

# OUR PROJECTS



## FARMING FOR SUSTAINABLE SOILS

### PROTECTING OUR FUTURE

The soils of northern Victoria are subject to considerable pressures as farmers strive to achieve profitable agricultural enterprises in the face of highly variable climatic conditions, increasing market demands, and escalating production costs.

The Farming for Sustainable Soils (FSS) project involves paradigm change. It devolves responsibility for soil protection to the regional farming communities that rely on the resource for their continued social and economic wellbeing. The North Central CMA supports and facilitates a best-practice approach based upon an adaptive community-based learning approach.

### WHY SOILS?

Australian soils have been subject to severe degradation since European settlement, through agriculture and land clearing.

Australia has always been a land of droughts and flooding rains; however, highly variable climatic conditions have been much more prevalent since the mid 1990s. Insidious soil loss is accelerated by increased susceptibility to wind erosion. The altered climate presents enormous challenges, as farmers struggle to identify and adopt new farming practices more in tune with the new circumstances.

The FSS project is assisting land managers in minimising their risks associated with wind erosion; this practice also supports the building of soil carbon.

### WHAT ARE THE ISSUES

Compelling problems arise as the more stable climate of the latter half of last century continues to give way to periods of extended drought and (most recently) record-breaking rainfall.

It is not only the annual rainfall that has changed. The seasonal distribution of rainfall is also different. In drought times our growing seasons are shortened by the failure of autumn and early spring rains, and in strong contrast intense storms bring large falls in late autumn and early summer.

The erratic nature of the climate impacts on the soil in many different ways. A few examples from drought times are listed below:

- ❖ Failed cereal crops resulting from a lack of rainfall late in the growing season are often grazed or used for hay production. Both activities deplete soil cover increasing susceptibility to wind erosion.
- ❖ The soils of lucerne pastures often blow because of a general lack of understory plants.
- ❖ Excessive rainfall in late spring and early summer produces massive outbreaks of summer weeds in cropland that have to be sprayed depleting groundcover.



Precision wheat crop at Serpentine  
Photo: Courtesy Darren Bain, North Central CMA

### PROJECT OBJECTIVES

- ❖ Community engagement
- ❖ Establish Local Area Soil Protection Plans
- ❖ Reduce the risk of wind erosion
- ❖ Support activities that build soil carbon

### PRINCIPLES BEHIND FSS

- Principle 1:** Work with socially cohesive farming communities motivated in protecting their soils;
- Principle 2:** Establish local community-based facilitators to work with groups;
- Principle 3:** Facilitate workshops that allow each group to consider a range of issues and mitigate the adoption of sustainable management practices;
- Principle 4:** Work with each group to identify the range of practices that might be adopted to mitigate soil loss;
- Principle 5:** Establish Local Area Soil Protection Plans that become the community blueprint for building sustainable farming practices;
- Principle 6:** Support groups determine their knowledge needs and resolve program to address these. For example, training programs, soil assessment programs etc;
- Principle 7:** Continuously monitor groups activities to ascertain their progress against their goals; and
- Principle 8:** Continuously provide guidance, support, feedback and motivation – success comes from caring about the issues and the people attempting to manage them.

### Soil is lost in our current climate in two fundamental ways:

Traditional land management practices leave the land devoid of vegetative cover at critical times of the year when it is more prone to both wind and water erosion. Changes in the water balance of landscapes enhance the negative impacts of traditional agricultural practices. These place pressures on the soil that lead to a loss of soil structure and resilience in the face of erosive winds and water. The loss of soil structure is accelerated by the loss of soil organic matter.

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## MAKING IT HAPPEN

***"The FSS project works with regional communities, building on knowledge and experiences achieved so far – each group reflects on their successes and lessons learnt before contemplating future investment in soils protection".***

**PHIL DYSON, Project Manager**

New groups will complement the six established since 2009. Locations will comprise a contiguous land area extending from the edge of the Loddon Basin west of Elmore across the Riverine Plains and foothills immediately east of Wedderburn in the mid reaches of the Avoca catchment. Northward will extend to Normanville in the eastern Victorian Mallee and southward will extend from Serpentine through the mid Loddon catchment west to Natte Yallock in the upper Avoca.

In 2011/2012 the FSS project will work with eight regional community groups in an effort to build a new approach to soil protection in the North Central CMA region. The eight groups comprise broad areas of North Central Victoria chosen on the basis of: (a) a well established social capacity; (b) soil landscape settings prone to erosion; (c) agricultural enterprise mix; and (d) willingness of landholders to actively participate. The six established groups include:

1. Normanville: southwest of Kerang
2. Loddon Plains: Serpentine to Drummartin
3. Lower Avon/Richardson: Donald area
4. Natte Yallock: Avoca River and adjacent Pyrenees foothills
5. Salisbury West: Salisbury West to Korong Vale
6. Mid Loddon: Marong, Lockwood, Shelbourne and Laanecoorie areas

## SOCIAL & ECONOMIC VALUES

The social values exuded by each group have been instrumental in the development and success of the project. The formation of the soils groups has enabled them to share their knowledge between each other and other soils groups. It has brought together the older generation with a vast amount of knowledge to share with the younger generation with a thirst for knowledge.

The economic values with protecting one of our most precious resources are enormous. Protecting our soils from erosion and improving soil structure will have added benefits right through the economy from farmers to the consumers.

## FUNDING AND OUR PARTNERS

The project is federally funded by Caring for our Country (CfoC) and complemented by in-kind support from landholders involved in the project.

*The nation that destroys its soil destroys itself...*  
**Franklin D Roosevelt**

## HOW THE GROUPS OPERATE

Each group prepares or updates a soil management plan following a series of workshops facilitated and supported by the North Central CMA and experienced local consultants. These plans become the *blueprint* that will afford both individuals and clusters of individuals access a grant schedule that supports the adaptation and adoption of sustainable management technologies in an environment of financial reduced risk. Each group oversees its own program.

## IN OUR COMMUNITY:

The 2<sup>nd</sup> Annual North Central Regional Soils Forum



2010 North Central Regional Soils forum  
Photo: Courtesy Imagine Pictures

*The inaugural – and highly successful – North Central Regional Soils Forum was first held in March 2010, drawing together members from participating groups and sharing both community-based knowledge and national expertise on soil management in the 21st century.*

*These free community events are planned again for both 2011 and 2012 – this year on 7 April 2011 at the Bendigo Club – so be sure to secure your attendance quickly, as places are again strictly limited.*

*The theme in 2011 will be based on soils lost to degradation and demands by a growing population. Expert keynote speakers include well known author, journalist and science communicator Professor Julian Cribb, and the newly appointed Victorian Soil Health Specialist Mr Declan McDonald from the Victorian Department of Primary Industries; as well as community members involved in the project.*

For the invite flyer and further information please visit:  
[www.nccma.vic.gov.au](http://www.nccma.vic.gov.au)



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