

# Benefits of parasite control in grazing livestock - ?



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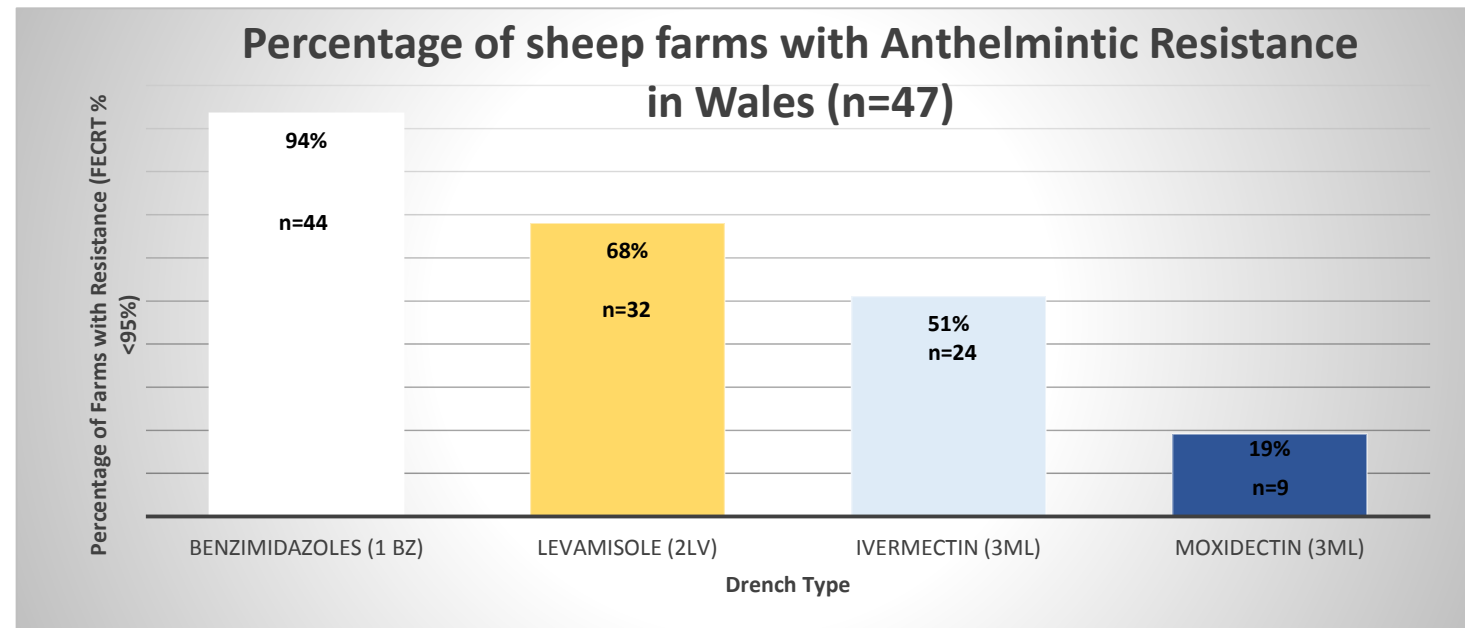
# Gut parasites impact livestock productivity



Photos: Gerald Coles

Chemical control is unsustainable due to:

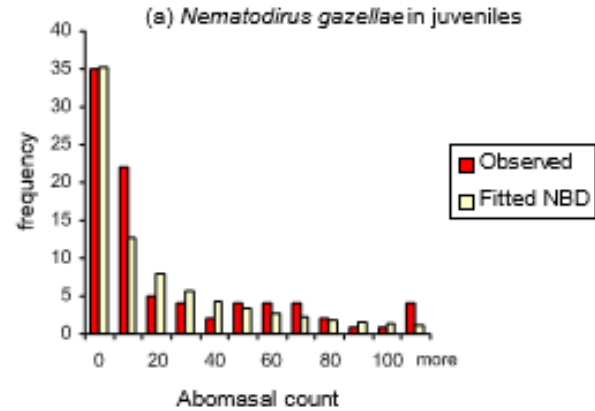
- Expense
- Environmental impacts
- Drug resistance



WAARD project 2015, University of Bristol / Techion Inc.



# Targeted parasite treatment delays drug resistance



Slowing antiparasitic drug resistance in LMIC is crucial to the sustainability of livestock production:

- Avoid importing resistant worms
- Apply targeted treatment





# Targeted treatment in LMIC



# Applying targeted treatment in Botswana

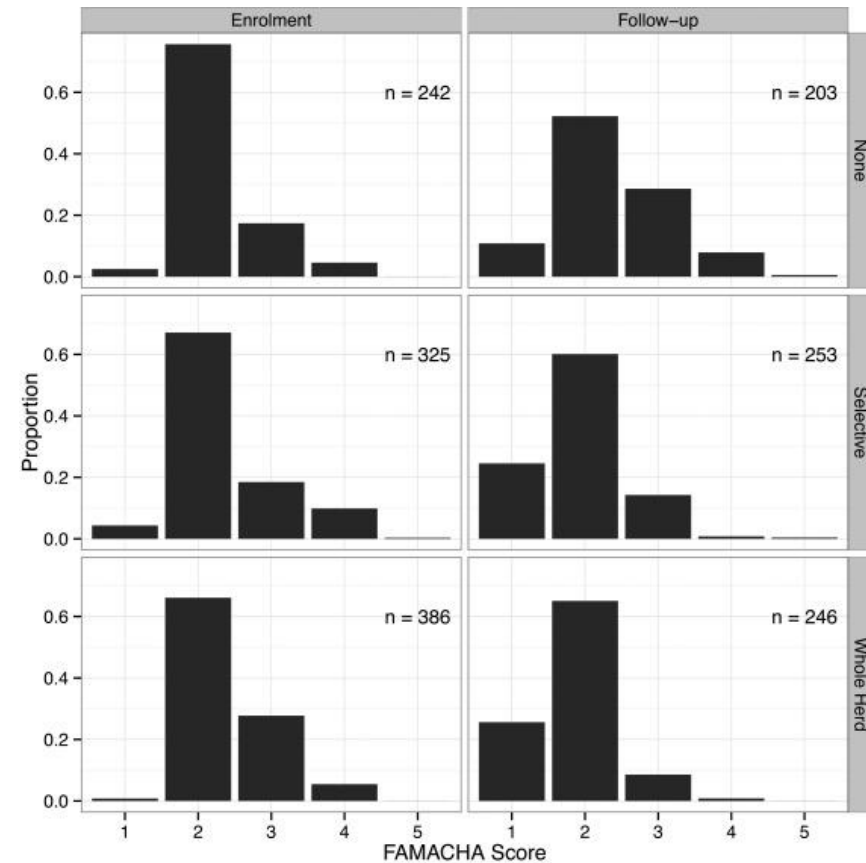
Trained 47 farmers in 4 villages to record anaemia score and treat accordingly (1059 goats).



Mixed methods evaluation of targeted selective anthelmintic treatment by resource-poor smallholder goat farmers in Botswana

Josephine G. Walker<sup>a,b,c,\*</sup>, Mphoeng Ofithile<sup>c</sup>, F. Marina Tavolaro<sup>d,e</sup>, Jan A. van Wyk<sup>d</sup>, Kate Evans<sup>a,c</sup>, Eric R. Morgan<sup>b,e</sup>

Veterinary Parasitology 2015



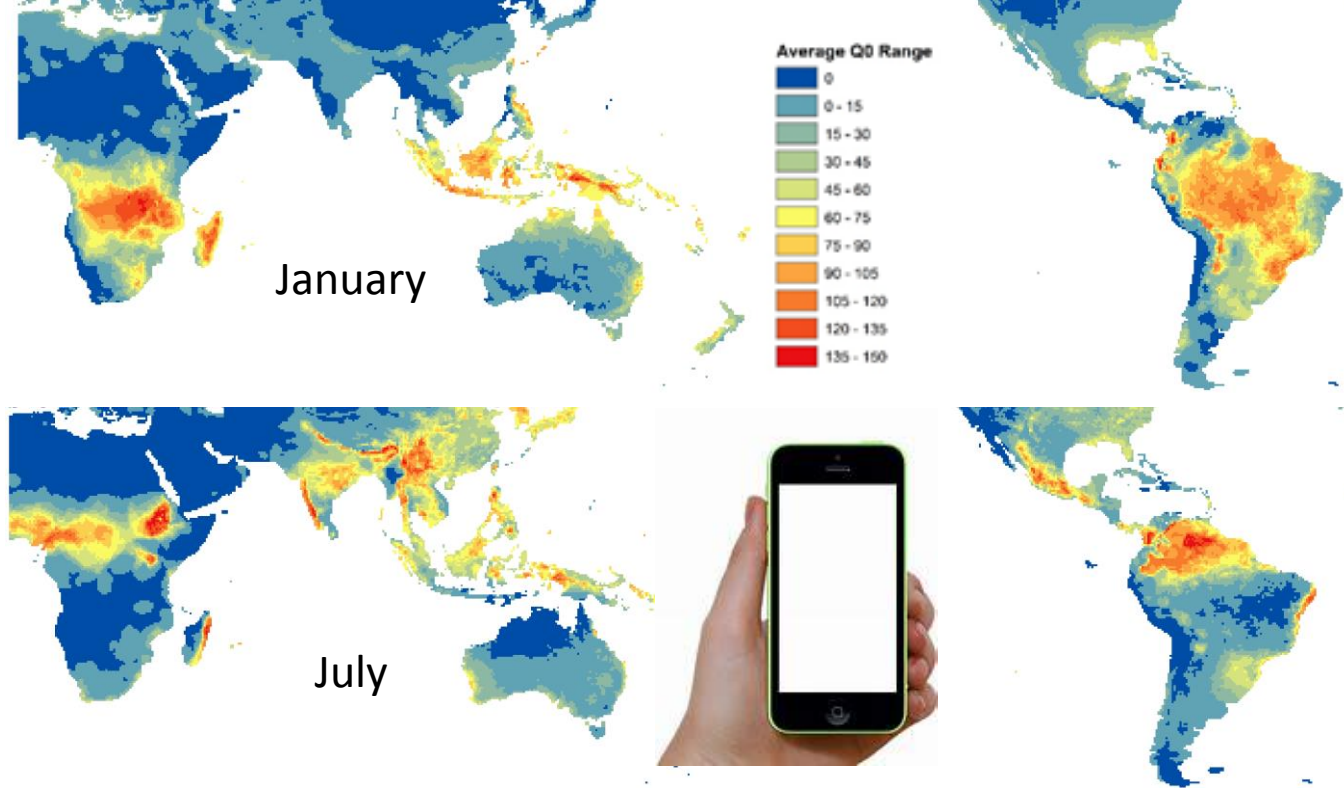
Targeted treatment achieved the same health improvements as whole-herd treatment for only 24% of drug costs



# Where next?

## 1. Refine risk assessment:

- Save labour by focusing checks at high-risk times
- Collect data remotely to calibrate risk models
- Monitor animal behaviour



With Prof Andrew Dowsey (Bristol)  
and Dr Jan van Wyk (Pretoria)



## 2. Upscale for impact:

- Develop the system for wider uptake

BUT need to....

- Adapt to other systems and cultures
- Measure baseline and impact
- Ensure sustainability





## Deworm the kids



?

## Feed the kids





### 3. Integrate with whole food and environment systems for better outcomes

- E.g. food safety
  - Lao PDR
  - 68 % of hospital patients malnourished
  - Protein sources rare and risky
  - Alternatives possible – but consequences?





# Help!



## University of Bristol

Hannah Vineer

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Rich Pancost and Cabot

Susan Jim and WUN

## Chennai, India

TANUVAS: Raman

Muthusamy

## Malaysia

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