

Fish Makes Fertiliser



Keely Mitsch, Katie Rogers,
Jack Sides and Ronan Waters

St Michael's Primary School



Creative Catchment Kids

Creative Catchment Kids is an initiative of the Murray Darling Association and Wirraminna Environmental Education Centre. It aims to improve engagement between the Local Land Services 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.

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**

Murray Darling Association

The Murray Darling Association has membership of over 100 Local Government councils in the Murray-Darling Basin, as well as community groups, businesses and individuals with an interest in ensuring that the Basin continues as a valuable asset for all Australians. Since 1950, the Association has initiated various school and community education programs on managing the Basin's land and water resources. **www.mda.asn.au**



Enviro-Stories is an innovative literacy education program that inspires learning about natural resource and catchment management issues. Developed by PeekKdesigns, 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**

Fish Makes Fertiliser

Authors: Keely Mitsch, Katie Rogers, Jack Sides and Ronan Waters

Teacher: Margaret Wettenhall

School: St Michael's Primary School

Local Land Heroes

In 2014, students involved in the **Creative Catchment Kids** program researched and wrote stories about 'Local Land Heroes' - people, businesses or industries who contribute to productive agriculture and healthy environments along the Murray and Murrumbidgee rivers. The program was generously funded by Murray Local Land Services and Riverina Local Land Services.

Local Land Heroes acknowledges the United Nations 2014 International Year of Family Farming.
www.fao.org/family-farming-2014/en/



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



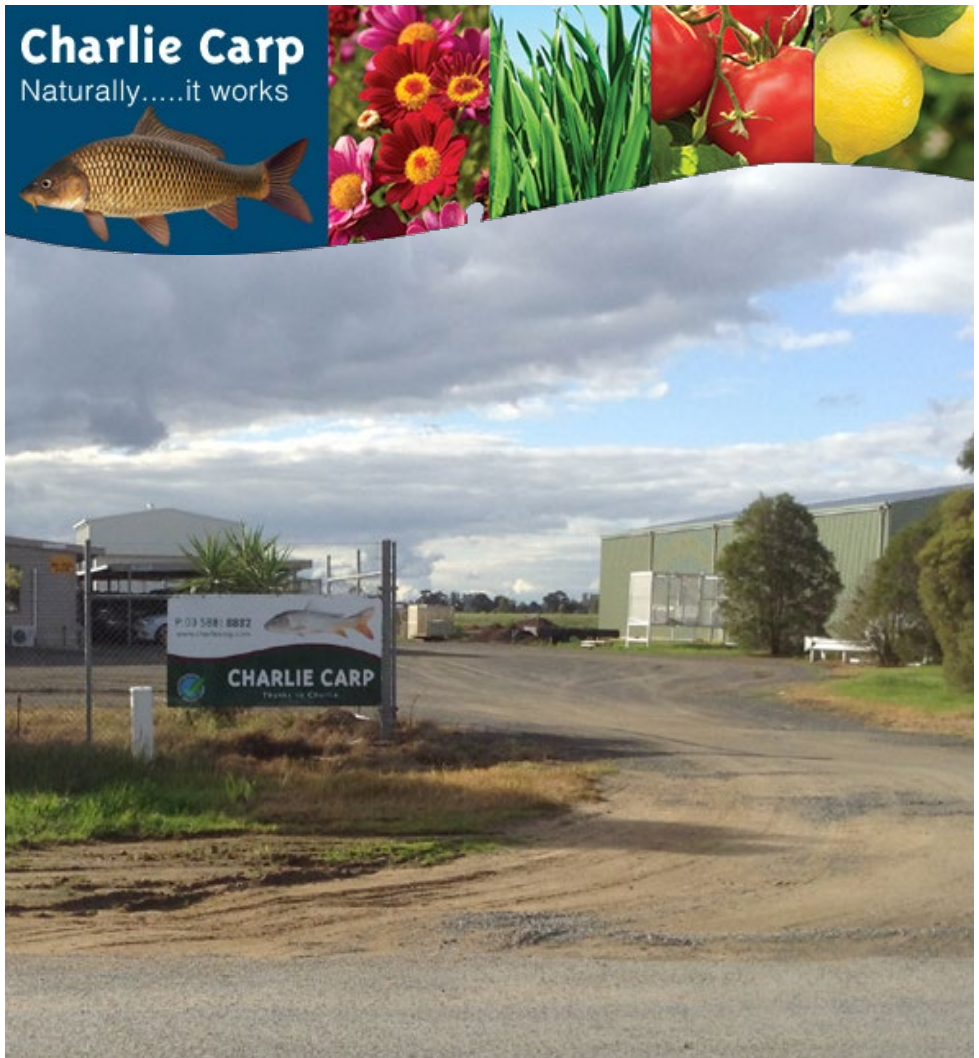
Design by Peekdesigns, www.peekdesigns.com.au

Copyright 2014 Murray Darling Association, www.mda.asn.au

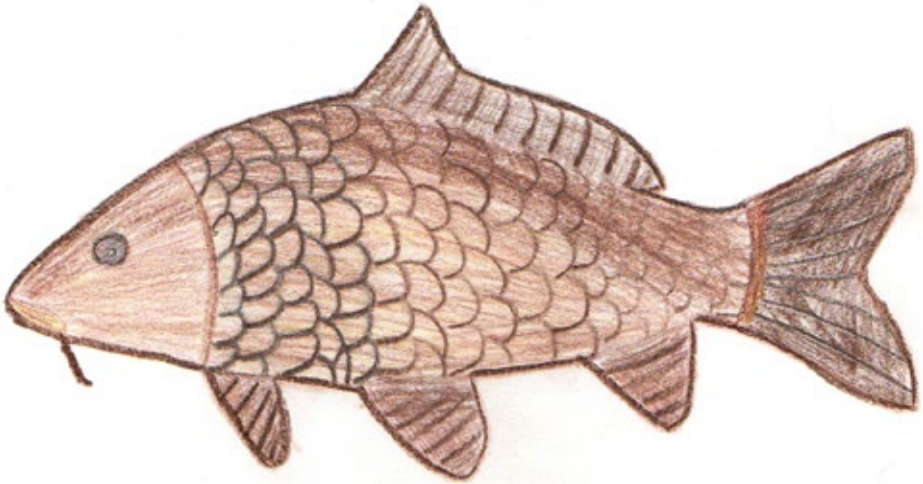


This story is written to tell one of the most positive stories about improving the state of our environment, particularly our rivers.

In the early 1990s, Bob McFarland from Oxley was not happy with the state of the Lachlan River. Carp were muddying the water and taking over native fish species.



He came up with the idea of making fertiliser out of the carp. Today, the Charlie Carp factory in Deniliquin is a thriving business. It employs four people full time, with three to four part timers.



There are two main varieties of carp – mirror carp with great big scales, and one with a smaller scale. Adult carp weigh usually three to four kilos but can grow up to ten kilos. Average length is 700mm, but they can measure one metre.

In order to protect native fish stocks, the carp must be caught by professional fishermen. Carp for the factory is sourced from the Gippsland Lakes, Swan Hill and Blanchetown in South Australia. The fish are caught using fish traps, nets and electro fishing.

When fish arrive at the Charlie Carp factory they are stored on pallets in a huge freezer.



Frozen fish on pallets



The first stage of processing is the chopper (top) which breaks the fish into pieces.

Then two and a half tonnes of pieces go into a huge cooker (bottom) at a time. After ten hours cooking they go into a vibrator which helps separate solids from liquids.



The solids, which by now look like mud, are made into pellets.





The liquid goes into tanks for three or four days to settle. Before it is packaged, it goes into a vibrating sieve to shake out any leftover particles.



The packaging process consists of the bottle machine, a capping machine, jet printer and labelling machine. The product is then packed into cartons.

The fertiliser is distributed to stores like Bunnings and nurseries. It is used by market gardeners, domestic gardeners, golf courses and on the famous roses at the Flemington Racecourse. Internationally, it is sold in Dubai, Kuwait, New Zealand and Mauritius.



Photo courtesy of Victoria Racing Club

The Charlie Carp business helps our environment in many ways. First, it rids the river of a pest which makes the rivers dirty. Less carp means the native fish grow better. Now that pellets are produced, every part of the carp is being used for fertiliser. Carp is an ideal soil conditioner, as it includes lots of trace elements. Because it is oily, it also repels sucking insects from plants. So, both the rivers and the land benefit.



Thank you to the manager of the Deniliquin factory, Ron Kopanica, and to Jenny Irwin in the office for making us so welcome and being very generous with their time so that we could learn all about Charlie Carp. Thanks also to Bob McFarland for his original idea and passionate promotion of Charlie Carp.





Keely Mitsch, Ronan Waters, Jack Sides and Katie Rogers

2014 Year 6, St Michael's Primary School

peek
designs



Local Land
Services
Murray



Local Land
Services
Riverina



Australian Government