

research

Volume XXXII | 2015
Number 2 | Agri-Food
Summer 2015 | Yearbook

MEETING THE CHALLENGE

These homegrown plants are
hardier than imports. SEE PAGE 10

Plant agriculture graduate student Emily Moeller is working to develop new Ontario-bred varieties for the province's \$4-billion horticulture industry.

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Growing Ontario's
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CHANGING LIVES
IMPROVING LIFE

Hopping to it

Researchers begin disease prevention program for Ontario's commercial rabbits

Ontario's commercial rabbit industry provides an important alternative source of meat, particularly as the province's ethnic diversity evolves. The industry is taking measures to meet this growing demand, including attention to disease control.

Pathobiology professor Patricia Turner is leading a research team committed to developing a user-friendly set of biosecurity recommendations. The team consists of pathobiology professors Scott Weese and Patrick Boerlin; Prof. Scott McEwen, Department of Population Medicine; Marina Brash, Animal Health Laboratory; and Richard Reid-Smith of the Laboratory for Food-borne Zoonoses at the Public Health Agency of Canada.

"We want to help producers develop the capacity to improve productivity and animal well-being," says Turner.

At the core of this project, researchers will evaluate the prevalence of common and emerging bacterial and viral enteric pathogens, as well as levels of antimicrobial resistance in Ontario commercial rabbits.

One challenge is that disruptions to bacterial populations within the gut microflora of rabbits can provide a breeding ground for new diseases, particularly enteritis or inflammation.

If not managed properly, enteritis can lead to significant production losses in the industry—as much as 35 per cent in young rabbits.

"In addition to the financial losses borne by producers, there are significant welfare issues and food safety risks," says Turner.

Preliminary studies on enteritis in

North American rabbits have identified bacterial and viral strains that could be infectious to other farm animals as well as humans.

However, few resources are available to track and treat these enteric pathogens. In fact, until very recently, only one drug was approved to treat diseased rabbits.

And due to its extensive use, resistance to this drug is increasing throughout the industry.

With this in mind, Turner is working with graduate student Jennifer Kylie to study the fecal microbiomes of different rabbit populations, hoping to understand how antibiotics alter their gut flora and possibly predispose them to infection.

Another issue the researchers are studying is hygiene protocols, which Turner notes require stronger enforcement within the industry in order to reduce the prevalence of infections. Current practices are often quite variable between farms, and there are no codes of practice for transporting breeding stock between locations. Inconsistent hygiene standards combined with mixing populations of rabbits often leads to cross-contamination, providing pathways for disease to spread.

"Producers need to know they can improve levels of biosecurity in simple, inexpensive ways that have profound

benefits for the entire industry," says Turner.

Small changes can have significant impacts. Changing boots and outer clothing when leaving the barn, disinfecting crates after shipping, and removing manure and urine more frequently all help to control the spread of pathogens, and raise the levels of biosecurity on farms.

Overall, Turner says results from this study will help identify ways to prevent complications before they arise. This, combined with efforts to strengthen the overall organization of Ontario's commercial rabbit industry, will help guide better methods of disease prevention and control.

—Alexandra Sawatzky

This research is funded by the OMAFRA – U of G partnership. Additional funding is provided by Ontario Rabbit, Floradale Feed Mill and B-W Feed and Seed Ltd.

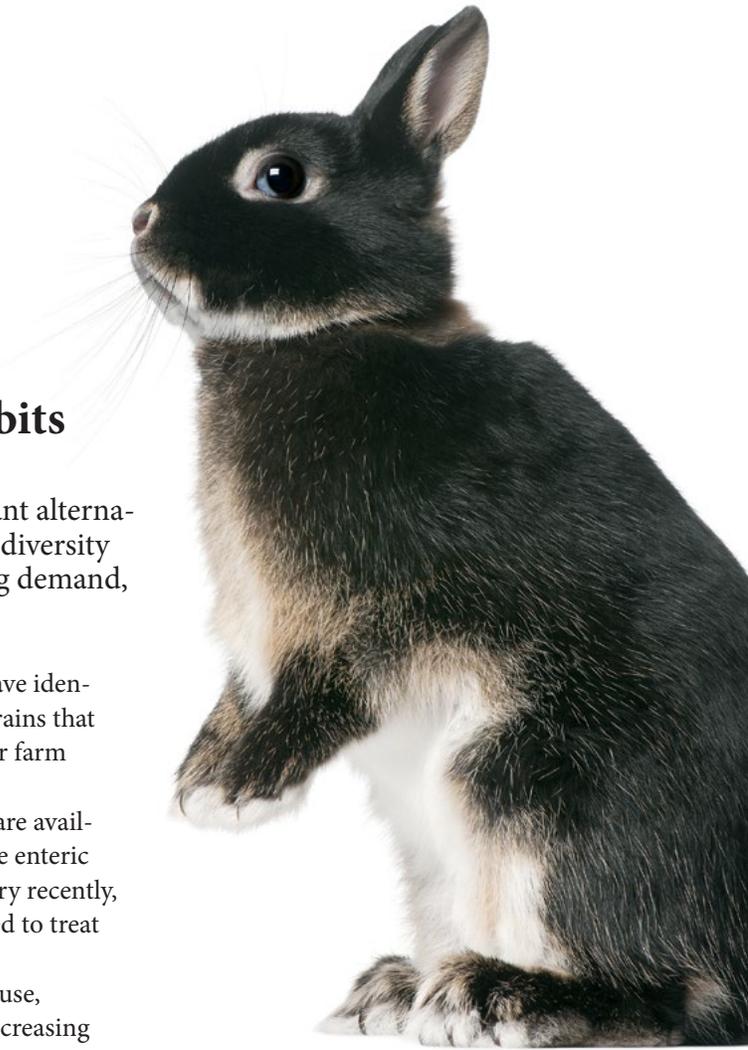


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