



South West Catchments Council

Sustainable Agriculture

Summary of Projects

Prepared by Sustainable Ag Team - August 2014

Sustainable Agriculture - Summary of Projects

SWCC's Sustainable Agriculture program aims to improve agricultural soil health, production and profits and the quality of broader environmental services. It will do this by supporting farming entities to trial new and innovative practices, monitor the response in soils, production and in some cases profit, extend results to other farmers through field days, case studies and technical reports, and support the adoption of these practices.

Funding has been provided to 31 entities, including grower groups, landcare groups and individuals, to trial and demonstrate practices across different industries and regions (**Figure 1**). Funding will run until December 2017. Together, these projects will deliver more than 70 extension events.

This document provides a brief summary of each project. Projects are divided into three categories that differ in the level of monitoring required.

If you would like to find out more about individual projects, please contact:

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South West Sustainable Farming Projects

Under the South West Sustainable Farming Initiative, SWCC has invested in on-farm demonstrations and trials focused on improved land management practices with particular attention to the adaption of practices to local conditions.

Map Code – Entity	Industry(s) - Locality	Project title and summary
SF1 - Evergreen Farming	Cropping / Grazing - Kojonup	Pasture Cropping into kikuyu in the south west of WA. Demonstrating the establishment of Kikuyu and effective pasture cropping techniques.
SF2 - Wagin Woodanilling Landcare Zone	Grazing (saltland) – West Wagin	Double-fencing for sustainable grazing management of riparian salt lands in the Upper Great Southern Region. Fencing the riparian zone and unproductive salt zone to enable establishment of perennial grass and shrub fodder and strategic grazing of the salt zone.
SF3 - Katanning LCDC	Grazing / Cropping - Katanning	Katanning Summer Cover Cropping. Summer cropping for cash crop and/or grazing and better nutrient cycling and erosion control.

SF4 - Winterbrook Farm	Beef Grazing – West Manjimup	Developing a resilient, long term perennial pasture to fill the autumn, early winter feed gap. Demonstrating how the establishment of a diverse, deep rooted perennial pasture system managed with rotational grazing can reduce the Autumn feed gap.
SF5 - Kuser-Singe Trust	Agroforestry – Boyup Brook / Mayanup	Growing Local Trees for High Value Timber: matching species to soils, and trialling establishment techniques. Matching a diverse range of local hardwoods to suitable soils and trialling establishment to increase survival and reduce duration of soil exposure.
SF6 - Dumbleyung Landcare Zone	Grazing - Dumbleyung	Using winter and summer pastures to demonstrate the sustainable outcomes of maintaining 100% annual ground cover to increase production with soil property benefits. Establishing a diverse annual/perennial mixed pasture and cell grazing to reduce feed gaps.
SF7 - Shire of West Arthur	Grazing – West Arthur	Productivity gains & environmental benefits with strategic incorporation of biodiverse Australian native species and companion grasses in a livestock enterprise. Demonstrating the use of saltbush clones, the Enrich perennial forage shrub/grass system, the new legume Messina and a new technique for sowing Puccinellia to improve cover and reduce water logging and salinity.
SF9 - Intuit Earth	Irrigated Beef Grazing – Scott River	Beef cattle nutrition through the application of biological sprays and composts to irrigated pastures. Demonstrating how compost can Increase organic carbon, plant available nutrients, mycorrhizal root associations, microbiological biomass, and feed digestibility.
SF10 - North Stirlings Pallinup Natural Resources Inc.	Grazing (saltland) - Mandarabin	Pearce Perennial Pastures Trial. Demonstrate establishment and species selection of salt tolerant plants such as sub-clovers, lucerne and tall wheat grass in mild and high saline areas.
SF11 - T G and R C Browne	Grazing (saltland) - Nyabing	Dryland Legume, Grass and Saltbush Species Trials at Nyabing. Demonstrate species selection for revegetation of partially saline land using saltbush and pastures e.g. tall wheat grass, balansa clover, lucerne, teder, messina.
SF12 - Primary Business Services Pty. Ltd	Dairy – Harvey to Dardanup (across 3 farms)	Harvey Compost and Mineral Trial. Demonstrate how the application of compost and/or

		overcoming specific mineral deficiencies will improve soil health, increase pasture production and quality without needing to increase nitrogen and phosphate fertiliser.
SF15 - Busselton Marybrook Grower Group	Horticulture (Potatoes) - Busselton/ Kaloorup (across 2 farms)	Better rotations for sustainable potato production in the Busselton-Marybrook Zone. Trial different cover crops and compare to current clover/ryegrass rotation to identify a system with better soil health recovery, yield and skin finish and reduced inputs.
SF16 - D E King and V J Nix – Boyup Brook/Mayanup	Grazing – Boyup Brook	Keyline Demonstration. Implementation of keyline farming principles such as Yeomans’ plough ripping , fodder tree planting, water management and the application of bioavailable fertilisers to increase water infiltration.
SF17 - Warren Catchments Council Inc.	Horticulture (Apples, Grapes) – Manjimup / Pemberton	Using Biological Tools in Organic Orchard and Vineyard Management. Trial a range of biological management practices including grazing with organically supplemented babydoll sheep and using poultry to incorporate manure and control pests and diseases.
SF18 - Warren Catchments Council Inc.	Manjimup Shire (5 farms – not shown in Fig. 1)	Biological Farming Network – Evidence based capacity building. Implementing biological farming practices (e.g. green manuring, compost); training farmers to monitor soil health; and developing a forum for information exchange.
SF19 - Wagin Woodanilling Landcare Zone Inc.	Grazing (saltland) - North Katanning Shire	Compost on Salt Paddock Trial. Improving soil health/saltland reclamation through composting, particularly waste product application.
SF21 Shire of Dumbleyung	Cropping - Dumbleyung	Claying demonstration to improve soil vitality of Cb4 soil. Incorporation of clay to improve soil structure and manage nutrient addition.
SF22 Wagin Woodanilling Landcare Zone Inc.	Grazing (saltland) -Wagin / Piesseville	“Mulching for microbes” saline soil health recovery trial. Use readily available byproducts such as Oil Mallee chips, Straw and Oat husks and assess impact on microbial diversity and ground cover.

Innovation on Farms Projects

Under the Innovation on Farms Initiative, SWCC has invested in on-farm trials and demonstrations with particular attention to innovative solutions to complex problems. The aim is to support previously established proof of concept results. These projects generally involve higher levels of monitoring and often include cost : benefit analysis.

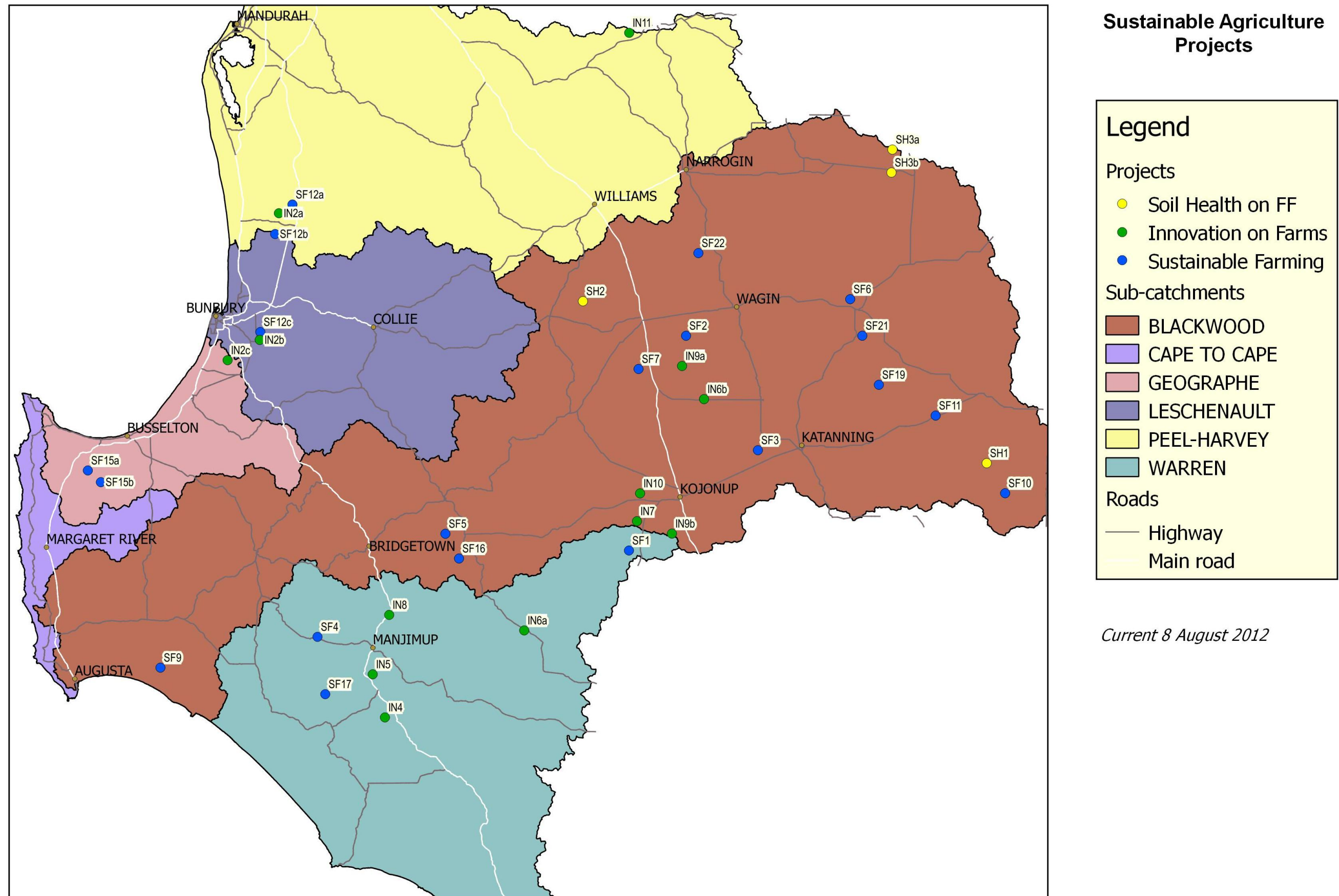
Map Code – Entity	Industry(s) - Locality	Project title and summary
IN2 - Western Dairy	Dairy – Harvey/Dardanup (across 3 farms)	Measuring the soil health and financial benefits of both on-farm composting of farm waste resources and purchasing compost. Making use of on-farm effluent in a manner that minimises leaching of nutrients.
IN3 - Warren Catchments Council Inc.	Grazing – Warren Catchment (8 farms – not shown in Figure 1)	Dung beetles - delivering ecosystem services that improve grazing productivity. Release dung beetles to incorporate manure and investigate soil health improvements, land management practices that enhance populations and cost effectiveness.
IN4 - Warren Catchments Council Inc.	Horticulture (Potatoes) / Grazing - Pemberton	Introducing diverse perennial pastures into potato/pasture rotations to improve soil health and pasture and potato yield and quality. Comparing a rotation of diverse perennial systems to current pasture systems.
IN5 - Warren Catchments Council Inc.	Horticulture (Avocados) - Manjimup	Productivity gains from biologically active soil initiated through biochar activated compost in an avocado orchard. Investigate the effect of incorporating biochar compost in soil, prior to planting avocado trees, on soil structure and waterlogging.
IN6 - Evergreen Farming Inc.	Grazing (saltland) - Woodanilling and East Manjimup (4 farms – 2 sites not shown in Fig. 1)	Improving the productivity and sustainability of saline valley floors by combining the new salt and waterlogging tolerant annual legume messina with existing perennial grass pastures. Evaluating the introduction of messina into pastures / saltbush and comparing messina with balansa clover.
IN7 - Southern Dirt	Cropping - Kojonup	Balancing investment in phosphorus and lime to lower Phosphorus losses and increase profit.

		Trialling the response of crops on soils with excess phosphorus and low pH to reduced phosphorus and increased lime application.
IN8 - Manjimup Pasture Group Pty. Ltd.	Grazing / Horticulture - Manjimup/Palgarup	Using grazing cereals and perennials in the high rainfall zone to increase farm productivity while improving soil and plant diversity. Establishing perennials with cereals to maximise soil health and provide a source of income during the perennial establishment phase.
IN9 - Bugs and Biology Growers	Cropping - West Wagin and Kojonup (across 2 farms)	Crop nutrition to increase the financial and soil bank balance. Trialling alternative nutrient management strategies aimed at improving soil health and compare to conventional approaches to increase farmer knowledge and confidence.
IN10 - Blackwood Basin Group Inc.	Cropping – Kojonup/Muradup	Maximising Benefit From Crop Residues: Practical stubble retention practices in mixed farming systems of WA. Demonstrating soil health benefits of promoting stubble breakdown using stubble crunching and fish emulsion compared to burning.
IN11 - L J and L Page and Co.	Grazing - Pingelly	Incorporation of perennial Australian shrubs (Enrich) into whole-farm management. Demonstrating the benefits of Enrich, the mixed forage system of perennial shrubs and inter-row pasture, to animal health, feed availability and groundcover.

Soil Health on Focus Farms

Under the Soil Health on Focus Farms Initiative, SWCC has invested in on-farm trials and demonstrations with particular attention to soil constraints on productivity. These projects involve in-depth monitoring and analysis and have a rigorous trial design.

Map Code – Entity	Industry(s) - Locality	Project title and summary
SH1- RN &CJ Hobley	Cropping/Grazing –Nyabing	Investigating impacts of including pasture in cropping rotations on soil pH and biology. Comparing rotations of pasture with canola in between cereal crops to assess the differences in soil health in particular soil pH and soil biology.
SH2 - Nisaja Nominees Pty Ltd	Grazing – Darkan	An independent investigation into the soil and plant health differences between conventional and two alternate fertiliser treatments on farm land. On farm trial to determine the efficacy and action of two commercial custom fertiliser products from Hi Tech Ag and Australian Mineral Fertilisers against a conventional control to establish their effects on soil health, mineral availability and yield.
SH3- Global Pasture Consultants Pty Ltd	Grazing - Wickepin	Improving soil health and sheep production through establishment of the perennial legume “lebeckia” on non-wetting, deep sandy soils. On farm trail to assess the soil fertility benefits of lebeckia and to improve methods of establishment and to harvest seed to enable larger sowings.



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Figure 1