

Developing a Methodology to Engage the Unengaged to Improve Sustainable Land Management

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Abstract

The long-term objective of the “Better Beef for the Reef” project was to contribute to reduced sediment run-off into the southern Great Barrier Reef while increasing on-farm profitability, productivity, and sustainability. Located in the Burnett-Mary region on the east coast of Australia, the project focused on improving engagement with livestock farmers who rarely or never engage with government and natural resource management groups.

The extension approach to engage previously ‘unengaged’ farmers was based on the “farmer-first” philosophy, initially promoted by Robert Chambers (Chambers et al. 1989; Scoones and Thompson 2009). Engagement and extension activities were tailored to the needs of individual farmers. Engaging farmers one-on-one at cattle and bull sales was one of the most effective engagement methods used. Farmers attended group workshops and field days on grazing land management, property mapping and genetic selection. Some approaches were/are not currently common engagement methods in Australian agriculture extension practice and were found to be instrumental in building relationships and trust. One-on-one extension complemented these activities to address farmer needs and achieve land management practice change.

Results indicate that extension needs to be context specific. In this case study, previously ‘unengaged’ farmers responded best to one-on-one methods such as property visits. Despite the short three-year timeframe, this project was successful; engaging closely with 45 grazing businesses, who own approximately 15,000 ha of land and 14,500 head of livestock cumulatively. 85% of ‘unengaged’ farmers improved their knowledge or skills in sustainable land management and implemented a practice change that contributes to water quality improvement, such as remediating gully erosion and implementing rotational grazing.

Introduction

Extension officers are technically qualified, professional communicators and play a critical role in establishing effective relationships and facilitating the adoption of enhanced farming practices in Australian (Williams *et.al* 2020). They work closely with farmers to disseminate current research, information, and services to encourage and support voluntary change and increase awareness, skills and motivation. An improvement in production, profitability, environmental and/or social outcomes can often be observed as a result of effective extension (Coutts, 2017).

In efforts to reduce environmental impacts on the Great Barrier Reef, challenges are placed on extension officers in Queensland to support landholders with information and resources to undertake practice change in priority catchments. Many extension service providers, such as government departments and natural resource management groups have continued to feel the pressure of reaching a wider audience and work with new cohorts to improve environmental outcomes for the Great Barrier Reef water quality. Continuing to grow the diversity of businesses that access government and natural resource management projects to undertake change has meant that working with ‘unengaged’ farmers in these catchments is now essential.

‘Unengaged’ farmers are often the most difficult to engage with and achieving practice change can be challenging, particularly within the short timeframes of funded projects. A distrust of government or associated organisations can contribute to this difficulty in some instances. A better understanding of motivations and barriers for engaging and adopting new practices and building rapport is needed in this group to deliver effective extension as well as building rapport. This paper explains how the Better Beef for the Reef (BB4R) project successfully engaged with previously ‘unengaged’ farmers. It evaluates key techniques that can be integrated into extension delivery to increase engagement and practice adoption with ‘unengaged’ farmers.

Methods and Study Site

The BB4R project was delivered in the Burnett-Mary region of Queensland, Australia. It utilised Geographic Information System (GIS) spatial data to prioritise grazing properties in the Burnett Mary region that were below major water reservoirs that trap sediment from upstream flows. Spatial ground cover data from 1986 – 2013 helped to identify properties with long term bare ground that would result in medium to high soil or streambank erosion risk. These identified properties could then be targeted within the priority area. Spatial data was ground truthed during property visits and analysed by local members of the project steering committee.

The Stakeholder Targeted Engagement Process (STEP approach was developed by the Burnett Mary Regional Group, a not-for-profit natural resource management organisation working in the Burnett-Mary region. STEP provided guidelines for engaging previously ‘unengaged’ farmers in the cattle industry through the BB4R project. The four ‘steps’ are sequential and iterative:

1. **[S] Stakeholder/s** identification – Define and identify a target audience/priority area. Benchmark current grazing practice standards inside the project priority area.
2. **[T] Targeted** – Discuss grazing practices with farmers, noting their current needs, barriers to adoption, social networks, and values. Extension officers should identify and consider these during one-on-one extension e.g. property visits. Spatial and desktop analysis should be conducted prior to the visits to identify and target the ‘unengaged’ farmers.
3. **[E] Engagement** – Develop and/or source products, tools and services that address identified and emerging needs, following up one-on-one with farmers,
4. **[P] Process** – Evaluate extension methods, learnings, feedback and practice changes (knowledge, skills, attitudes, motivations and practices); and frequently refine extension methods to improve reach and engagement with ‘unengaged’ farmers.

The key extension principles inherent in the STEP approach are important when working with previously unengaged landholders and some examples from the BB4R project include:

- [S] - Stakeholder: Using local networks, common meeting places and recognised information sources to reach targeted landholders;
- [T] Targeted: Engage, especially initially, at locations where landholders are familiar and comfortable e.g. cattle saleyards;
- [E] Engagement: Provide information, services and activities that put landholder needs first, and do not determine needs from institutional goals;
- [E] Engagement: Provide information in a timely manner, being cognisant of landholder timetables;
- [P] Process: Use adaptive learning processes within the extension, frequently reviewing and adapting extension and engagement techniques.

A multi-faceted approach to extension was utilised e.g. mail outs, cold calling, posters and livestock sales. These extension methods were evaluated by the Grazing Extension Officer and members of the steering committee for their effectiveness, consistently over the life of the project.

Results

The BB4R project successfully engaged 45 grazing businesses and funded five on-farm demonstration sites over the three-year period. Engagement methods included face-to-face meetings, telephone calls, cold calls, events and 93 property visits. Approximately 150 producers attended 7 workshops and field days covering various topics, predominantly production focused, such as beef cattle genetic selection, pasture identification, reproductive diseases, property mapping, grazing land management practices, soil conservation and erosion remediation techniques.

Practice change achieved by the BB4R project was significantly higher than the experienced steering committee anticipated would be achievable in the timeframe. Farmers adopted 17 practices that were measurable under the Australian and Queensland Government’s Paddock to Reef (P2R) Integrated, Monitoring, Modelling and Reporting program (BMRG, 2020). The P2R program evaluates management practice effectiveness for water quality benefits, catchment condition, pollutant runoff and marine condition.

One-on-one extension was the most effective and efficient way to engage ‘unengaged’ farmers and is a preferred method common among farmers in Australia (e.g. QFF 2020). Various methods were adopted by extension officers in the BB4R project to stimulate one-on-one extension, and many of these were innovative and not widely reported in extension services currently. Engagement methods commonly used in Australia such as expressions of interest for

funding, social media and letters were not as effective for engaging ‘unengaged’ farmers. The effectiveness of methods was evaluated based on landholder engagement and participation by an independent evaluator, Dr Dana Kelly. Methods have been outlined in Table 1. Effectiveness of Methods.

Table 1. Effectiveness of Methods

Method	Effectiveness
Community and industry networking, attending events etc.	Effective for networking and building rapport with grazing community, local stakeholders and agribusinesses (e.g. local veterinarians, produce agencies and livestock agents).
Posters in shops and community centres	Very effective to establish good networks in the local community and to find potential properties for demonstration sites.
Cattle and bull sales	Very effective to establish community presence, build rapport and credibility.
Workshops, field days etc.	Limited effectiveness in engaging ‘unengaged’ landholders. Effective for changing motivations, developing skills and knowledge as well as establishing rapport and presence in the grazing community. Events do not always lead to practice change in the first instance and require additional one-on-one extension to achieve implementations.
One-on-one extension e.g. Property visits and access to technical experts.	Very effective to achieve long-term practice change especially when used in conjunction with other methods such as networking (cattle sales), workshops and incentives etc.
Incentives for farmers	Effective to achieve short-term practice change.
Peer-to-peer learning	Effective to achieve motivational change which could lead to long-term practice change.

It was time consuming to effectively engage with the ‘unengaged’ and subsequently achieve practice change, when using the methods outlined in Table 1. The more time spent implementing each method, and combination of methods, improved outcomes achieved with farmers e.g. motivational or practice change. It is well documented that achieving engagement and practice change can be challenging in short timeframes and that the most effective method is to build strong relationships.

Discussion

Through the BB4R project, extension and engagement methods evolved over time as innovative methods continued to be trialled. The STEP approach recommends an on-going process of adaptive and reflective project management where outcomes and extension methods are continually assessed, evaluated and refined. An important lesson from this project is to adopt a multi-faceted approach to extension methods that build relationships and trust between extension officers and ‘unengaged’ farmers. Some of these methods utilised through the BB4R project are outlined in Table 1.

Extension officers recognise that providing information in the absence of on-going one-on-one extension has limited impact on encouraging long-term practice change (Bennett 1975). In this project, building trust, credibility and strong working relationships with the farmer was prioritised and achieved through one-on-one extension, often during property visits. Strong relationships created a foundation for farmers to consider making changes to their land management practices over time. It can take years before extension activities can be attributed to improvements or change. Shifts in knowledge, awareness, skills, attitudes and motivations are sometimes all required before practice change can occur (Bennett 1975). Practice change with farmers is achieved incrementally over time and in most instances, takes longer to achieve with the ‘unengaged’ due to their distrust and low level of previous engagement with extension services. Building relationships, forming trust and working together with farmers to implement their production goals is critical in achieving long-term practice change. It cannot be skipped, fast tracked or overlooked.

One-on-one extension methods that encapsulate Robert Chambers’ (Chambers et al. 1989; Scoones and Thompson 2009) ‘farmer-first’ philosophy should form the foundation of any approach, as these in combination are known to be the most effective (Coutts et al. 2017), especially for encouraging long-term practice change. The farmer-first principle proposed that information be provided in response to landholder questions, rather than providing information based on institutional goals. Farmers in Australia tend to be predominantly interested in topics related to increased production (Keuhne 2018) and this was supported by findings in the BB4R project. Information was also provided in a timely manner in response to farmers direct questions, current concerns, and long-term goals. Being cognisant of farmer timetables and changes to seasonal conditions such as prolonged drought and extreme fires was critical to engaging and achieving practices change. Extension officers intentionally acknowledged farmers beliefs

and values when tailoring information as it was found that they could be important motivating factors influencing behavioural change (Gilmore et. al 2011).

A strong network of relationships with stakeholders such as industry groups, agribusinesses and the local grazing community worked well in conjunction with engagement methods adopted. Building mutually beneficial relationships and working in partnerships with stakeholders such as livestock agents, produce agencies and veterinarian clinics was very effective for engaging a wider audience in this project. Identifying and delivering events and learning opportunities in partnership with these stakeholders was effective for reaching new 'unengaged' farmers and producing a platform for further engagement and extension. This works particularly well because stakeholders building working relationships with landholders and involving them in project delivery can help to build on these relationships and existing credibility, particularly if they endorse the extension officer.

In the BB4R project, community events such as bull and cattle sales proved to be very effective for finding and meeting previously 'unengaged' farmers. Cattle sales provide a comfortable and familiar environment for farmers where many go to socialise, network with their peers, keep up to date with market trends and sell their livestock on occasion. It was found that farmers were more receptive to engagement when they regularly saw the extension officers at various community and industry events such as cattle sales. Particularly if their trusted peers/advisors were regularly engaging with the extension officer, both socially and professionally. Credibility, rapport and trust within the grazing community was built through this method and it positively contributed to engaging the unengaged.

The knowledge, skills, background, and personality of extension officers is also critical for success. Experience in the agricultural industry and/or living in rural areas is very useful for those providing advisory services, especially to 'unengaged' farmers. Being able to converse in language that farmers understand and about topics of interest to them helps to establish relationships. A technical proficiency and understanding, and/or access to experts equipped with a broad range of property, land and livestock management knowledge was particularly valued by farmers in this project. The ability to discuss aspects of the 'whole business', from finance to cattle nutrition was beneficial to engaging the 'unengaged'. Farmers were particularly interested in ruminant nutrition, increasing weight gain or calving percentages as well as remediating erosion. As Coutts et. al (2005) explains: "A major factor in supporting on-farm change is having a trusted advisor who can help work through the relevance, implications and practical implementation of new approaches on an individual farm.

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