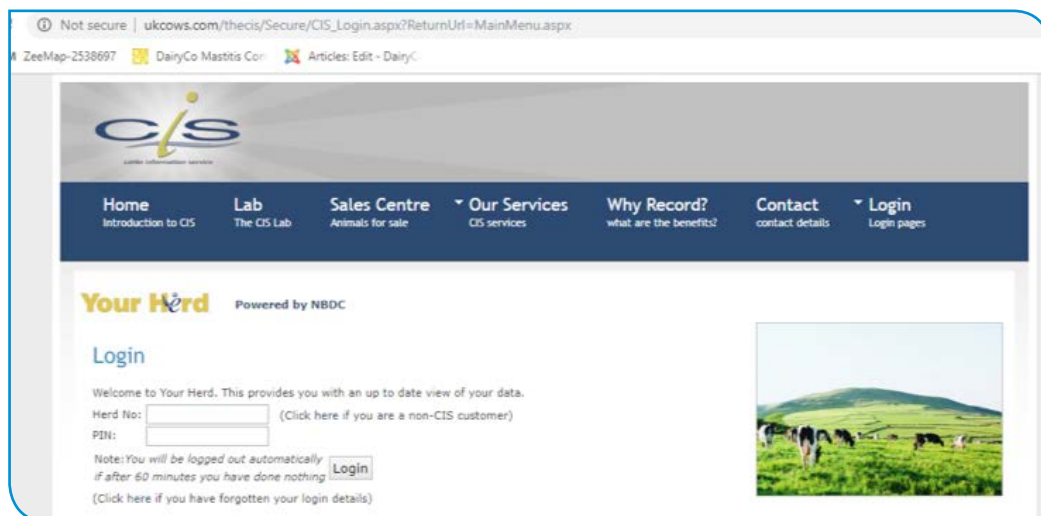
If you need to obtain files on behalf of a third party (advisor login), you will need to complete and return two forms, found at:

- <http://thecis.co.uk/theCIS/Notices/Advisor%20Application%20Form.pdf>
- ukcows.com/thecis/Notices/Data%20Transfer%20Permission%20Form.pdf

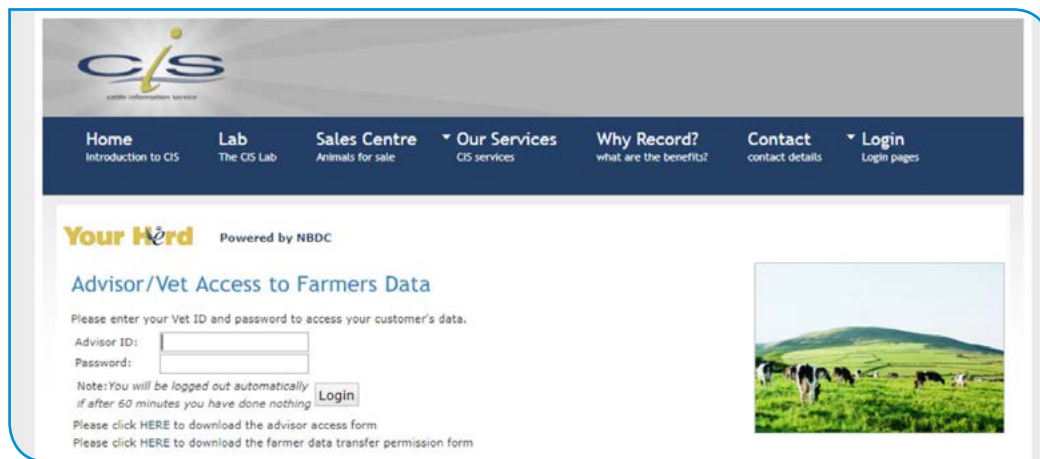
2. Once you have your login details:
 - Go to ukcows.com/thecis/ and hover over Login
 - Select Member Login if logging in as a Member
 - If acting as a Third Party, select Adviser Login



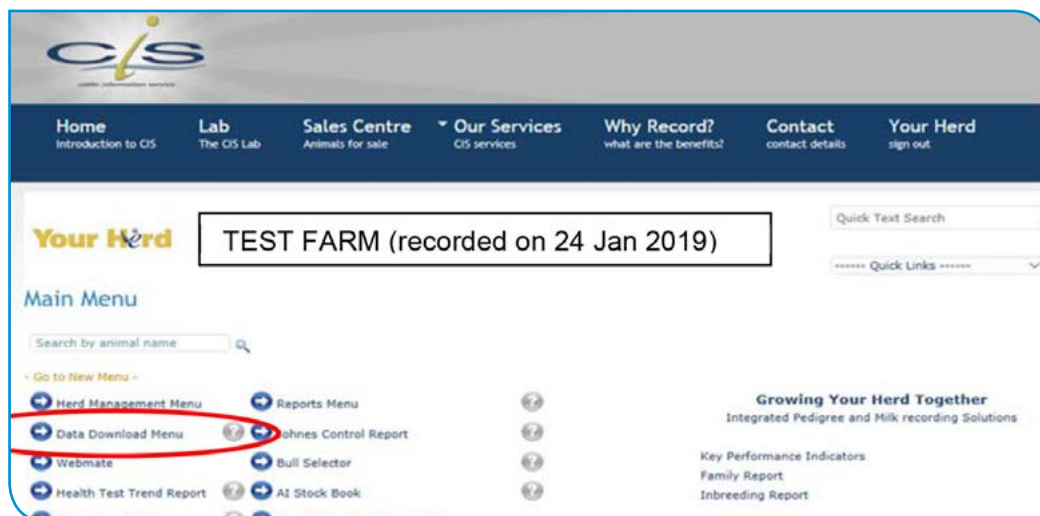
3. Enter herd number and PIN in the Member login page or Adviser login page.



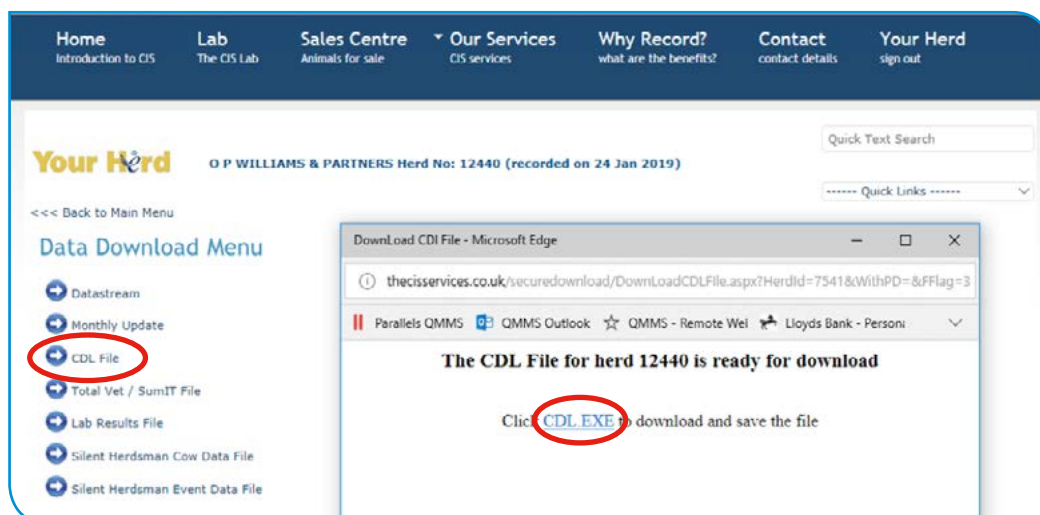
Use the advisor log in if acting as a third party.



4. Once logged in, go to Data Download Menu.



5. Click on 'CDL file' and the DownLoad CDL file window will appear.



6. Click the CDL.EXE link and save the file.

Note: To read the file into the QMMS - SUM-IT cdl converter, the file name must begin with CDL – it must be named CDL*.exe. i.e. CDL.exe or CDL Manor Farm.exe can be read but Manor Farm CDL.exe cannot.

If you wish to email the file, you will need to change the 'extension' from .exe; for example, rename the file CDL.ex (.exe files cannot usually travel by email).

NMR

1. If you are not already registered for data download, contact NMR Software Support on 03330 043043 or email softwaresupport@nmr.co.uk

They will supply your username and password. If you need to obtain data as a third party, you will need to complete and submit a Third Party Authorisation Form, available from the web page nmr.co.uk/data-download

2. Once you have registered, whenever you need a CDL, go to nmr.co.uk/software/data and log in to the Data Download area.
3. Enter your username and password.

The left screenshot shows the NMR Data Download page with a 'Log in to the data download area' button. The right screenshot shows the login form with fields for Username and Password, a LOGIN button, and a link for 'Forgotten password?'.

4. Your latest recording files will appear. If there is any option, select CDL (NOT Datastream). Click on your farm name alongside the 'CDL.exe' option:

The screenshot shows the NMR Data Download page with a 'Log in to the data download area' button.

5. Download and save the file.

Note: To read the file into the QMMS - SUM-IT CDL converter, the file name must begin with CDL – it must be named CDL*.exe. i.e. CDL.exe or CDL Manor Farm.exe can be read but Manor Farm CDL.exe cannot.

Should you wish to email the file, you will need to alter the 'extension' from .exe; for example, rename the file CDL.ex (.exe files cannot usually travel by email).

If you have any questions, contact NMR Software Support on 03330 043043 or email softwaresupport@nmr.co.uk

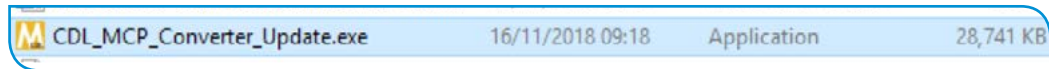
QMMS

Request results in CDL format from milkrecording@qmms.co.uk or ring 01749 871171. As a vet or adviser, please complete and return a Third Party Consent Form, available from qmms.co.uk/documents/forms or by email.

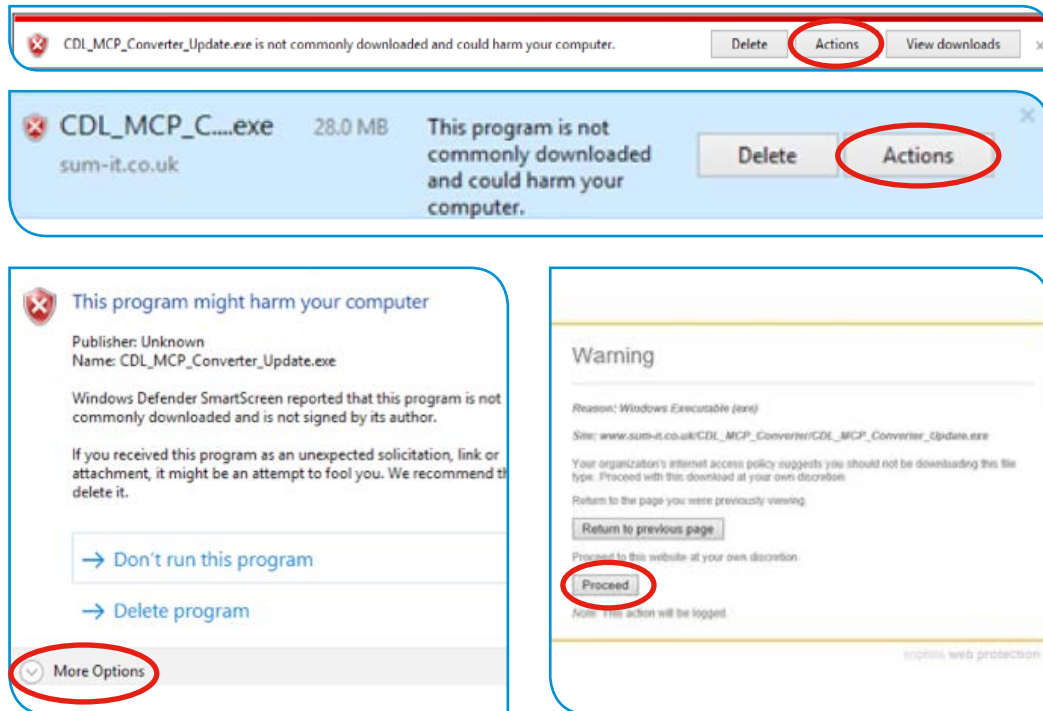
How to install the CDL converter for MPAT

1. Download the file from:
sum-it.co.uk/CDL_MCP_Converter/CDL_MCP_Converter_Update.exe

The file below will appear in your downloads folder.

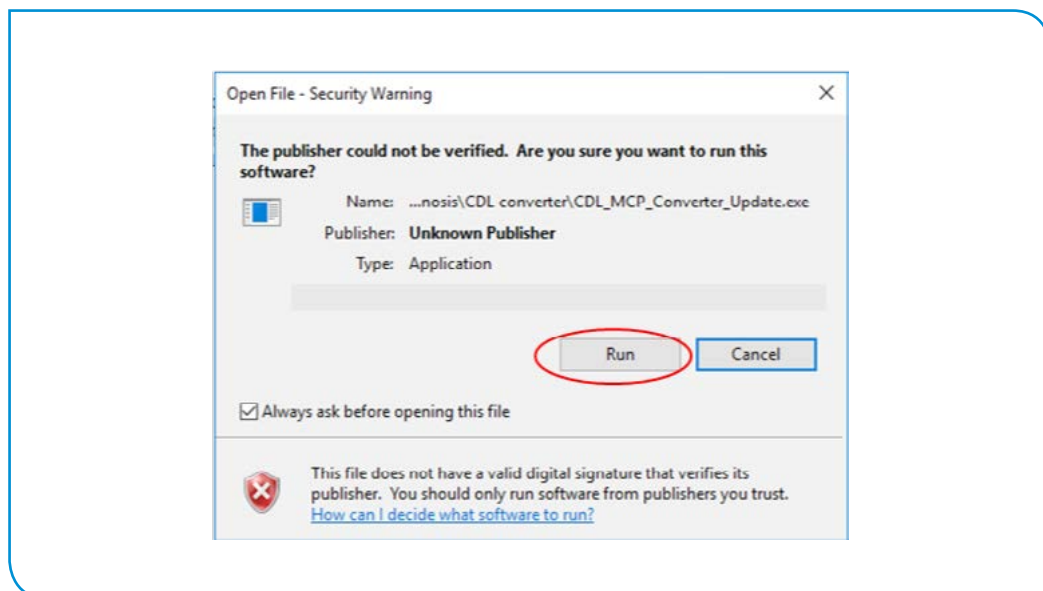


You may receive warning messages similar to the type shown below from your security system, as this is a '.exe' file. Check that the file name is correct and, if so, proceed. In some cases, you may need to contact your System Administrator to install.

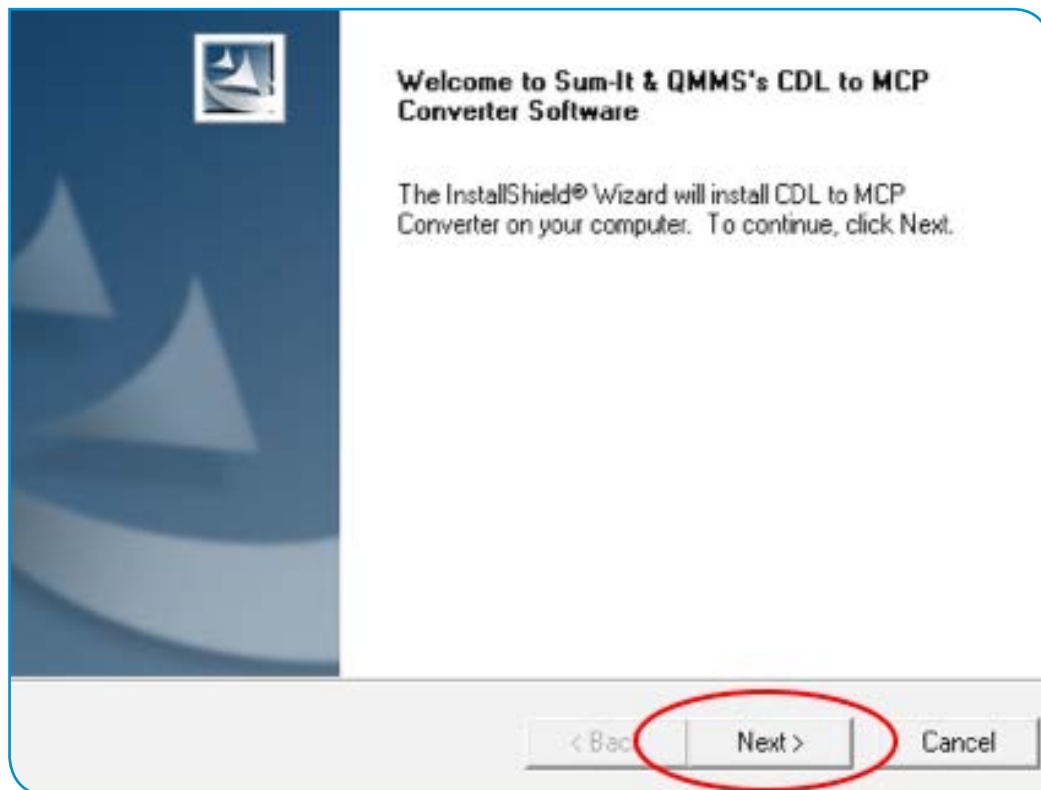


With the above messages, click on Actions, More Options, Run Anyway. If you receive the warning message illustrated above left, click Proceed, heeding the warning.

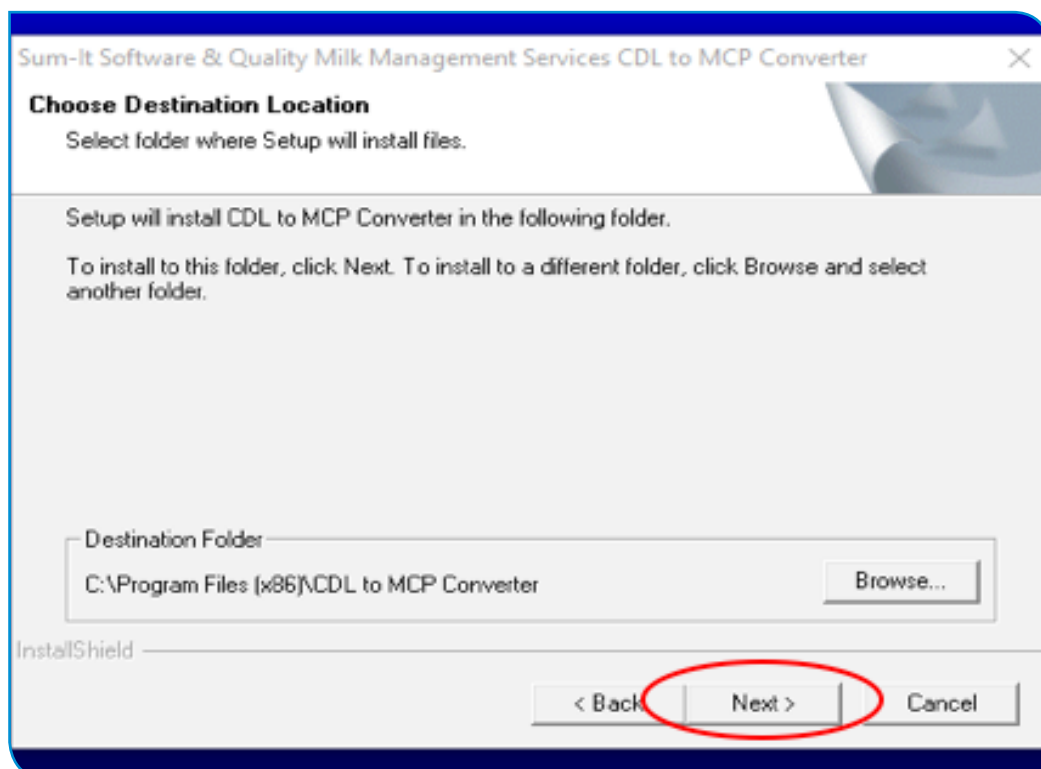
2. Double-click on filename CDL_MCP_Converter_Update.exe
3. Click Run.



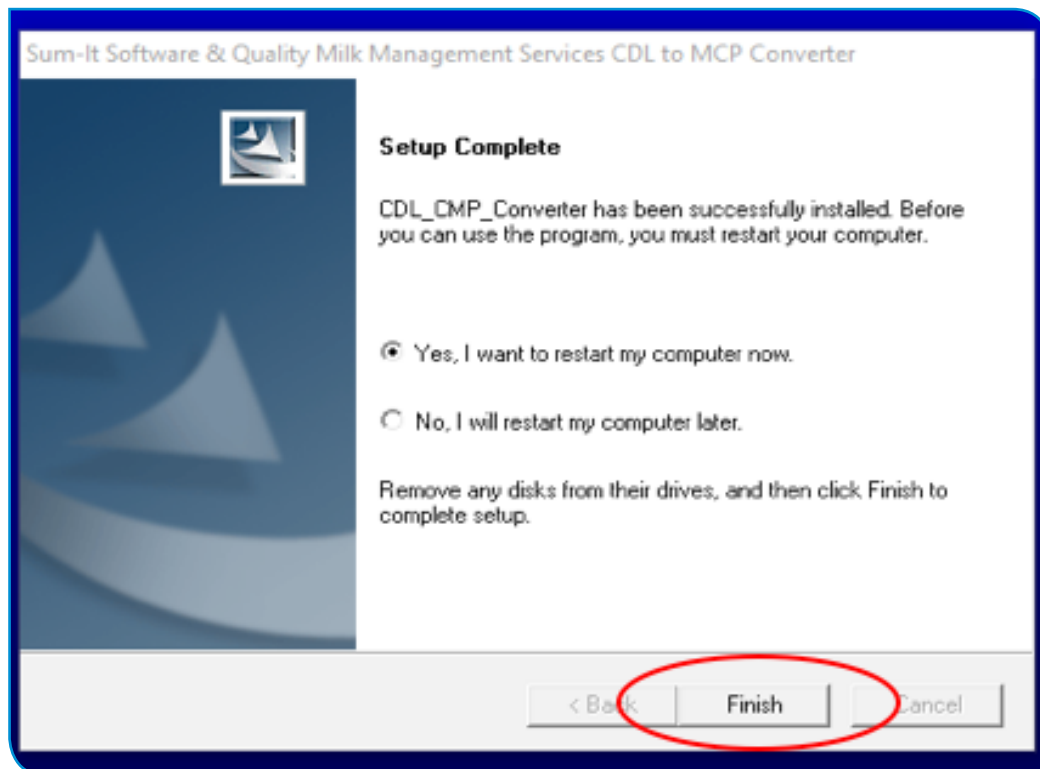
4. Click Yes to making changes to your computer.
5. Click Next to begin installation process.



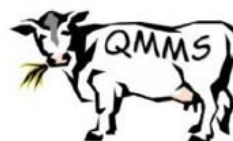
6. Click Next to start installation in the folder indicated.



7. Click finish and restart the computer to complete the installation.



8. The converter icon will appear on your desktop. Click this to start the converter.



This converter has been developed and distributed by QMMS and SUM-IT free of charge for the benefit of the dairy industry.

How to use the CDL Mastitis Data Converter Tool

What this converter tool is used for

This electronic converter tool is designed to take a milk-recording Common Data Layer ('CDL') file and create an output of clinical mastitis and somatic cell count data for use with the AHDB Mastitis Pattern Analysis Tool (dairy.ahdb.org.uk/mastitis-pattern-tool).

This converter has been developed and distributed by QMMS and SUM-IT free of charge for the benefit of the dairy industry.

Specifically, the CDL converter tool creates a *.csv file containing 18 months of clinical mastitis and cell count parameters in a specific format. This *.csv file is then imported into the Pattern Analysis Tool.

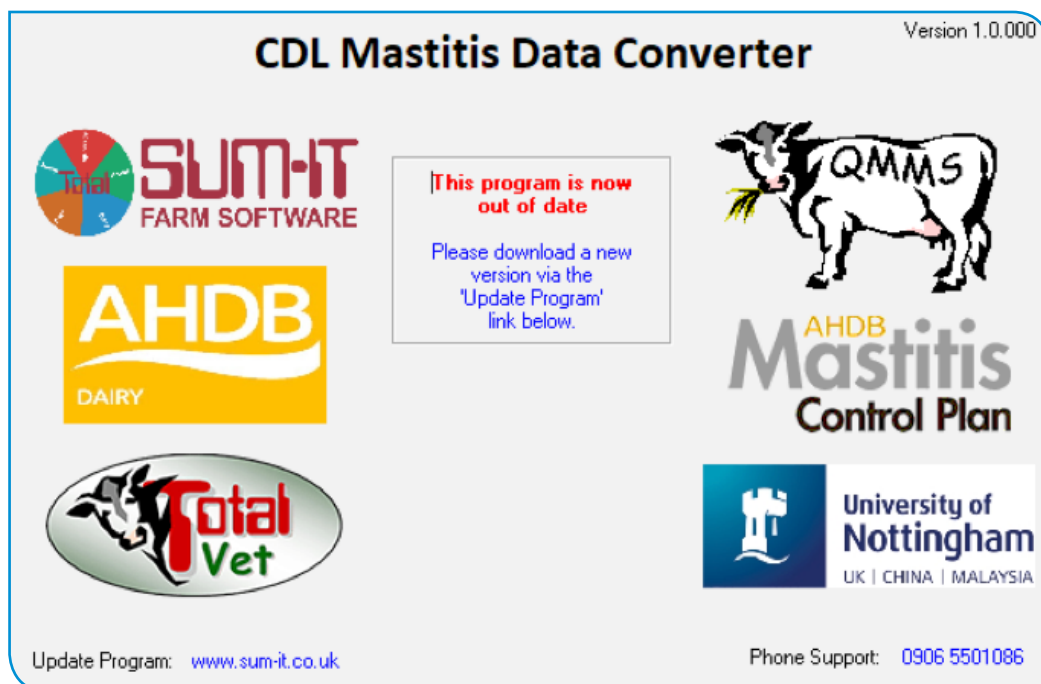
CDL files are available from the Cattle Information Service (CIS), National Milk Records (NMR) and Quality Milk Management Services (QMMS Ltd.)

How to use the CDL converter tool

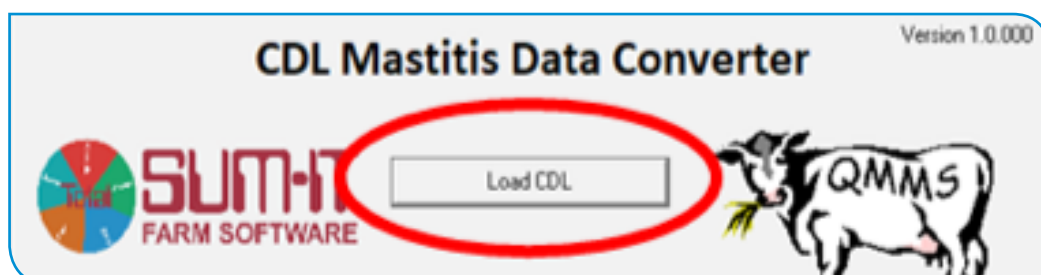
1. Double-click on Desktop icon to start the converter.



Should you receive an update message, follow the instructions.

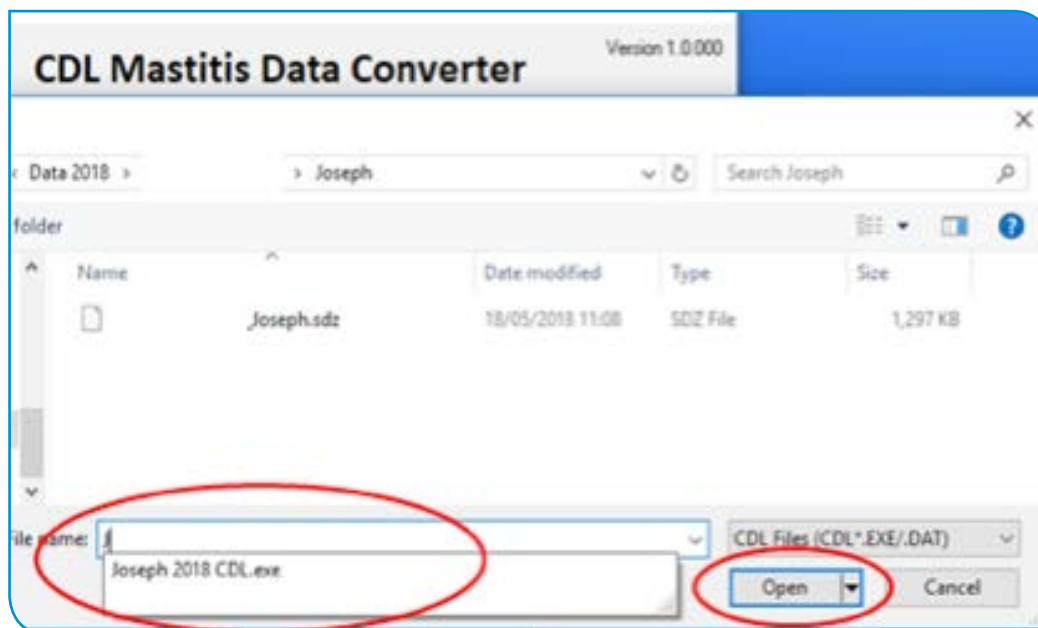


2. Front screen appears. Click 'Load CDL'.



3. Browse to where you have saved the CDL file you wish to convert.

If you have renamed your CDL file, the file name may not appear; in this event, begin typing the name and the CDL file should appear; select to open.



4. Wait until the CDL data is read into the converter – this may take a couple of minutes. When the CDL data is ready, the central panel will contain the herd details.



5. Once the CDL file has been converted, you have the option to merge in ADDITIONAL clinical mastitis data, if appropriate, and if this additional clinical mastitis data is available in a suitable separate file.

Additional clinical mastitis data must be in a file with the name structure below:

mastitis_farm name.csv i.e. the file name must begin with 'mastitis'.

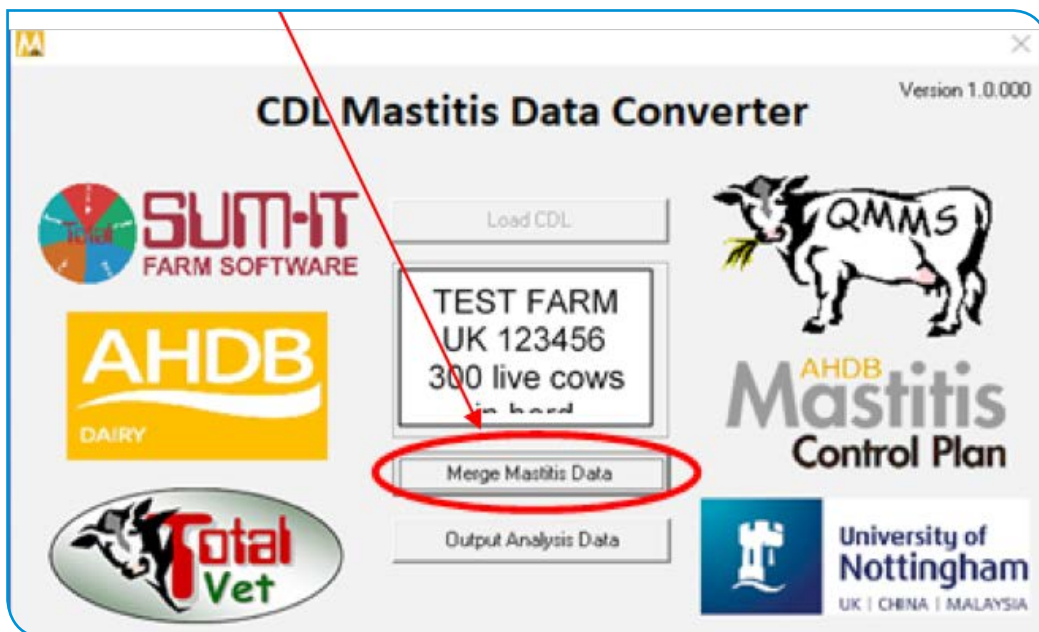
The file can be created in a spreadsheet, e.g. Excel, but, for this purpose, a version must be saved in the file type .csv

The layout of the data must be exactly as shown below, with the first column as the date of the clinical case, followed by the line number of the cow (as this cow exists in the milk-recording CDL file).

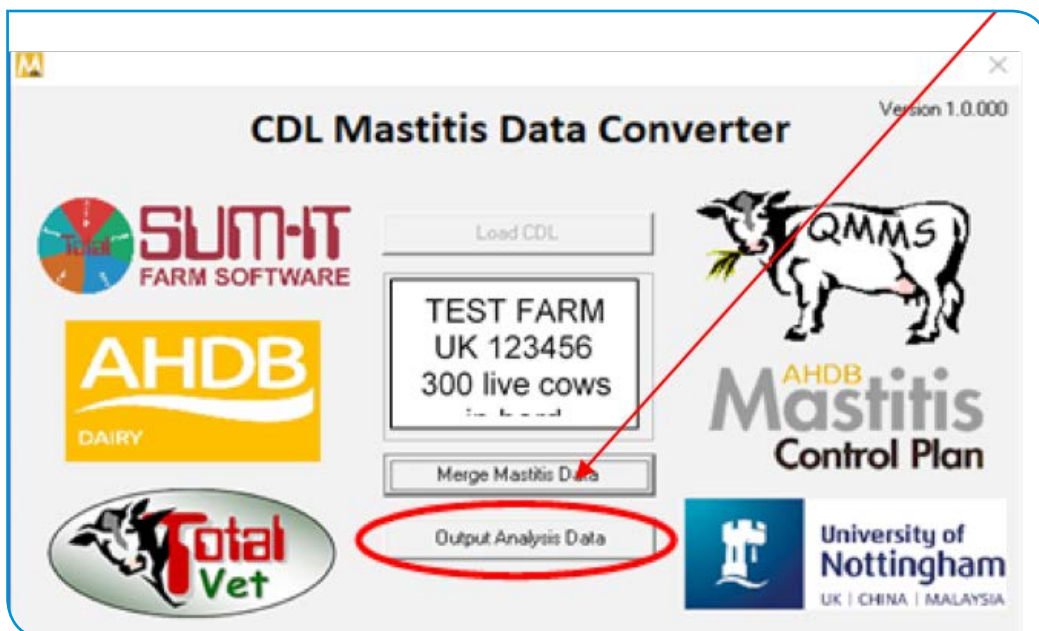
Date	LineNo	Comment	Severity	FRLeft	FRRight	BKLeft	BKRight
15/01/2016	67				1		
16/01/2016	870						1
03/02/2016	562			1			

Date' and 'LineNo' are essential; the following columns are optional, but quarter information is useful. More than 8 columns or other anomalies will lead to a row of data being rejected – a message will indicate if this has happened.

6. Click 'Merge Mastitis Data' and browse to the .csv if required.



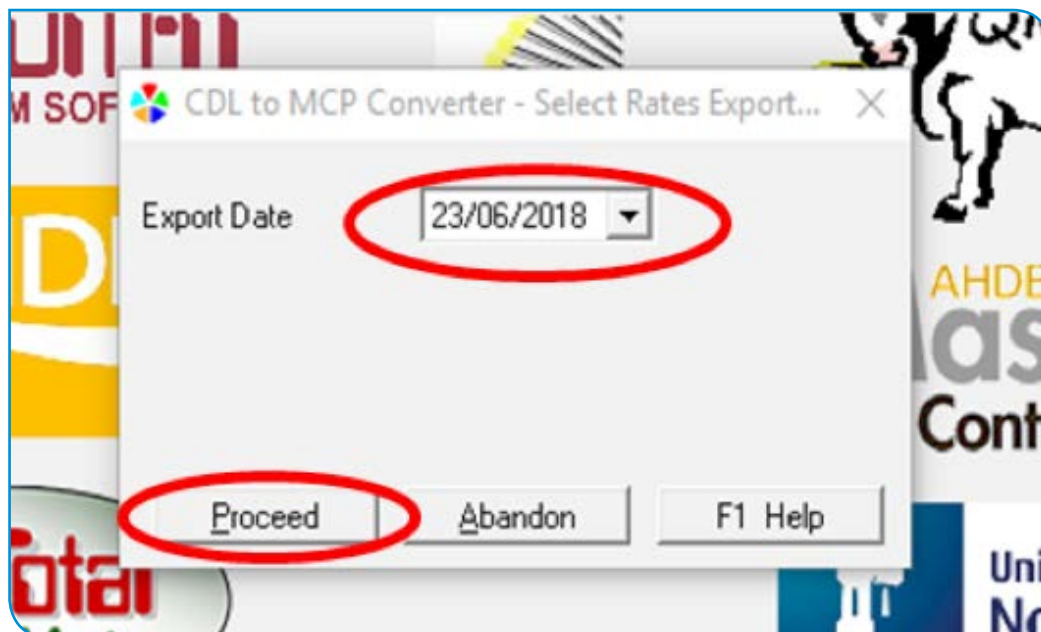
If there is no additional clinical data, click the 'Output Analysis Data' button.



7. Enter an appropriate export date

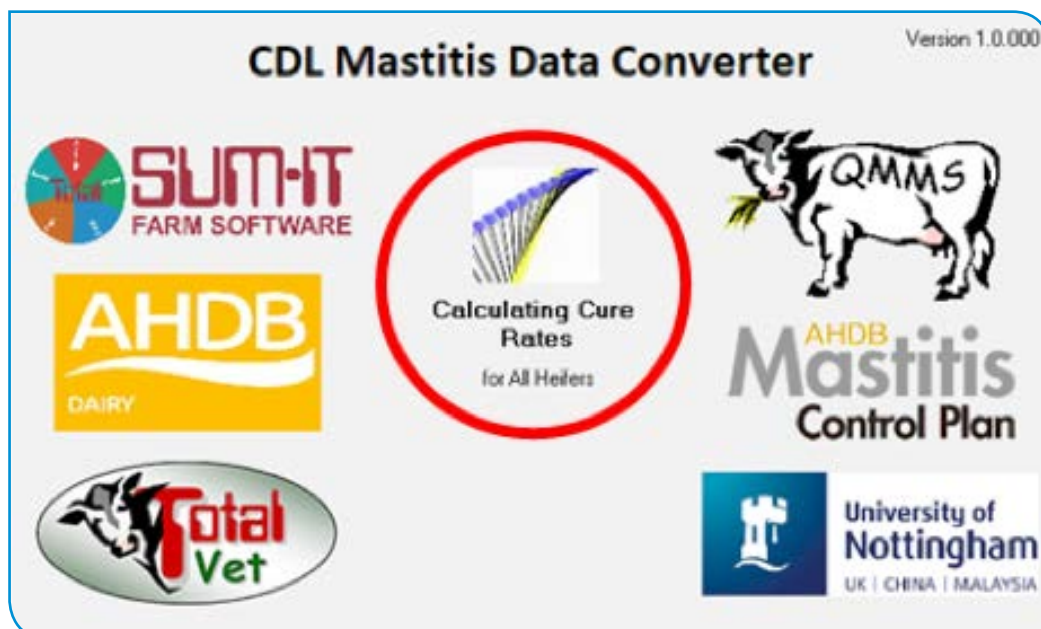
The default date is the date of the last event 'action' recorded in the CDL file. However, the most recent milk-recording date or another date may be more relevant, depending on calving pattern and management issues such as housing, turnout, etc. If the effects of housing, seasonal calving or any other events are of interest, select the export date with these in mind.

The Pattern Analysis Tool will report on the 3 months prior to the date selected (current pattern), the 12 months prior to the date selected (recent pattern), and the period 12–18 months prior to date selected (historic pattern).



8. Click 'Proceed' and enter details of where file should be saved.

Wait until the *.csv output file is calculated – this may take a couple of minutes.



9. Once the *.csv output file is created, the CDL converter tool reverts to the front screen, ready to accept another CDL.

To close the CDL converter tool, click on the X in the top right-hand corner.

Produced for you by:

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