AWI R&D Update

Rabbit control

Australian Wool Innovation Limited

Controlling rabbits, can result in increases of greasy wool cuts up to 20 per cent per head per year. Woolgrowers see fewer foxes and feral cats and more ground nesting birds and small native marsupials on their properties.

Rabbits graze crops and pastures in competition with livestock, lowering weight gains, wool cuts and birth rates. They stop seedlings regenerating and reduce crop yields. Densities as low as 1 rabbit/ha reduce native plant regeneration long before rabbits cause noticeable economic damage to agricultural land.

The economic impact of rabbits on Australian agriculture is estimated to be $200 million annually.

Despite the release of the myxoma virus in the 1950s and rabbit haemorrhagic disease virus (RHD or calicivirus) in 1995, rabbits remain widespread across southern Australia.

RABBIT CONTROL TIPS

- RHD has its greatest impact on rabbit populations during:
  - Summer in temperate zones
  - Wet winters in semi-arid areas.
- Use more than one rabbit control method, like poisoning, warren ripping and fumigation, with biological controls to limit the recovery of rabbit populations after a bout of RHD and/or myxomatosis.

AWI'S RESPONSE TO RABBIT PROBLEMS

AWI established the AWI Rabbit Advisory Group (ARAG) to provide strategic advice on rabbit research, development and extension investments. The ARAG is made up of four pastoral and high rainfall zone producer members who work with AWI to guide future investment into sustainable options to control and manage rabbits.

AWI invests up to $100,000 each year in rabbit controls to increase wool and meat production.

KEY RESEARCH AIMS AND OUTCOMES

Biological control of rabbits

AWI has partnered with the Invasive Animals Cooperative Research Centre (IACRC) and Meat & Livestock Australia (MLA) to assess the effectiveness of rabbit haemorrhagic disease virus (RHD or calicivirus) since its release in 1995.

Rabbits catch RHD from direct contact with infected rabbits, other contaminated objects or several blowfly and bushfly species. Most caliciviruses infect the lining of the throat, lungs or gut. RHD also infects the rabbit's liver causing acute hepatitis. Rabbits die within five days of infection, although rabbit kittens up to six weeks old are much less susceptible to RHD than older rabbits. A freshly dead but otherwise healthy-looking rabbit may have died from RHD.

Some rabbits recover from lower doses of a RHD-like virus found in cooler, more humid parts of Australia, giving those rabbits some immunity to low doses of RHD. However, even RHD-resistant rabbits die from large doses of RHD.

Through the RHD Boost project, AWI, the IACRC and several partners are investigating new RHD strains that kill rabbits partially immune to existing Australian strains of the virus. Up to ten field strains of RHD that suppress rabbit

populations in Europe will be tested in Australian labs for their potential to further control rabbit populations here.

From 2012, AWI will invest a further $800,000 over five years into growing the next non-resistant strain of RHD, and ensuring the new viruses are registered for rabbit biocontrol in Australia.

MAKING RABBITS INFERTILE

- AWI modeling of rabbit populations showed potential fertility controls would be much less effective than alternatives such as biocontrol combined with poisoning, warren ripping and fumigation. The most cost-effective rabbit control remains naturally spread biocontrols like myxomatosis and RHD, since they do not incur a cost to the landholder.
- By working together, woolgrowers and other natural resource managers are showing how a concerted and committed approach to rabbit control can improve biodiversity and renew confidence for woolgrowers wanting to retain or grow their flocks.

Tools and information

AWI supports several major projects in rabbit control. Learn more about these projects at: www.wool.com/pestanimals.

The Invasive Animals Cooperative Research Centre (IACRC) and its partners including AWI work together to reduce the impact of invasive animals like rabbits on Australia's economy, environment, and people. Visit: www.invasiveanimals.com

Rabbit PestSmart Toolkit – the IACRC and its partners publish a range of guides and tools on practical rabbit control. For free copies of the resources below, email the IACRC at contact@invasiveanimals.com or visit: www.feral.org.au/pestsmart/rabbits

- PestSmart Factsheet: Using RHDV for rabbit control
- Making the most of Rabbit Haemorrhagic Disease - learn more about how RHD works, how to improve the impact of RHD through complementary control methods and State/Territory requirements. Visit: www.feral.org.au/making-the-most-of-rabbit-haemorrhagic-disease
- Conventional Rabbit Control: Costs and Tips
- A rapid survey to know when to control rabbits to protect native vegetation.

FeralScan - a free web tool to help coordinate local pest animal control activities by community mapping of pest animals and the damage caused. Record your rabbit sightings on-line at: www.feralscan.org.au/rabbitscan

PestSmart YouTube channel - video clips with practical instructions on a range of pest animal control methods, new products and monitoring techniques. Learn more at: www.youtube.com/PestSmart

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