Healthy Country

managing the land for healthy waterways

FarmFLOW Framework - Sustainable Production Systems Extension for Healthier Waterways

Authors: Brian Stockwell, J. O'Halloran, Z. Nicholls, I. McConnel.

FarmFLOW – growth through good practice

The Queensland Primary Industries and Fisheries (QPI&F) FarmFLOW component of the Healthy Country project provides extension and agricultural economic support to landholders to enhance the adoption of best management practices for soil, nutrients, grazing land and wetlands. The focus is on practices that can improve production, profitability and viability as well as reducing nutrient and sediment movement into local catchments and eventually Moreton Bay.

Pineapple producers learn about soil water monitoring from peer who also grows avocadoes.

Activities include on-farm demonstrations, trials, field days, BMP and economics workshops, property management systems training and one-on-one extension services aimed at optimising farming system inputs, improving land condition, reducing soil erosion, nutrient leaching and runoff. These activities all deliberately interconnect the social, biophysical and economic elements of sustainable food production in a practical and observable manner.

Target

By 2012, 30 percent of landowners in targeted high risk sub catchments adopt recommended land-use management practices for nutrient management, soil conservation, wetlands protection and restoration, acid sulphate soils and water quality improvement.

FarmFLOW Extension Framework

The FarmFLOW framework has been designed to respond to the diverse production landscapes of South East Queensland where multiple intensive farming systems occur within a broad mix of residential, recreational and conservation land uses. FLOW is an acronym standing for farmers learning and observing good water and land management. The key elements of the FarmFLOW framework are depicted in *Figure 1*.

Novel aspects of this area-wide, adaptive management approach include:

- Working in defined high value agricultural landscapes in subcatchments that demonstrate a high risk to downstream wetlands and waterways;
- Developing extension networks based on creating district 'hubs' which connect various grower group 'clusters' at a scale where all industries share a similar 'sense of place';
- Undertaking social network and economic characterisation as well as benchmarking best practice adoption and barriers and motivators for change;
- Sharing knowledge across industries through cross-sectoral extension activities as well promoting adoption of commodity specific best management practices.
- Monitoring the impact of these activities on the soil and water resources at a plot and subcatchment scale.

FarmFLOW designs solutions to hydrological problems by working within and across defined social catchments. The approach aims to link specific commodity 'communities of practice' to natural resource management 'communities of interest' into a 'community of place' working toward shared goals for landscapes, lifestyles and livelihoods.

Results to Date

QPI&F have been piloting this FarmFLOW partnership approach with SEQ Catchments and SEQ Healthy Waterways Partnership, industry and community in the Pumicestone since 2005. Diffuse sources of pollution in this catchment are driving algal blooms and the decline of oyster farming. Fifty- seven (57) producers are now actively involved in this locality. In 2008 the Healthy Waterways Report Card showed that freshwater streams in this catchment have improved in four out of five water quality indicators.

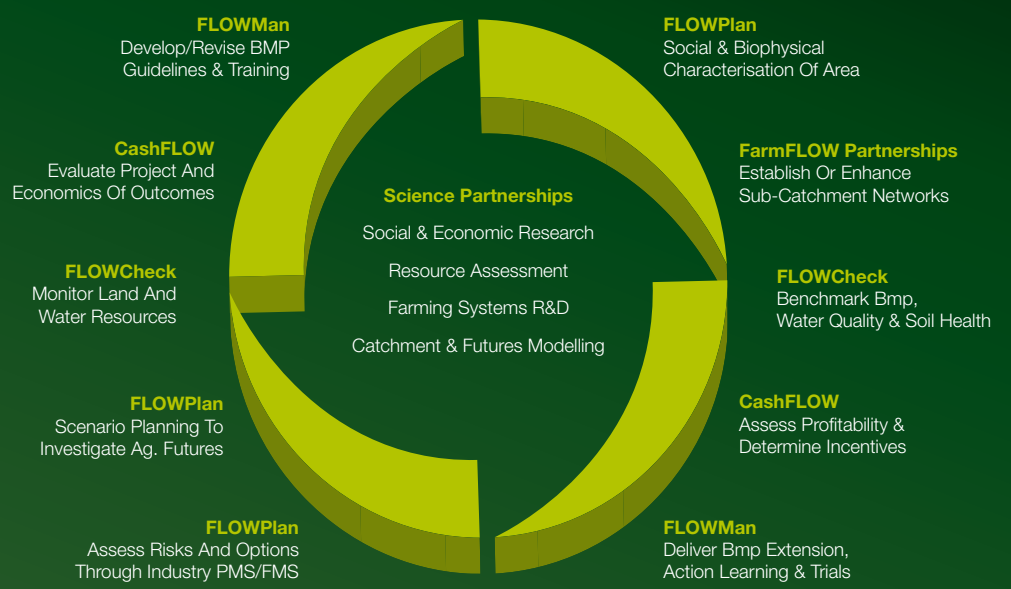

Figure 1: *Conceptual Diagram of FarmFLOW Extension Framework*

Based on the success of this pilot the Healthy Country Project employed additional extension officers and an agricultural economist to expand the approach in the Lockyer, Bremer, Logan-Albert catchments. Primary producer and industry engagement and action learning has expanded greatly under this project (*Figure 2*).

Benchmarking of adoption of BMP is still in its early stages. Initial benchmarking across horticulture in the target catchments shows some positive trends including:

- Nutrient Management – there is a high adoption of soil testing (95% in some areas) but on average only 55% of growers currently use this to inform fertiliser application rates.
- Trickle irrigation which reduces nutrient leaching is used by the majority of irrigators at least some of the time (55% in Lockyer & Bremer, 77% in Pumicestone)
- Comparison between 2008/ 2009 surveys show small but encouraging improvements in the rate of adoption of recommended BMP (eg. *Figure 3*).

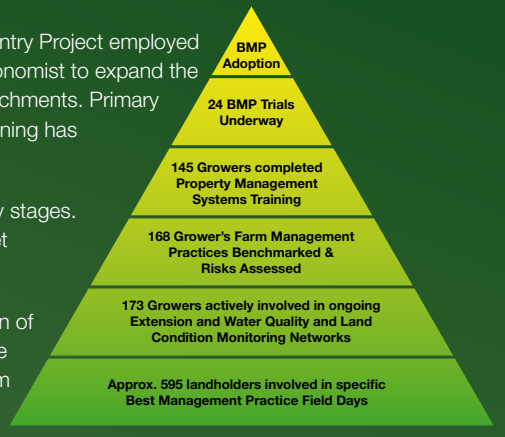

Figure 2: *Summary of Landholder Action Learning Involvement Aug. 2008 to July 2009*

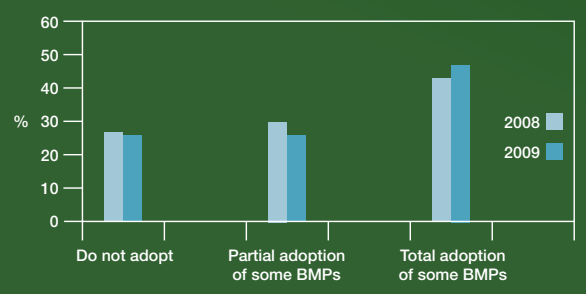

Figure 3: *Biannual Best Management Practice benchmarking results for the Pumicestone Catchment. Results indicate if a particular practice was adopted as not at all, some of the time (partial) or all of the time (total).*

SEQ Catchments

Healthy Waterways — Because we're all in the same boat

Queensland Government

SEQTOA