

Landcare UpHunter

Summer 2014

In this issue:

Farming Alpacas	p1
Junior Landcare - Earthworms Everywhere	p2
Ellerston Waterwatch	p2
Cropping Morsels from Merriwa	p3
Resources & Funding	p3
Events for your Diary	p4
Keep Stock Safe & Vaccinate	p4
Contacts	p4

Farming Alpacas in the Upper Hunter

Fiona and Stuart Marshall have been farming alpacas in the Upper Hunter for over a decade, initially on a small 40ha property at Middlebrook and now on their 90ha property north of Wingen. Towarri Alpaca Stud is currently running about 80 animals in a variety of colours and variety of age groups.

Alpacas originate in South America and are bred for their wool, as distinct from Llamas that are bred for their ability to carry heavy loads. The alpaca herd across Australia is around 300,000 animals, bred across all States excluding the Northern Territory. The cold winters of the Upper Hunter are ideally suited to breeding alpacas (their young are called Crias).

Well adapted for small acreages, they require minimal water and feed and are equivalent to 1.5 DSE/hectare. They are environmentally sustainable animals with soft pads, rather than hard hooves for feet, a split lip like a Kangaroo which stops them from damaging pasture long term. They require minimal ongoing maintenance, with shearing, toenail trimming, a 5in1 vaccination annually and regular drenching. Depending on breeders' locations alpacas may also require annual A, D and E vitamin injections.

On purchasing the property at Wingen we fenced off riparian areas, undertook minimal revegetation and subdivided remaining paddocks based on land capability. This has led to much improved ground cover, the retention of waterholes in the creek, improved water quality and habitat value.

Alpacas are best suited to small paddocks and are ideal for rotational grazing. We also use them to crash graze established treelines and riparian areas, as they cause no erosion in these fragile areas. Additional feed can be provided through Lucerne hay and/or chaff and specially formulated alpaca pellets. No special fencing is required as they tend not to push on or through fences.

We sell alpacas for breeding of their wool, as pets on small acreages or as sheep guards against fox predation. A small market for meat is developing, particularly on the South Coast. The meat is lean (approximately 4% fat with a mild taste).

Fleeces produced go into the annual SRS® fleece collection and Australian Alpaca Fleece Ltd. Some are sent to small processors who manufacture it into products like doonas, pillows, cushions, clothing or wool skeins. Our alpaca manure is sold to gardeners for fertilizer as it is high in nitrogen and does not burn plants. Alpacas have a habit of leaving their manure in one spot making it easy to collect with minimal contamination.

The Australian Alpaca Association has regional based breeder groups who will provide long term support and advice to new owners. Go to <http://www.alpaca.asn.au> or visit <http://towarrialpacas.com.au> for more information.

Stuart Marshall



Earthworms Everywhere

Worms are a common sight in our gardens, schools, vegetable patches and anywhere where there is soil. They can come in different sizes and different colours, like dark red, light brown or even blue. The most developed worms that we have are Earthworms. They have been around for a very, very long time - over 120 million years!

You might be used to finding earthworms in your garden but did you know they also live in salt and fresh water? They are important for our gardens, our farms and to our planet as they loosen soil so that plant roots can grow. Earthworms don't have a skeleton like we do but they do have a brain (a very simple one), a nervous system and a nerve cord. Each part of their body (called a segment) has a purpose and it helps the earthworm move.

Each segment has bristles (hairs) on it which help the earthworm slide through the soil and each part has four sets of bristles. Imagine how tiny they are compared to the hairs on your arms or legs. They also have two sets of muscles, one set to make parts of their body long and thin and one to make other parts fat.

Most of the earthworms we see in Australia are small and thin, sometimes as short as 2 centimetres long but in Ecuador in South America they can grow to over 2 metres!

Do earthworms have hearts and lungs and if they do how many do you think they have? The answer is on page four (bottom of the Events for Your Diary box).

Have you ever wondered why if an earthworm is cut into two parts it still moves? Well, the part with the head segment is able to grow a new tail and keep on living and doing its job in our soil.

How do earthworms eat? They have a mouth, sections to pass the food down their body, store food, grind food down and pass waste out the other end. What do they eat? Plant and animal material in our soil. The waste material they produce after eating has lots of nutrients in it and also helps to fertilize the soil.

Some earthworms are more active at night and can live for up to 5 to 10 years! Maybe because they live up to 2 metres down in our soil and cannot be seen and eaten by birds at night, if they do come to the surface.

Red earthworms are the most common ones you can see in your garden as they live on and near the surface. They are good at recycling waste material and making our soil more fertile so that trees and food can grow.

So earthworms help loosen and turn our soil, they tunnel underneath and bring air to soil, eat waste material on and under the ground and their own waste helps to nourish trees, flowers, vegetables, fruit and other plants.

Ruth Hardy

Ellerston Waterwatch

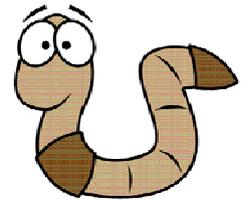
On Wednesday 5th November, Ellerston Public School held a fun day with Blandford, Belltrees and Rouchel school students, teachers and parents as guests. The day's activities included a Waterwatch session on the Hunter River with Amanda Burrows, which was the best activity of course.

We were split into groups of 2-3 children and were straight into dip netting. We each had a net to catch the bugs, a tray to put our findings in, a tray to separate different bug species and a spoon to shift bugs from tray to tray.

We found many bugs in the river such as freshwater yabbies, freshwater shrimp, dragonfly nymph, mayfly nymph and water boatman bugs. Amanda supplied us with a poster of all the water bug species so we could identify which bug was which.

Lessons learnt: When yabbies bite they hurt! One of our teachers learnt that the hard way.

Sarah Caspers & Sarah Schiffman (Year 6 & Year 5)



Cropping Morsels from Merriwa

Wheat, Canola and Lupins grown by local farmers have different end uses e.g. for livestock fodder, for making bread, pasta, breakfast cereal, margarine, cooking oil, salad dressing, cornflour and many other products.

Farmers recently enjoyed a snapshot of cropping activities around Merriwa at a Hunter Local Land Services Field Day. Industry specialists and landholders discussed the National Variety Trials testing of new and existing wheat seed varieties, weather and soil conditions suitability testing, physical properties, disease susceptibility and input requirements, helping farmers make decisions about strains to use and profitability and sustainability.

"We previously grew canola but weeds were causing issues so we changed to wheat. These wheat trials fitted in nicely with our existing arrangements" said Mark Campbell of wheat varieties sown in plots at 'Woodlands' farm.

One trial tests wheat variety susceptibility to Crown Rot, caused by the fungus *Fusarium pseudograminearum*, a stubble-borne pathogen reducing the plants ability to take up water, causing yield loss. Using a PreDicta BrDNA test, farmers can take soil samples from across a paddock, helping build a true picture of any disease presence.

Crown rot thrives when a plant is stressed, having a competitive advantage at low water levels and colonising after harvest. Stubble retention, crop rotation, good hygiene practices etc. can all help minimise its impact.

At 'Elimata' farm an Albus Lupins crop has been sown into the 2013's oat crop stubble. Lupins are legumes and are therefore nitrogen fixers, suited to fertile, acidic, well-drained soils and mainly used for fodder due to high protein yield. Farmers determine their soil type before deciding which species to grow as poorly drained soils and flooding can cause detritus mould.

Canola belongs to the brassica family (like cauliflower and broccoli) and is used as a forage crop. It is important to follow withholding periods after herbicide use in a paddock, to make sure livestock get all the correct nutrients as calcium deficiency can be a problem if sheep are only grazed on Canola.

Claire Hewitt



Resources & Funding

RipeNearMe - helps people find and connect with growers in their area and find out about local produce. Go to www.ripenear.me for more information and to register for updates.

NSW Farmers Association - a new membership category for urban-based residents with an interest in farming and agriculture. Receive quarterly updates, invitations to networking events and access to Farm Card member benefits. Go to www.nswfarmers.org.au for more information.

Recommended Guiding Principles for reporting on Camera Trapping Research - article in Biodiversity Conservation (2014) 23:2321-2343 go to <http://link.springer.com/article/10.1007%2Fs10531-014-0712-8>

Junior Landcare in the Australian Curriculum - teaching and learning resources for 2015 (Primary schools) now available via the online portal SCOOTIE or from the Landcare Australia website at www.juniorlandcare.com.au/ Developed by the Primary Industries Education Foundation and Landcare Australia.

Nature Climate Change - article on climate change impacts on agriculture, the influence of agriculture on climate and our capacity to adapt. Go to <http://www.nature.com/nclimate/focus/farming/index.html>

National Landcare Programme - results of public consultation. Australian Government summary report available at <http://www.nrm.gov.au/national-landcare-programme/public-consultation>

Species of National Environmental Significance - over 1,700 maps and datasets have been released to assist you in finding threatened species in your area. Published by the Australian Department of the Environment at <http://www.spatialsource.com.au/2014/09/23/species-of-national-environmental-significance-maps-released/>

Funding

Australian Flora Foundation - research grants into the biology and cultivation of Australian flora. Applications for funding of \$5,000 - \$15,000 for 2016 close on 16th March 2015. Go to <http://www.aff.org.au>

Events for your Diary

Murrurundi Bush Regeneration Workshop & on-ground activity on 21st December 8.00 - 12.30pm. Meet at Wilson Memorial Oval, Murrurundi. Tel: Robyn 0419 705 753 email ethelo009@hotmail.com

Increasing Mitigating Emissions from Cropping Systems webinar on 5th December from 1.30 - 2.30pm (NSW time). Register at <http://attendee.gotowebinar.com/register/2778769710924382722>

Successfully Seeking Funding webinar on 9th December from 1.30 -2.30pm. To register go to http://www.frrr.org.au/cb_pages/creating_inspiring_rural_community_lship_engage_circle.php Click on Register now for Webinar 2

Landcare stall at 'Christmas in the Park' 13th December 5.00-9.00pm at Elizabeth Park, Scone - markets, movie & other entertainment.

Pages River Warriors Working Bee 7th December, 1st & 15th February, 1st & 15th March 8.00 - 10.00am at Wilson Memorial Oval, Murrurundi. Tel: Robyn 0419 705 753 or email ethelo009@hotmail.com

Glenbawn Catchment Landcare Group - for meeting details etc. Tel: Katherine on 6546 5007 or email glenbawncatchment@outlook.com

Clean Up Australia Day & Schools Clean Up Day 2015 register at www.cleanup.org.au/

Answer: Five hearts & no lungs



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Keep Stock Safe & Vaccinate

Caring for cattle and sheep on farm is a complex business. Besides providing pasture, shade and water farmers need to ensure they have good health regimes for stock and apply disease prevention measures.

There are 5 Clostridial bacterial diseases that can affect ruminant livestock. These bacteria can flourish when the right anaerobic conditions occur. This could be due to changed feeding conditions disrupting digestion which allow the bacteria to proliferate and produce a toxin (pulpy kidney), or from muscle damage such as bruising which allows blackleg bacteria to flourish. Blackleg tends to affect younger cattle whereas pulpy kidney often affect cattle in the best condition being the greediest eaters.

As a District Veterinarian in the Upper Hunter Shire I find the most common clostridial diseases are Blackleg, Pulpy Kidney and Tetanus. Farmers continue to lose stock from these diseases with recent losses of up to ten head. This can be easily prevented by vaccinating stock with a 5in1 vaccine. Better still, a 7in1 vaccine gives added protection for cattle against clostridial diseases and Leptospirosis bacteria which can cause infertility in cattle and disease in calves. Leptospirosis can also cause disease in people including severe flu like symptoms and sometimes other effects.



From 10 weeks of age, lambs and calves need two vaccinations 4 to 6 weeks apart. It is important both vaccinations are given, otherwise immunity is short lived. Annual boosters are needed and sometimes in high risk feeding environments more frequent doses.

Changes in diet, like moving stock from pasture to grain feeding (due to dry conditions) or sudden access to lush pastures or carbohydrate rich feeds like grains can result in Pulpy Kidney stock loss. Clostridial disease affected stock can show few warning signs, looking fine one day and die the next. They often appear bloated and decay quickly.

Whether you have a few cattle or sheep on a small property, or large herds on a farm, keep stock safe and vaccinate! It is more cost effective for you than to lose your livestock. Vaccinations can be purchased from your local agribusiness for just 50 cents each for cattle and 30 cents each for sheep.

You can contact me on 6545 1311 (Hunter Local Land Services) for advice on vaccinating programmes and a management plan for stock disease or go to <http://hunter.lls.nsw.gov.au/livestock/livestock-advice> for other areas.

Lyndell Stone



Have a safe & happy Christmas & New Year

Visit us at www.landcare.nsw.gov.au/groups/scone-landcare-group