

HOUSE OF ASSEMBLY

THURSDAY 17TH NOVEMBER 2016

BIOLOGICAL CONTROL (MISCELLANEOUS) AMENDMENT BILL

Second Reading

Adjourned debate on second reading.

(Continued from 22 September 2016.)

Mr PEDERICK (Hammond) (16:43): I rise today to speak to the Biological Control (Miscellaneous) Amendment Bill 2016. The bill amends the Biological Control Act 1986 to specifically include viruses and subviral agents within the definition of an organism. In regard to the Biological Control Act 1996, South Australia is part of a national scheme of mirror legislation based on the commonwealth legislation, the Biological Control Act of 1984.

Uniform legislation was passed by the state and Northern Territory parliaments to establish a uniform equitable system applying throughout Australia to ensure that biological control programs which had been identified as being in the public interest could proceed without interruption by litigation. These amendments address an issue which has arisen about the classification of viruses and subviral agents as living organisms, and the possible legal implications this might have for agent and target organism declarations made under the biological control acts.

Two new viruses are being assessed for national release: the next rabbit haemorrhagic disease virus (RHDV1 or sometimes it is called RHD5) and the koi herpes virus to control European carp. The amendments are required before an application is made to ministers for these releases to proceed. To enable the proposed biological control agents for rabbits and European carp to be considered, this bill, on our information, must be passed by December 2016.

The bill introduces minor amendments to specifically include viruses and subviral agents within the definition of an organism. The bill addresses an issue which has arisen about the classification of viruses and subviral agents as living organisms and the possible legal implications this might have for agent and target organism declarations made under the biological controls acts. These amendments clarify biological control programs which use viruses and subviral agents and they are covered by the Biological Control Act 1986 (South Australia). The amendments maintain consistency with mirror legislation in the commonwealth and other jurisdictions to address a sovereign risk. They certainly, from our understanding, do not affect the original scope or intent of the act.

Certainly, there have been issues that have had to be dealt with and one of them has been Salvation Jane in the past. Salvation Jane is a dominant pasture weed and toxic to most grazing animals. One single plant produces over 10,000 seeds. It was estimated that in 1985 Salvation Jane was present on over 30 million hectares in Australia. By 2002, this weed had cost the wool and meat industries \$125 million each year. Salvation Jane is a declared plant in South Australia and landowners have the responsibility to control the weed, hopefully with the assistance of natural resources management.

As cited in the biocontrol fact sheet, Salvation Jane biocontrol in South Australia involves a suite of agents that attack various parts of the plant: leaf mining moths attack the leaves, crown weevils attack the rosettes, flea beetles and root weevils attack the roots, and pollen beetles attack the flowers and seeds. The pollen beetle feeds on the flowers

and seeds and the larvae of these beetles also have an effect on the weed. Crown weevil larvae also have effects on Salvation Jane and it is said to be more of a success than other methods, especially in areas that are susceptible to higher rainfall.

It has certainly been noticed that in more recent times, over the last decade or so, Salvation Jane is not as prevalent as it once was, so obviously these practices have come into play. I think part of the reason this legislation is being changed is that there were some legal challenges around some of these viruses with Salvation Jane all those years ago.

Anyone involved in farming certainly would be aware of myxomatosis and its effect on rabbits. The myxoma virus was the first virus released into the rabbit species in the 1950s. This virus spread through fleas and mosquitoes, and myxoma was first field tested in 1938 before being released in the 1950s. After the official release, the virus reduced the estimated rabbit population from 600 million to 100 million in two years.

Partial genetic immunity to the virus was observed and since the seventies, this resistance has grown. Now only 50 per cent of infected rabbits die. There is presently an outbreak of the myxomatosis virus in South Australia, and owners of rabbits are being urged to keep their rabbits indoors or away from mosquitoes and other biting insects as, for obvious reasons, the virus is fatal. I am talking pet rabbits here, obviously. I am not looking after my rabbits home on the farm.

Unfortunately, with many viruses such as those being discussed, animals tend to develop somewhat of an immunity, therefore resulting in the need for alternative strains which led to the introduction of the calicivirus. The rabbit calicivirus (RCD), also known as rabbit haemorrhagic disease (RHD), was first reported in China in 1984. RHD is a viral disease which only affects European rabbits. As RHD had the potential to be a biological control method for wild rabbits, the virus was brought to Australia and was quarantined at the CSIRO Australian Animal Health Laboratory where extensive studies were conducted.

In 1995, the virus escaped field trials. It was being trialled on Wardang Island, and there have been some quite legendary stories of how it happened. I remember talking to a group of learned gentlemen one night at the Cleve field days about how it might have escaped. There were a few knowing smiles but, at the end of the day, it was the best thing that happened in regard to controlling rabbits. Farmers and station owners had seen the potential of what this virus could do, and they were keen to get it out there. We saw, especially on larger properties, station owners delivering dead rabbits with the virus from helicopters to spread the disease more quickly on their properties.

Since 1995, this virus has spread across the majority of Australia. There were some concerns raised about the virus affecting humans. However, studies have shown humans who were exposed to the virus were not affected and the virus has been present in 40 countries since the eighties. Along with humans, no other animal species have been affected but, for those with pet rabbits, vaccinations are available and can be accessed at vet clinics. RHD can only be released during specific times of the year as it generally does not have an effect on kittens and young rabbits. Initial results in wetter areas were also lower.

A new strain has been identified which is a Korean strain of the calicivirus called the RHDV-K5. RHDV-K5 is already in many locations within Australia; however, it has not yet been formally introduced as a biological control method. Contrary to the calicivirus, RHDV-K5 is effective in cool, wet and other parts of Australia where the original calicivirus was not present. Rabbits are Australia's most costly pest, costing Australia's agriculture industry an estimated \$206 million per year in damage. They contribute to soil erosion and are also allegedly associated with impacting 304 threatened species in

Australia. RHDV-K5 is one of the most humane methods of pest control and is anticipated to be released in 2017.

I note a press release that went out recently from the federal member for Barker, my colleague Tony Pasin. Barker will participate in the release of a new variant of the rabbit haemorrhagic disease virus, RHDV1 K5, at 15 sites, and a RabbitScan mobile app is now available to enable people to contribute to the national dataset. This comes some 21 years after the initial release. This new virus will be trialled next year at 20 sites across the electorate of Barker in an effort to significantly reduce rabbit populations and the devastating impact on agricultural production and native ecosystems. There were many local residents who got on board to help identify potential trial sites for the release of the virus in 2017.

Scientists and landowners certainly hope it will significantly reduce rabbit populations. Some of the sites across Barker and several other electorates include Alawoona, Brookfield Conservation Park, Cambrai, Kingston on Murray, Kingston South-East, Lameroo, Loxton, Lucindale, Meningie, Naracoorte, Parrakie, Renmark, Sandleton, Annadale, Blanchetown, Sedan and Taldra. Australia has had a good track record when it comes to the biological control of rabbits. When the first calicivirus was released, there was up to 98 per cent reduction in arid areas.

In regard to the reductions that were achieved from the release of myxoma virus in the fifties, more than 85 per cent of Australia's rabbit population was killed. This will certainly do great work in decreasing the rising rabbit population, and it has industry, government, researchers and local communities working together to address this problem. This is part of the Australian government's \$1.2 million commitment to assist in the research and development of new rabbit controls. This trial will certainly be welcomed. People can search about RabbitScan and they can go to the Invasive Animals CRC website for more information.

Carp is another pest that has invaded our Murray River system, so I will talk about the carp herpes virus. Carp were first introduced into our systems over 100 years ago. They are in every state except the Northern Territory and now make up 80 to 90 per cent of the Murray-Darling Basin's fish biomass. Females produce up to one million eggs per year. Carp are known to be very tolerant, can adapt to water with low oxygen levels and can live in salty water.

The federal government has allocated \$15 million over 2½ years for the National Carp Control Plan. The carp virus only affects carp, is a natural occurring strain and has been investigated by the CSIRO for some eight years. It is suggested that the herpes virus has been around since the late nineties and is now present in 33 countries. The virus is expected to be released by the end of 2018 and it is expected that the virus will initially remove 70 to 80 per cent of carp in the river system. However, it will not eradicate the carp species.

The economic impact of carp is estimated to be up to \$500 million per year. A trial in New South Wales showed that, after the removal of carp in a small designated area, the water became clear. I can tell you it has been a long time (many decades) since I have been able to see any distance in the River Murray. Concerns have been raised in relation to the removal of great amounts of carp and whether fish that consume carp will have enough food. However, studies in Queensland investigated how the ecosystem responded to the removal of carp. The studies found a significant increase in zooplankton. Subsequently, small-bodied fish increased by up to 1,000 per cent and native fish also exploded in numbers, and the biomass was more than the carp that was removed.

I note the recent announcement that Dr Matt Barwick was appointed as the head of the rollout of the virus and the community consultation process. It is on the internet—or the 'interweb', as the Attorney-General likes to call it—that Barnaby Joyce, our Deputy Prime Minister, was asked a question about the carp virus in federal parliament earlier this year, and I quote from part of his answer to the federal parliament:

It was great to be able to announce the \$15 million that we will put towards the eradication of carp. We know that it is incredibly important. We are afflicted with these disgusting, mud-sucking creatures—bottom-dwelling, mud - sucking creatures. The only form of control is a version of herpes; it is the only thing that will get rid of these disgusting, mud-sucking creatures.

They probably do not give it enough inflection to match our Deputy Prime Minister, but I think you get the idea.

Members interjecting:

Mr PEDERICK: What's that, Madam?

The DEPUTY SPEAKER: Mud-sucking!

Mr PEDERICK: Mud-sucking creatures. There are things that will need to be ironed out before this carp virus is released. I believe that Senator Anne Ruston is involved in the investigations. I will be having discussions with her, and I certainly want to catch up with Dr Barwick. When you have an electorate at the bottom of the system—although, this will not affect my electorate, but it will affect four or five state electorates, including the member for Chaffey's electorate—if the carp virus is introduced, the management of the carp and getting them out of the system is the biggest issue facing downstream communities in the river system. It is a huge issue.

No-one is exactly sure how many hundred thousand tonnes or million tonnes of carp might be killed, how many will be killed in a set time and whether they will start from the bottom of the river system and work up. I commend the federal government funding and Matt Barwick. Let's hope that the appropriate work is done because the last thing we want is to have hundreds of thousands of tonnes of rotting carp that we are not able to manage out of the system.

It would affect not just the environment and irrigators. Obviously, pipelines come out of the system at Murray Bridge, Mannum and other outlets along the river, watering most of our population, so we have to get this right, when critical human needs water is coming out of the Murray River. Most of these pipelines are not just-in-time pipelines; they are connected to dams and storages. I declare an interest to the degree because my property is on the Keith pipeline, which is a just-in-time pipeline, bar a few storage tanks along the way. Essentially, it is just-in-time delivery from a service at Tailem Bend, where it goes through the filtration process and then heads all the way to Keith in the South-East.

The big thing we need to know, especially in this state, is that the research has been done and that we have the appropriate actions in place to get rid of the carp. There is some talk about vacuum machines and so on, but I will not be happy unless we have at least one more built-in failsafe apart from the original way of however the government believe they can get rid of the dead carp in an effective manner. Certainly, I am keen to have further involvement and dialogue with my community at my end of the river, at the bottom end of the system, to get people along so that they are informed about potentially what will happen. By the looks of it, they are aiming at the latter part of 2018.

This is not to say that everyone is happy about the carp removal. Some of the fishermen in the Lakes and Coorong are heavily reliant on selling carp, especially with the damage inflicted on their nets by the New Zealand fur seals when they are fishing for Coorong mullet and other species. Some of them will lose that vital market to a fair degree. Obviously, with some of the carp left behind, they will still potentially have a market. The carp may be a little harder to catch, but there is certainly a big market in fishing for carp for the cray pots in the South-East, so that is something else that needs to be managed.

On the other side of the ledger, people have come to me and said that they want to be involved, to get a job or supply equipment and help out with this project, and that they are more than happy to get on board. In terms of the calicivirus, I think that will be an exercise that continues and will not be a huge drama. Hopefully, the release of the herpes virus into the carp will not be a huge drama either. In fact, I do not want it to be any drama. We need to make sure that all the discussions are had and that all the investigations and all the details are in place with respect to how we are going to get rid all the bodies of these filthy mud-sucking creatures. With those few words, I commend the Biological Control (Miscellaneous) Amendment Bill 2016 and indicate that our side of the house will be supporting it.

Sitting extended beyond 17.00 on motion of Hon. L.W.K. Bignell .