

Targeted selective treatment at housing with injectable eprinomectin in French dairy cattle using a validated decision support system (TRI)

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Objectives

Anthelmintic resistance (AR) is a reality across Europe that threatens the sustainability of the cattle industry. Until recently, cattle farms were not considered at risk for AR but several reports have confirmed its presence in many countries. To limit the development of AR, it is necessary to rethink our views on strategic “systematic” program. Targeted selective treatments (TST) are potentially good options but their adoption in cattle herds has been limited due to low level of awareness, fear of economic losses, and difficulty to implement them. To encourage acceptance of TST in French dairy cattle herds, a decision support system (TRI) based on validated criteria was developed that gives farmers access through their veterinarian to a list of dairy cattle to be treated at housing with eprinomectin injectable (Eprecis® 20 mg/mL).

Material and methods

In participating dairy herd and with farmer’s consent, the following data is collected for each lactating cows: ID, individual milk production, days in milk (DIM) and parity. Key findings from a previous study in 120 French dairy herds were used to generate the TRI list (Ravinet *et al.*, 2018). Specifically, best responding cows were found to had calved during the grazing season (less than 200 DIM at the time of treatment) and to have a low-to-medium peak performance for their class of parity. Based on the farm data and these two individual criteria, a list is generated indicating the dairy cows eligible for treatment and the economic impact of different interventions (from systematic deworming to selective deworming).

Results

Since its launch in 2021, the TRI initiative has been adopted by more than 1 000 dairy herds and contributed to decrease the use of eprinomectin by 75% while increasing farmer’s revenue by 30%.

Conclusions

Refinement of the use of anthelmintics is possible using validated scheme and active collaboration across the industry. In the future, this dedicated decision support system (TRI) will be automated and aim to indicate the level of environmental exposure to endectocides.