MIR Conception Tool
For Herd Platform users

Key points

The MIR Conception Tool is a decision support tool that helps farmers with mating decisions.

The tool uses MIR data from herd recording to:

- Identify cows that are sub-fertile.
- Determine the cow's chance of conceiving to her first service (drawing upon additional indicators that are combined with the MIR data).
- Identify the best cows to use sexed semen for mating.

The tool is only available for herds tested through MIR enabled milk testing machines. Check with your herd test centre to see if this tool is available to you.

MIR Technology

New herd test equipment has the capacity for MIR analysis. MIR stands for mid-infrared spectroscopy, which involves passing a beam of light through a milk sample to provide data in the form of spectra (absorbance at specific wavelengths). Absorbance spectra are unique to the sample and are used to indicate levels of fat and protein in the milk.

Researchers have matched this MIR data with conception data to develop a model that indicates a cow's likelihood of conceiving to the first service. A total of 30,355 spectral and milk production records from 15,456 cows in 50 dairy herds were used.

The researchers were able to identify with a high degree of accuracy, those cows who were <u>unlikely</u> to conceive to the next service.

MIR Conception Tool

MIR Conception Tool helps herd managers determine the most appropriate type of semen (sexed, conventional or beef) for a particular cow.

It is designed to use at the time of insemination to optimise the outcome of each mating and to ensure that expensive semen does not get wasted on sub-fertile cows.

A series of "common sense" metrics have been added to the MIR Conception Probability rating to allow the user

to make a considered judgement regarding what type of semen to use on a particular cow.

The metrics in the tool are:

- MIR Conception Probability – the assessment of the likelihood to conceive to the first service based on the MIR data adjusted for a small number of fixed effects

- Days Since Calving – the user can define the days since calving range that in their experience equates to the strongest likelihood of conceiving.

- Insemination History – the ratio of inseminations to conceptions, e.g. 3 inseminations resulting in 2 pregnancies would achieve a rating of 66%. (only available where insemination and pregnancy data is provided to your herd test centre).

- Age (months): the user can choose the age range that in their experience equates to the strongest likelihood of conceiving.

- No Antibiotic Treatment - Cows that have health issues requiring antibiotic treatment experience reduce conception rates.

The report allocates a tick or a cross based on meeting or not meeting the criteria of the metric (see the report below).

All ⌄ records per page   Search:

Cow ID	Breed	BPI	HWI	Daughter Fertility ABV	PI	MIR Conception Probability	Days Since Calving	Insemination Probability	Age	NO Antibotic Treatment
526	FFFF	287	334	111	107	✗	✓	✗	✓	✓
164	FFFF	112	193	110	98	✓	✓	✓	✓	✓
310	FFFF	112	136	107	95	✓	✓	✓	✓	✓
652	FFFF	340	385	112	102	✓	✓	✗	✓	✓
148	FFFF	82	131	106	105	✓	✓	✓	✓	✓
766	FFFF	51	98	106	100	✓	✓	✓	✗	✓
200	FFFF	66	100	102	96	✗	✓	✗	✓	✓
515	FFFF	294	342	113	104	✓	✓	✓	✓	✓

- Dashboard
- My Animals
- Animal Search
- Herd Test Summary
- Dashboard Summary
- Lactations
- Cow Test Days
- Benchmarking
- Selective Dry Cow Tool
- MIR Conception
- Reports / Files
- Fertility Focus Report
- Mastitis Focus Report
- Genetic Futures Report
- Genetic Progress Report
- ABVs

Access

The MIR Conception tool is available to customers of participating herd test centres whose equipment has MIR technology.

The tool is accessed via HerdPlatform which is available on DataVat.com.au.

Report

MIR Conception Tool provides a single, sortable report that can be printed or shared with third parties such as staff, inseminators or vets (CSV, Excel and pdf formats).

Getting started

- Check that your herd test centre offers HerdPlatform.
- If your herd doesn't already have a DataVat login, set one up (see over page).
- Login to datavat.com.au
- Click on the HerdPlatform tab
- Click on MIR Conception Tool in the menu on the left of the screen

More info

- DataGene Fact Sheet: About DataVat
- DataGene Fact Sheet: Herd Platform

Contact us

DataGene
Ph 1800 841 848 E: abv@datagene.com.au
www.datagene.com.au December 2022

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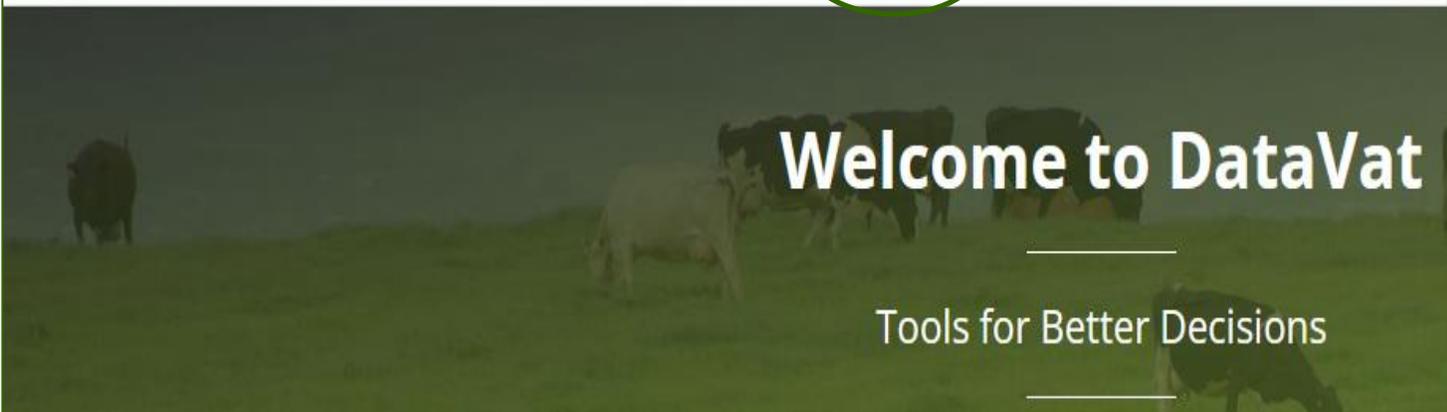
Datavat.com.au for dairy herds
Steps to setting up a DataVat login

1. Visit www.datavat.com.au
2. Click on the Sign Up button to create an account.
3. You'll need to enter your National Herd ID or Herd Shire number.
4. Optional: If you wish to grant permission access to staff or trusted advisers, use the Authorisations tool to share your data with any other person with a DataVat registration (Access via the Reports & Tools tab at the top of the screen).

Watch quick video: Getting started on DataVat

Contact us
DataGene
Ph 1800 841 848 E: abv@datagene.com.au
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