PRACTICE ABSTRACT: 24

Sustainable PARasite Control in Grazing Ruminants

Creating *refugia* by targeted treatment of first season grazing cattle.

Introduction

Refugia is the proportion of the parasite population that is not exposed to antiparasitic treatment, and includes:

- Parasites on pastures
- Parasites in untreated animals

Objectives:

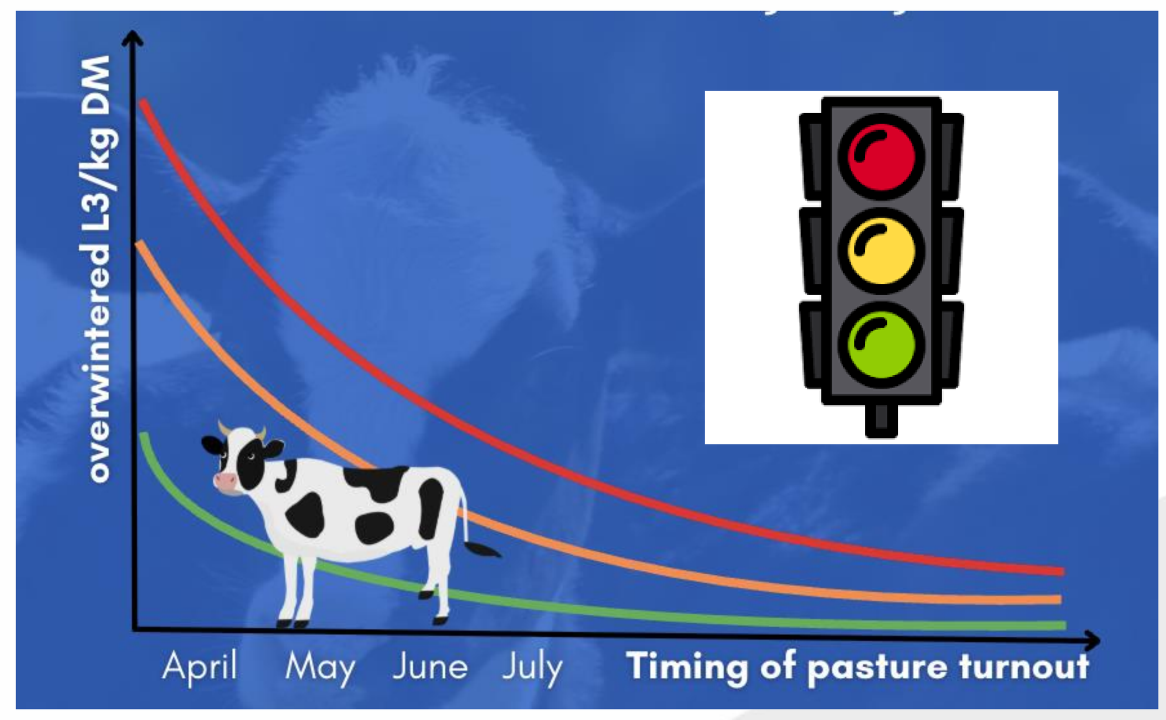
- Create *refugia* by implementing **targeted anthelmintic treatment** in first grazing season cattle

How? Treatment decision based on a non-invasive decision support tool **(Wormtool)**

- **Risk assessment** of the pasture infection level based on a short questionnaire before turnout:
  - Grazing management in previous year?
  - Anthelmintic treatments in previous year?
- **Treatment advice** based on risk profile:
  - Low risk: no treatment or treatment with anthelmintic without persistent efficacy
  - Medium risk: treatment(s) with anthelmintic with persistent efficacy
  - High risk: intensive treatment, e.g. with long-acting anthelmintic
  - More specific treatment options within each risk category to be discussed with veterinarian
  - If the grazing management is different from last year, adapt treatment advice to new situation

Benefits

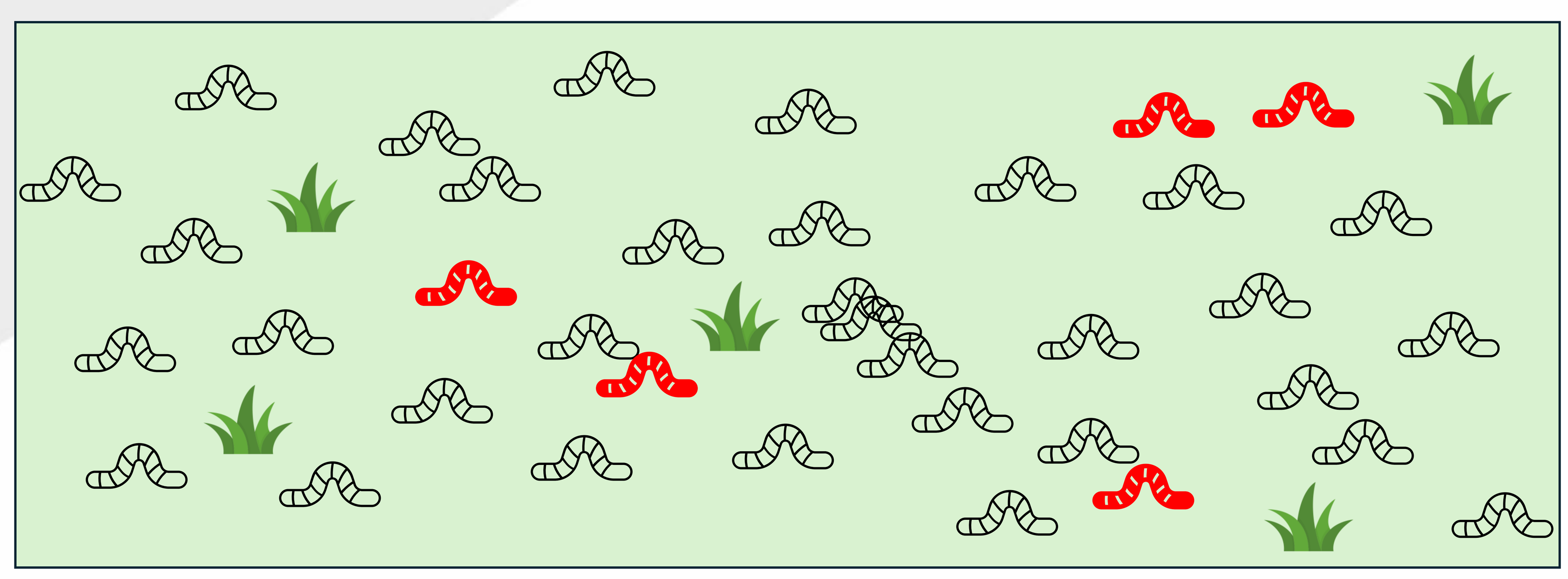
- 'Blind' treatments replaced by informed treatment decisions, reduced and/or more effective use of wormers
- Creation of a worm population *in refugia* that escapes selection pressure for anthelmintic resistance
- Potential delay of anthelmintic resistance
- Reduced environmental contamination with drug residues



Risk assessment of pasture infection level at turnout

Targeted treatments

Susceptible worms
Resistant worms



Wormtool facilitates targeted anthelmintic treatment of your heifers. Reduced treatment frequency will increase the proportion of the worm population that is not exposed to the drugs and therefore will not be under selection pressure for anthelmintic resistance (i.e. worms *in refugia*)

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