



APA Letter to Canberra Times re Canberra Feral rabbit population increases due to weather

Rabbits populations might indeed have increased recently ("Canberra feral rabbit population increases due to weather", CT 4/2/2021). Except in very simple ecosystems, such as offshore islands, lethal control of any fast-breeding animal species always fails in the long run.

One has to wonder, once again, why the Australian government did not take the opportunity to humanely and non-lethally eradicate rabbits from Australia when the means became available.

In the 1980s, the CSIRO developed an attenuated variant of Myxomatosis that would (ultimately) have rendered every female rabbit in Australia infertile. If it had been released then, instead of the horrifically cruel Rabbit Haemorrhagic Virus Disease (RHVD, otherwise known as RCD) a few years later, wild rabbits would almost certainly be extinct in Australia by now.

The eradication would have been non-lethal and humane. It would have been gradual enough to give native mammal populations time to recover, and refill the niches left by the rabbits. Native predator populations would not have crashed due to lack of prey, as they did when RHVD was first released (Birds Australia 1998).

While both poisoning and germ warfare are horrifically cruel to target animals, the use of viruses against animals, slap bang in the middle of a zoonotic pandemic, should be utterly terrifying to humans. There is never any guarantee these nasties are species-specific. After all, RHVD was released with assurances that it was not zoonotic, yet in 2000, scientists were able to successfully infect pigs with it (Canadian Veterinary Journal, 2000).

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An addendum

Immunocontraception (eg viral fertility control) is only possible if you use a viral strain to which the target animal is substantially immune. Immune does not mean they don't get infected, it just means their immune system attacks the infection immediately so that the disease causes minimal symptoms. To be on the safe side (in case the occasional target animal is NOT sufficiently immune), you use a strain that has evolved in the environment to already cause minimal pain/weakness in the target animal (ie an attenuated strain). The less the target animal is harmed by the virus the more others they'll infect before their immune system kills off the virus.

What was done by CSIRO in the 1980s was to attach a bit of male rabbit sperm to the virus they released into the target rabbits so that when the female rabbit became infected, her immune system recognised the virus and quickly adapted to also recognise the male sperm as part of the infection. Henceforth the immune system destroyed any rabbit sperm it detected in her system whether it was attached to a virus or not.



This was fully developed by CSIRO and ready to do, bar the bureaucratic impediments, in the later 1980s.

BTW: Being immune to a disease is not the same as not being susceptible to a disease. Many viruses are species specific because they can only co-opt one kind of body chemistry. If you are immune to a disease it means you are susceptible, ie you can be infected, but your immune system is prepared for the infection and destroys it. If you stay in quarantine you won't infect anyone else before you shake it off.

Rabbits don't stay in quarantine.

Essentially, just like any other infection, it would work like a vaccine for any animals who get infected and who don't already have some immunity to the attenuated virus. They should thereafter be immune to both male sperm every time they get inseminated and to that particular strain of the virus every time they get infected.

I don't know whether it would deliver any immunity to the more virulent strains of Myxo but most Australian rabbits are now immune to all the environmental strains of Myxo that are around these days. Ideally (from an epidemiological point of view as well as a welfare point of view) it would be great if it delivered immunity to the more virulent strains as well. The more already infertile female rabbits surviving a deadly epidemic, the sooner complete non-lethal eradication will be achieved.

As evidenced by both Myxo and RHVD, lethal germ warfare is incapable of achieving complete eradication unless it has a guaranteed 100% death rate, and even then you've got to find a way to get it out to every single rabbit. RHVD was claimed to have a 90% death rate (three times higher than any killer epidemic in human history) and the rabbits were back in a couple of years!