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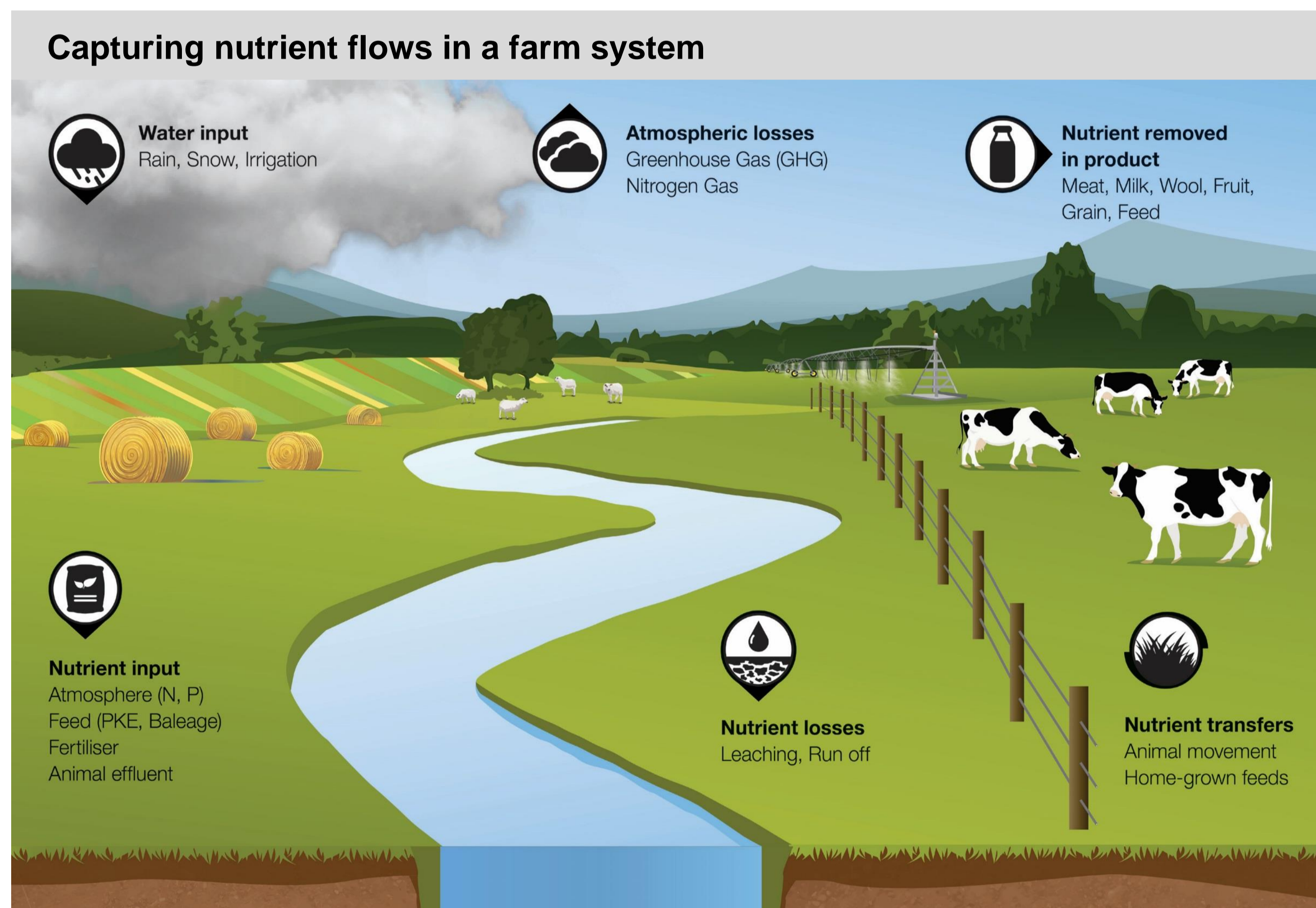
OVERSEER[®] Nutrient Budgets – New Zealand's leading nutrient management tool

INTRODUCTION

- **OVERSEER is a unique agricultural nutrient management tool.**
- **OVERSEER supports optimal nutrient use on farm for increased profitability and managing environmental losses.**
- **OVERSEER is used in New Zealand by many Regional Councils to help manage agricultural nutrient losses and protect water quality.**

What is OVERSEER?

OVERSEER calculates a farm's nutrient budget on an annual basis. From this information reports are prepared so that nutrient and lime recommendations, nutrient use efficiency and potential losses to the wider environment can be assessed. Environmental losses can be benchmarked and monitored over time.



Farm systems captured:

- Dairy cows and dairy goat farms
- Sheep, beef and deer drystock farms
- Seed, grain and some vegetable crops
- Kiwifruit, apples, grapes, avocados and peach crops

OVERSEER models seven nutrients:

- Nitrogen
- Calcium
- Phosphorus
- Magnesium
- Potassium
- Sodium
- Sulphur

OVERSEER also models greenhouse gas emissions and provides reporting to show your farm's greenhouse gas footprint.

Model Scope:

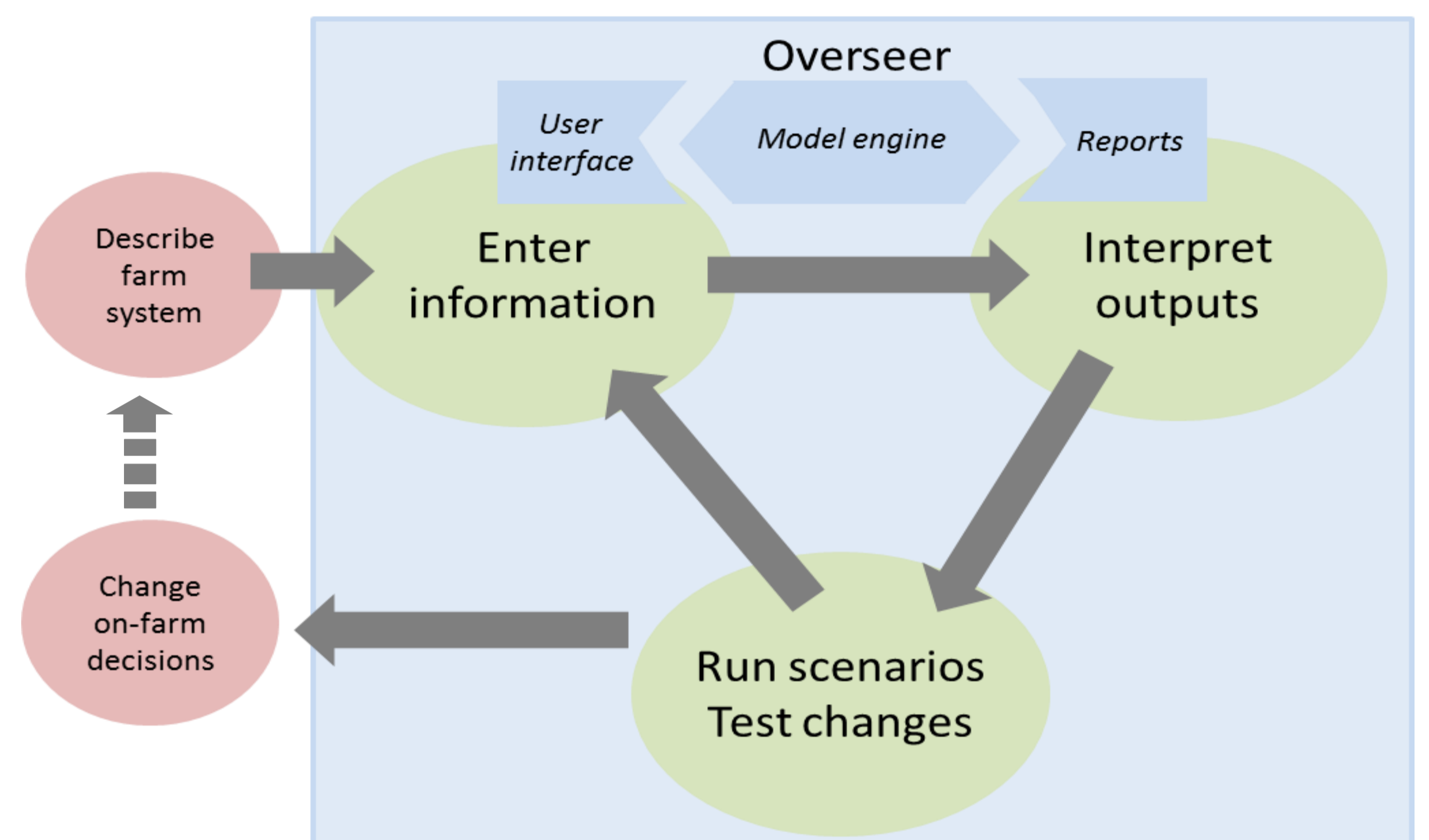
- OVERSEER models nutrient flows to the farm boundary (the farm gate) and to the bottom of the root zone (60-120 cm).
- The nutrient budget is calculated using long-term (30y) average climate data and assumes farm management and production are constant for the site-specific characteristics.
- OVERSEER is a strategic model and is not spatially explicit and does not model specific critical source areas on a farm.

How does OVERSEER work?

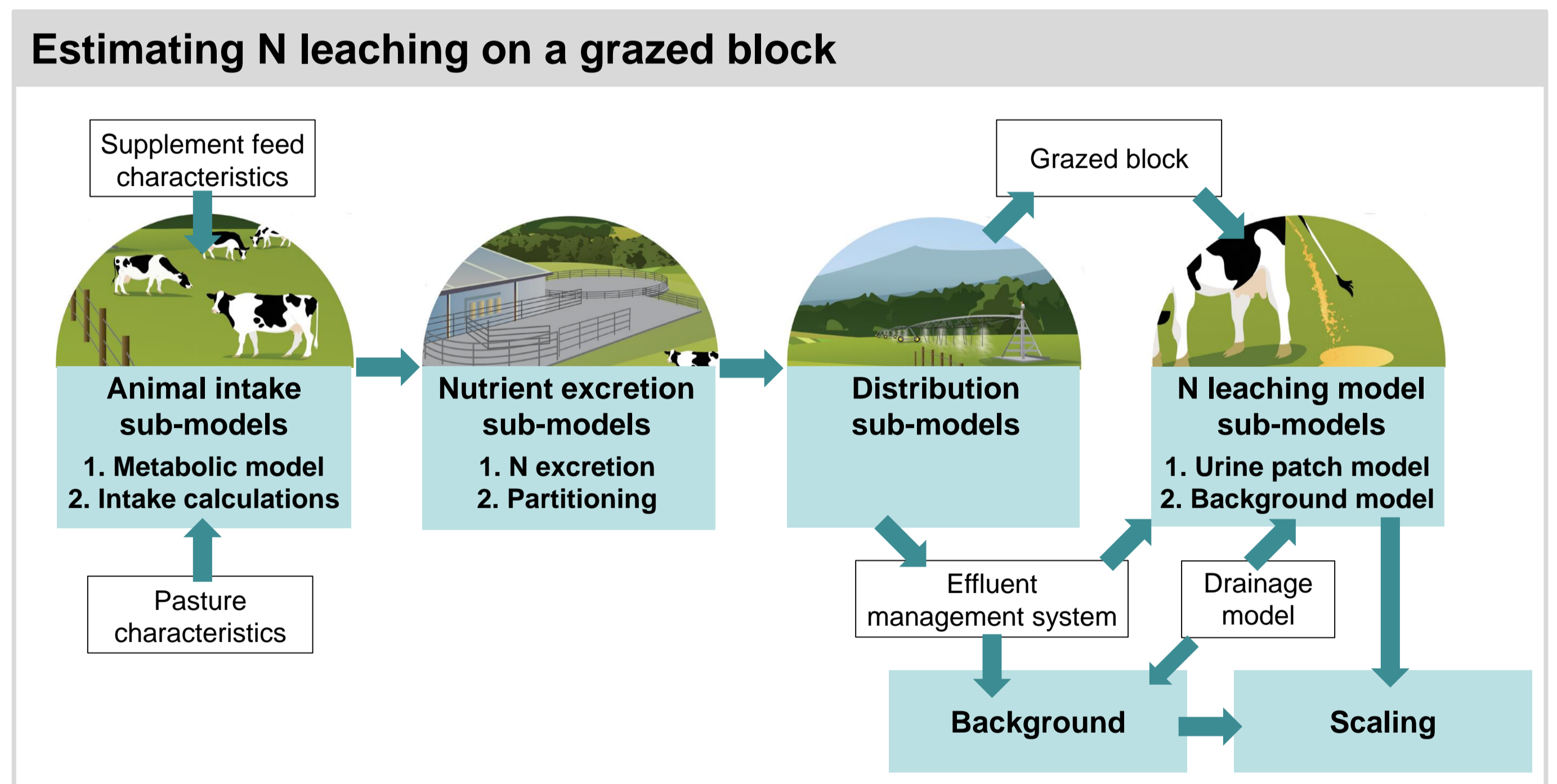
OVERSEER uses a wide range of inputs, including:

- Bio-physical attributes (e.g. climate, soil and plant information).
- Production data (e.g. animal numbers and types)
- Management decisions and events in the farm calendar (e.g. feeding animals, applying fertiliser, and ploughing a paddock).

Information can be entered to describe the farm as it is, or to describe a potential scenario.



The OVERSEER engine is a series of over 20 sub-models based on a combination of science principles and assumptions that are simplified to describe nutrient use and movement.



Model outputs are evaluated and calibrated based on measurements made in the field that capture the wide range of farm system attributes around New Zealand.

SUMMARY

- **OVERSEER estimates nutrient movements and greenhouse gas emissions for a farm.**
- **OVERSEER enables the New Zealand agricultural industry to meet the growing pressure on managing nutrient losses from land.**
- **OVERSEER has a long history of collaboration between the New Zealand government, the fertiliser industry and agricultural scientists.**
- **It is critical that the model is based on good quality data, to ensure results are generated for use in a regulatory environment.**

We wish to acknowledge Overseer Limited for the support of attending the conference.

Find out more

Visit: www.overseer.org.nz

Email: info@overseer.org.nz