

Silverleaf Nightshade: Our Regions Pest



Madeleine Favero, Tyson Ward,
Lachlan James and Teneal Boye

Lake Wyangan Public School



Creative Catchment Kids

Creative Catchment Kids is an initiative of Wirraminna Environmental Education Centre. It aims to improve engagement between our funding partners and school students by providing opportunities for positive and authentic ventures that encourage students to develop creative solutions to agriculture and natural resource management issues.

www.wirraminna.org/creative-catchment-kids/

Wirraminna Environmental Education Centre

The Wirraminna Environmental Education Centre is located in Burrumbuttock, north of Albury in southern NSW. Since 1995, the centre, which is adjacent to Burrumbuttock Public School, has provided opportunities for discovery and learning about the natural environment, the ecology of the local woodlands and the beauty of native plants.

www.wirraminna.org

Enviro-Stories

Enviro-Stories is an innovative literacy education program that inspires learning about natural resource and catchment management issues. Developed by Peekdesigns, this program provides students with an opportunity to publish their own stories that have been written for other kids to support learning about their local area.

www.envirostories.com.au

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Local Land Heroes - Pests in Irrigation

In 2015, students involved in the Creative Catchment Kids program researched and wrote stories about their 'Local Land Heroes' who are involved in pest management in and around the Murrumbidgee Irrigation Area. These heroes are local individuals, couples, a business or industries that have made a difference in their local community by contributing to the management of pest animals and plants. The program was generously funded by Riverina Local Land Services.

Local Land Heroes is part of Enviro-Stories, a PeekDesigns education program.





Kevin De Lucchi is a farmer at Lake Wyangan, near Griffith. His family has been farming in this area for forty-six years.

Both Kevin's mother and father are from Italy. They came to the Griffith area because there was a lot of work available. Kevin has always wanted to be a farmer as he loved growing up on the farm and enjoyed lots of responsibilities and chores as a child.



Kevin has dry and irrigated land on his farm. At harvest time, Kevin employs casual workers to help him through the busiest times. His crops include citrus, grapes, lucerne, irrigation crops and he occasionally grows wheat. Kevin's most important crop changes every few years, as demands and markets change. He also runs cattle and sheep.





Silverleaf nightshade, or *Solanum elaeagnifolium*, is currently one of the worst weeds in the Griffith region. It is a weed of national significance. Many farmers are finding this weed difficult to manage as climatic conditions are very suitable for the growth of this weed. The Silverleaf nightshade bush will grow up to 60 centimetres high, have short spines on their stems and purple or white flowers. The leaves are 5-10 centimetres long and are a silvery, green colour.



The berries, or fruit, are round, smooth and striped green when young. They turn orange or yellow when they are mature. The roots of Silverleaf nightshade can bury themselves more than two metres underground. Silverleaf nightshade can produce up to sixty berries, each containing 10 to 210 seeds. The best time to manage this weed is in April, when it is dying, and again in November, when the new flowers are starting to bloom.

Silverleaf nightshade became a problem on Kevin's dry area farm 6 years ago, but because it was in small sections he didn't worry too much. When he started moving some hay from one paddock to another, he noticed how much it had started to spread. Kevin ploughed up one of his dry area paddocks, but now knows that this makes it spread even more. The Silverleaf nightshade on Kevin's dry paddocks has gradually become harder to control as the years have passed.



Kevin realised he needed to address the growing problem. He researched the weed by going to workshops, field days and talking to people. He hosted a field day in conjunction with Griffith City Council on his farm.

Silverleaf nightshade currently infests more than 350,000 hectares of farm land around Australia. He soon discovered that Silverleaf nightshade is easily spread. This weed can be spread by wind, water, animals and machinery.





Silverleaf nightshade is a problem on the farm because it blocks up ploughing and harvesting equipment. It is also taking valuable nutrients from the soil, which affects crop growth.

It is not good for Kevin's cattle to eat because it can stay in their stomach for up to six weeks. Silverleaf nightshade is poisonous to cattle. There have been reports of horses, sheep, goats, cattle and humans poisoned by this weed.



Kevin currently sprays three times a year. The most recent was with a herbicide in May. So far, the results look promising. He has experimented with different chemicals and sought help from experts to find the right one to use. He has narrowed it down to RoundUp, Tordon and Starane.

Kevin gives Silverleaf nightshade some competition by growing dense grasses and lucerne with long roots and dense foliage. This strategy is currently working well.

Another way Kevin limits the spread of the weed is by leaving his sheep and cattle in a pen for 6 days so the animals can digest what they have eaten. Afterwards, he cleans out the pen to reduce the spread of Silverleaf nightshade.

Kevin rarely buys cattle for his farm. He would rather breed his own so he can avoid having periods of isolation or clean up.



Kevin has read about a bug that could completely get rid of the Silverleaf nightshade on his farm. Unfortunately, it will also eat other crops such as tomatoes and eggplants. Studies are being done to find an insect that will only harm Silverleaf nightshade. Kevin hopes that in the future he will be able to use the bug on his farm as it would seem to be the best control. He hopes the research will continue.





Kevin knows this is only the beginning of an ongoing journey. He will continue to try a variety of methods to control and eliminate this weed on his farm. He knows that a mixture of research and trial and error is how he will best succeed.

Kevin will continue to seek help from other farmers and experts to learn more. His whole farm and business will benefit by his management of Silverleaf nightshade and his aim is to eliminate this weed altogether.



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2015 Year 6, Lake Wyangan Public School

CONGRATULATIONS

Wirraminna Environmental Education Centre and the Creative Catchment Kids Program won the 2015 NSW Junior Landcare Team Award and will be competing in the 2016 National Landcare Awards.



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