

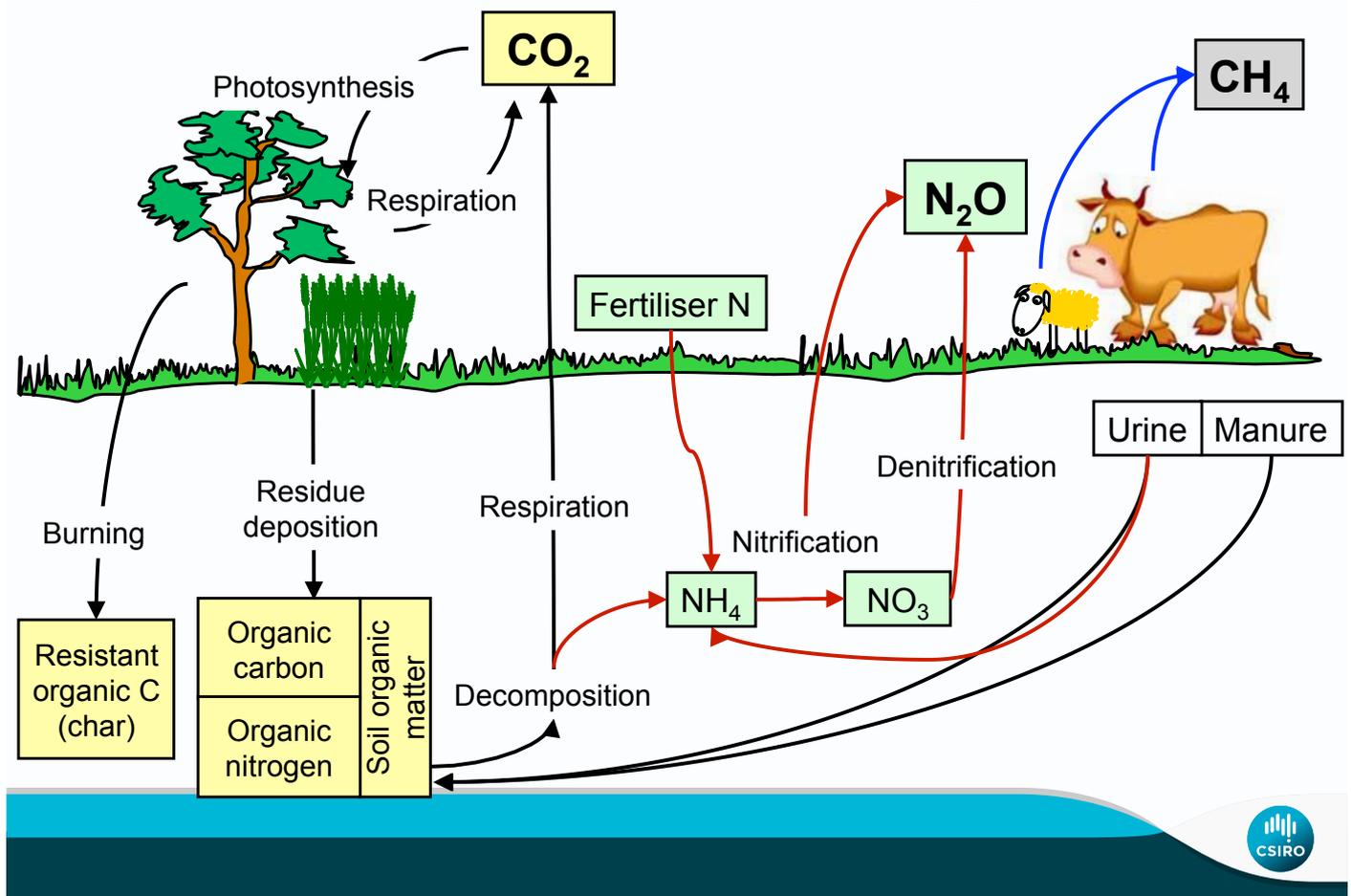
Nuffield Scholar Jennifer Hawkins recently addressed participants in a Grain & Graze 2 webinar on aspects of her study of Carbon Farming.

Grain & Graze 2 Hosts Carbon Farming Webinar

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Jennifer and her husband Jack have an irrigation property in Southern NSW. After experiencing significant change to irrigation practices brought about by evolving water policy decisions, she could see the carbon issue becoming the next 'big thing' that farmers had to learn about. Few people in the industry and commodity groups Jennifer attended understood what farmers would require to adapt to changes in carbon policy. With that in mind she applied for and won a Nuffield Scholarship and began her journey looking at carbon.

Carbon cycle and agricultural greenhouse gases



Jennifer describes herself as 'just a farmer' with no formal science or agronomy background. She says it is difficult for farmers to understand how it is possible to create measurement, legal and trading systems for something that is both invisible and sometimes hard to quantify. One of Jennifer's goals was to translate the science into a language that makes sense in her farming business and that of other farmers with whom she meets.

A basic carbon accounting course at Swinburne University gave a good grounding for what she would learn in her visits to the US, Canada, Japan, Scotland, Denmark, UK and Italy.

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“The whole thing is not that complex but very bureaucratic. Farmers understand soil carbon both from a production system and a sequestration system but having to prove and develop the methodologies that are robust enough to trade is the difficulty. The key with soil sequestration is getting to where we can prove it in an accounting system.”

Many countries had put lots of effort into developing their carbon and climate change policies but much of that was shattered when the global financial crisis occurred. Jennifer says that, fortunately, in Australia we have continued to work through that.

The key for farmers is to actually examine how the carbon comes and goes in their individual enterprises and total business. They will need to be able to identify the sources of their direct and indirect emissions. It sounds daunting but there is help available from some online calculators. “The Australian Farming Institute has a good one called the Farm Gas Calculator where you can put your data in and it enables you to get some feedback on what your emissions profile looks like.”

Jennifer says that farmers want to increase soil carbon and reduce emissions. This will require a close look at fertilizer management and fuel use. Soil carbon will also need to be maintained for the length of any contract farmers undertake and a 100-year contract will obviously have intergenerational implications.

Many factors such as tillage practices, irrigation and rainfall can influence soil carbon levels and their maintenance. Jennifer Hawkins sees a huge potential for Research and Development technology to make quantum changes in our ability to sequester carbon and is concerned that carbon tax proceeds are not being sufficiently invested in this area.

Although carbon is the base unit of measurement for Global Warming Potential, when looking at greenhouse gases, there are others to consider. Methane is about 23 times worse than 1 unit of carbon. Nitrous oxide is 321 times that base unit. “Anywhere on your farm you can reduce emissions from methane and nitrous oxide will give the greatest advantage and therefore, if you are going to be trading it, the greatest windfall.”

Many farmers will be interested in starting a Carbon Farming Initiative Project. The important thing to remember is that money will be paid out only for something over and above what you are already doing or what is considered normal regional practice. “So if you are currently no-tilling, you can’t get money for continuing to do that. A great source of information on these projects is the Carbon Farming Initiative Handbook – go to www.cleanenergyfuture.gov.au”

Another interesting point Jennifer discussed is that companies investing in a project will want to know that it ticks off all the boxes and is a tradable commodity. “But there are differences between carbon credits; you and your neighbor may have similar methodology and land characteristics but your credits might not be equal in the market. If you have a certain value system on your farm, as distinct from a neighbor, that might add value. So the story of your farm and what you do is really important to getting a better price in the market eventually.”

“Regardless of your position on climate change just look at policy, don’t get caught up in the climate change debate! However, in order to do that we have to communicate better by developing a common language and approach with researchers and policy makers.”

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Jennifer Hawkins' main message is that it's important to get a picture of your business to then assess suitability for the next step of maybe developing a CFI project. Even if at this stage you don't understand the policy, if you know the emissions profile of your business then you can start to integrate carbon management into farm business plans.

She gives the example, "in our business, as part of our plan, we were looking at putting in a centre pivot spray irrigation system. When we started to talk about the increase in energy required to move the water we actually moved away from that and planned our development on a gravity fed system. So that is the beginnings of our businesses starting to look at other issues as they develop, like the ongoing costs of being such a high energy user."