In-silico model of lifetime trajectories of dairy COWS

Commonly used acronym: INSILICOW
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SCOPE OF THE METHOD

<table>
<thead>
<tr>
<th>The Method relates to</th>
<th>Animal health</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Method is situated in</td>
<td>Basic Research, Translational - Applied Research</td>
</tr>
<tr>
<td>Type of method</td>
<td>In silico</td>
</tr>
<tr>
<td>This method makes use of</td>
<td>Animal derived cells / tissues / organs</td>
</tr>
</tbody>
</table>

DESCRIPTION

Method keywords
dairy cow
white-box model
lifetime trajectory
reproduction
milk yield
modelling
simulation

Scientific area keywords

Animal science
statistical modelling
Method description

This white-box model uses energy partitioning throughout the lifetime of dairy animals (growth, lactation, gestation, ...) to simulate reproduction performance, lifetime length, production performance etc. The method is developed by dr. Olivier Martin at INRAE, MoSAR, Paris.

Lab equipment

You need the model codes to work with them.

Method status

History of use
Published in peer reviewed journal

PROS, CONS & FUTURE POTENTIAL

Advantages

Replaces costly animal trials,
Accurate outcomes if you put the right parameters in.

Challenges

Parameter choice and identifiability

Modifications

Further extensions and improvements are in constant course of development

Future & Other applications

Simulation studies in dairy cows, for example for studying resilience and perturbations in milk yield, or reproduction progesterone profiles

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

References


Associated documents

Links

Validation of a novel milk progesterone-based tool to monitor luteolysis in dai...

PARTNERS AND COLLABORATIONS

Organisation
Name of the organisation KU Leuven
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Geographical Area Flemish Region
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