Organic amendments
Local trials and demonstrations

Past trials
• DEPI and La Trobe University
• DNRE, State Chemistry Laboratory
• Surf Coast and Inland Plains Network

Current Trials
• Southern Farming Systems
• Woady Yaloak Catchment Group
• DEPI and Upper Barwon Landcare Network
• Monash University
DEPI and La Trobe University

Subsoil manuring on problem clay soils (2005-11)

- Poultry litter or lucerne pellets

RESULTS

- Grain yields increased on average by 60%
- Improved the physical properties of the clay subsoil (macroporosity)
- Increased the water holding capacity of these soils

More information:
DNRE, State Chemistry Laboratory

A long-term study into compost applications for broadacre cropping

- Established on a broadacre site at Southern Farming Systems, Gnarwarre
- Compost applied at 10 different rates, replicated 6 times
- Compost derived from wool scour sludge and timber fines

RESULTS (2001 –2002)

- Soil moisture increased significantly with increasing compost application
- Soil bulk density decreased and porosity increased as well as a significant increase in soil organic matter content
- No significant differences in crop parameters after first year

More information:
Surf Coast and Inland Plains Network

Soil First Project (2012/13)
• Short 12 month trial
• Assessed the impact of lime and biological products on soil acidity, soil biology and dry matter production
• Compost and biochar trialled

RESULTS
• Lime was shown to increase pH but the biological products alone had no effect on pH
• Neither the lime nor the biological products made a significant difference to soil biology levels
• Neither compost nor biochar had a significant impact on dry matter production

More information: email: scipn@bigpond.com or phone: 03 5226 1707
Southern Farming Systems

Commercialisation of subsoil manuring (2014-16)

• Trials at Inverleigh, Wingeel and Westmere
• Assessing compost, prill, municipal green waste, wheat stubble with added N and a fresh legume
• Design and development of commercial machinery

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Woady Yaloak Catchment Group

Evaluating alternative fertilisers and biological products for pastures and crops

• Pig and poultry manure, biosolids, Seasol, Powerfeed, Nutrisoil, compost
• Some products tested on all 8 sites but others only tested at only 1 or 2
• Products applied at rates recommended by the supplier and not to balance nutrient supply
• Results are for 3 years of the project
RESULTS (2009-2011)

- Pig manure increased pasture production and crop yield to a lesser extent
- Poultry manure increased pasture production but not crop yield
- Manures proved to be a cost effective alternative to traditional fertiliser
- No significant effects were recorded for biosolids, Seasol, Powerfeed, Nutrisoil, or composted products


DEPI and Upper Barwon Landcare Network

Surface and subsurface compost application to address subsoil constraints (2014-2016)

- 3 year demonstration in Irrewarra
- Goal is to improve production on a heavy grey clay, with sodic sub-soil
- Surface applied compost (produced on farm, wood chips, yard scrapings)
- Sub-soil manuring using chicken litter
Monash University

Decreasing dairy farm greenhouse gas emissions and building soil C (2012-2015)

• Assisting farmers to make compost out of dairy waste
• Reduce reliance on inorganic N fertilizers
• Increase soil carbon
• Enable farmers to make better decisions on the use of soil amendments

Summary

• Manures have been shown to increase plant production
• Compost has been shown to improve soil structure and water holding capacity
• Lots of trials have been done and even more are in progress but not always easy to find results
• Changes in soil parameters take time and short term trials won’t measure this