

Peer support model as catalyst for change

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Abstract. An overwhelming response to biofertiliser courses delivered by community-based family enterprise RegenAG® and hosted on-farm by landholders in central Queensland, with the support of Fitzroy Basin Association (FBA), was the catalyst for forming a community of practice for peer-to-peer support and mentoring in regenerative agriculture. Regenerative agriculture promotes reduced costs and environmental impacts, making it a highly relevant and important alternative to traditional agriculture. Combining this practice with a peer-to-peer learning format acknowledges regionally specific contexts, recognises the human imperative for connection, encourages shared learning, and empowers participants to drive the direction and objectives of the group. This has proven to be a highly effective approach, with members reporting improvements in plant vigour, yield, quality and resilience, as well as their knowledge, skills and confidence. They also attest to feeling encouraged and more supported through the networking process, which is expected to attract buy-in from other landholders.

Keywords: peer-to-peer mentoring, regenerative agriculture, Fitzroy Basin

Introduction

The work of private landholders is increasingly being recognised as critical for the restoration and protection of natural assets. At more than 156 000 square kilometres, the Fitzroy region in central Queensland is the largest cattle producing area in Australia (Meat and Livestock Australia 2019) and includes the largest catchment flowing to the Great Barrier Reef lagoon. With agriculture the dominant land use (Department of Agriculture 2019), extension initiatives are integral to promoting and supporting land management practices for sustainable agriculture, climate resilience and optimal environmental outcomes across the region.

An overwhelming response to RegenAG® Biofertiliser courses held in Banana and Nebo in September 2018 was the catalyst for forming a community of practice for peer-to-peer support and mentoring in regenerative agriculture. The workshops were coordinated by Fitzroy Basin Association's (FBA) Regional Agricultural Landcare Facilitator (RALF), delivered by community-based family enterprise RegenAG® and hosted on-farm by local landholders. These built upon interest in masterclasses delivered by internationally renowned regenerative farmer, Joel Salatin whom FBA brought to central Queensland in early 2018. FBA's establishment of the peer-to-peer group signifies a dedicated investment in ground-up, landholder and partnership driven initiatives. Turn towards this approach has come about in recognition of the complexities inherent in operating at multiple scales – from individual enterprises to a whole of catchment level – and the need to consider the human dimensions of natural resource management to achieve widespread and lasting practice change.

Regenerative agriculture

With the agricultural industry subject to ongoing market and climate volatility, landholders are increasingly interested in alternatives to conventional farming practices. With its genesis in the 1980s, regenerative agriculture challenges mainstream production models and moves beyond simply sustaining systems (Rodale Institute 2019). Instead, regenerative agriculture is interested in rebuilding, restoring and regenerating the farming landscape (Massy 2017; Rhodes 2017). This includes improving soil microbiology, enhancing biodiversity on a broader scale, reducing chemical use for cleaner air and water, valuing social capital, respecting natural processes, and ultimately producing more nutrient-dense food (Massy 2017). In this way, regenerative agriculture seeks to work with nature rather than competing with or depleting it. The practice promotes high standards of welfare and fairness, while emphasising the relationship between soil health and productivity (Rodale Institute 2019).

Peer-to-peer learning

The link between effective learning and positive relationships has been recognised in education and other disciplines for decades (Cozolino 2013). As the brain is 'a social organ' (Cozolino 2013), observation and modelling others is the natural foundation for learning from infancy. As stated by Henson and Rossouw (2013, p. 175) 'research has also demonstrated that we learn best from observing and being taught by a peer compared to someone that we perceive as dissimilar to ourselves'. In contrast to the traditional one-way transmission of information from an identified instructor or expert, peer-to-peer learning invites the sharing of ideas and personal experiences among landholders (Kueper et al. 2014) in what is considered a safe environment. This approach may lead to increased involvement from landholders not engaged by other extension models

(Kueper et al. 2014). Due to its communal and social nature, peer-to-peer mentoring appeals to a variety of participants and lends itself to multiple forms of facilitation including online platforms.

Catalysing change

With 84% of the Fitzroy region under an agricultural landuse, of which 78% relates to livestock production (Department of Agriculture 2019), it is imperative landholders employ best management practices to mitigate the negative externalities of agricultural production. FBA works with a range of land managers to foster a sustainable, productive and profitable region. In collaboration with these stakeholders, FBA supports the adoption of sustainable practices for a healthy catchment, whilst promoting a balance between industry and the environment.

The feedback from biofertiliser course participants demonstrated a keenness to not only implement learnings from the initial sessions but importantly, a genuine readiness to discover more and continue the learning process with RegenAG® specifically. With restoration of soil health and enhanced biological function at its core, regenerative agriculture appealed to participants as a means of addressing land degradation and improving productivity. However, confidence to undertake new practices without further guidance was low. This prompted FBA's RALF to explore a different model to share learnings and build participants' self-efficacy.

Self-efficacy, being belief in one's ability to successfully carry out an activity and produce a desired result (Stajkovic & Luthans 2002), is important for the adoption of new practices. Like self-confidence, self-efficacy is linked to motivation and incentive to act (Stajkovic & Luthans 2002), which in the context of implementing new techniques was necessary to harness or enhance as participants looked to apply regenerative agriculture on their own properties.

The process

The practice of regenerative agriculture, advocating ecological understanding and connectedness as key tenets, demonstrates an environmentally and socially dynamic way forward for enterprises that also can provide a financial return. Aware of a growing interest in regenerative agriculture across the region, FBA's RALF initiated the two original RegenAG® Biofertiliser courses. An overwhelming response to these sessions led to the formation of a community of practice for peer-to-peer support and mentoring.

Although a new approach for FBA, staff and management were keen to support the establishment of a landholder peer-to-peer mentoring group. Funding and support for a project of this nature was made available through the Enhanced Extension Coordination program.

Initially, attendees of the first RegenAG® Biofertiliser courses were contacted with the opportunity to submit an expression of interest to establish a trial site on their property. This was a twelve-month commitment for longitudinal collection of quantitative data from baseline testing in soil condition including pH, carbon and nutrient content. It was important to gain support from a range of enterprises to demonstrate the benefits of regenerative agriculture across a variety of industries. Of nine expressions of interest, six properties were selected as trial sites, representing irrigated grazing, irrigated cropping, dryland grazing and dryland cropping.

Twenty-four individuals from sixteen enterprises, all of whom attended the original RegenAG® Biofertiliser courses, subsequently joined the peer-to-peer mentoring group. Goals, processes and timeframes were established by group members at a planning and networking meeting held at the outset of the project. This set the tone for subsequent gatherings and bolstered members' sense of ownership for decisions made and the direction of the group. It also reinforced participants' shared goals around determining the suitability of regenerative agriculture practices for their specific industry, location and scale of enterprise. Further to this, members also investigated the process of forming a buying group to enable bulk purchase of biofertiliser materials and to share transport costs. This approach also supported development of group norms around valuing soil health and composition through a reduction in synthetic inputs.

The design of the project saw landholders with trial sites receive regular technical support from RegenAG®, which they in turn shared with members of the peer-to-peer mentoring group. Other participants also had the benefit of ongoing guidance from RegenAG® in the form of monthly group video conferences (i.e. Zoom meetings) and field days held on a quarterly basis. This resulted in some landholders establishing additional trial sites of their own accord. Importantly, all video conferences were recorded making it possible for participants to revisit discussions or catch up outside of assigned sessions if necessary. Members also stayed in touch with one another to discuss risks, failures, successes and discoveries. This is a critical component of the peer-to-peer learning process, whereby landholders can implement new practices and adapt approaches based on shared understanding and experiences. This process effectively cultivated a safe learning

environment and increased participants' confidence to adopt new practices. As reported by one member:

Contact with our peers within the group has also been crucial as we give each other moral support and encouragement and share success and failure and learn from each other's mistakes and wins, hence expediting the success of implementing these new concepts (P12).

Although enthusiastic and committed, participating landholders explicitly expressed the need for a designated facilitator to organise formal activities. To this end, FBA's RALF provided administrative assistance and helped to sustain rapport and relationships within the group. The RALF's role in listening to, then delivering on landholder requests was instrumental to the group's achievements. As acknowledged by one participant:

Without the Peer to Peer Mentoring Group I have doubts as to whether or not we would have gone ahead with the BioFerts. Mentoring is important to give people confidence to put into place what they have learnt at courses (P2).

Results and lessons learned

Flexibility of delivery model

Agriculture in the Fitzroy Basin is heterogeneous. Differences in enterprise focus, business approaches, access to off-farm income sources, size and number of properties, landholder training and education backgrounds, generational factors and more mean flexibility in extension is paramount. The peer-to-peer mentoring group model, combining face-to-face and hands-on field days with online correspondence and recorded meetings, enabled participants to adjust their involvement to suit individual time constraints and commitments. Adaptability is a definite strength of this model, which includes its application not being limited by geographic isolation. One participant described a main benefit of the experience as:

Being able to meet together (without having to go anywhere) to ask questions along the way. There have been so many questions that have come up as we have implemented these practices. I think that implementation without this support would have been really difficult (P14).

Trial sites and risk management

While exposure to a new practice and the ability to build competence in a collaborative learning space is important, the economic viability and success rate of the approach in question is also vital. The trial sites exhibited excellent results in terms of plant vigour, yield, quality and resilience under RegenAG® practices. Grass and crop response in the face of harsher, dryer conditions exceeded participant expectation. Yield in cereal crops reportedly increased by two tonne per hectare, with grazing enterprise trial sites experiencing an increase in animal feed utilization leading to higher weight gain and more return on commodity. With tangible improvements evident from early on, some landholders were quick to expand practices more widely across their properties. Survey data collected at the end of the first year revealed all participants would recommend the practice of regenerative agriculture to a friend or colleague (likelihood of recommending regenerative agriculture practices: *extremely likely* – 82%, *very likely* 12%, *moderately likely* – 6%).

Establishment of the trial sites allowed participants to safely engage in the risk of carrying out new practices – essentially 'trying before buying' – prior to personally committing to practice changes. This was also important for building participant self-efficacy, with the positive experiences of peers and the practical nature of field days demonstrating a relatable and mutually achievable success story. Encouragingly, feedback collected at the end of the first year indicated all participants would recommend the peer-to-peer mentoring group to a friend or colleague (likelihood of recommending peer-to-peer mentoring group: *extremely likely* – 71%, *very likely* – 23%, *moderately likely* – 6%).

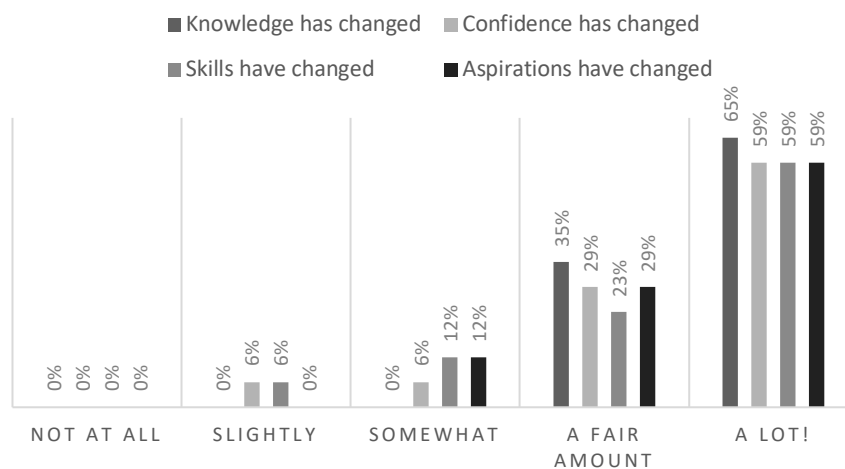
Buying group

The buying group idea received widespread support and has facilitated ongoing connection between participants. Working cooperatively to organise materials and place orders has saved time and money and empowered group members to turn to each other for collaborative solutions to the challenges of improving farming landscapes.

Human dimensions

A follow up survey asked participants to indicate how much their knowledge, confidence, skills and aspirations had changed because they were involved in the peer-to-peer mentoring group for a year. Survey results showed over 80% of participants' knowledge, confidence, skills and aspirations had changed *a lot* or *a fair amount* (see Figure 1).

Figure 1. Aggregated results of feedback from peer-to-peer mentoring group participants on the rate of change in their knowledge, confidence, skills and aspirations because they participated in the project



Anecdotal feedback and qualitative survey responses reveal connection with like-minded people was a key benefit of the project. This was reflected in comments such as:

Sense of belonging, which gives you the confidence to be able to ask any question from the different enterprises without being judged and given a honest answer' (peer-to-peer mentoring group participant, P11).

The rapport and common ground established through the reciprocal learning environment also saw members discuss other important issues such as pasture dieback, drought and rural mental health. Group dynamics and the overwhelming success of the regenerative agriculture practices implemented with the expert support of RegenAG® has led to a change in mindset. Not just of some participants who may have initially been somewhat hesitant, but of generations within the one family or business entity. This is demonstrated by comments such as 'It has been pivotal to me implementing here as the older generations would have had me quit on it months ago and now we can all see the benefit!' (peer-to-peer mentoring group participant, P12). This has led to an increase in advocates of the practice of regenerative agriculture and a diffusion of the science underpinning it.

Moving forward

The project aimed to improve participants' capacity to adopt low cost, effective and efficient soil restoration practices to support sustainable and productive enterprises. By all accounts, involvement in the peer-to-peer mentoring group has been a positive and empowering experience that has achieved those goals. As stated by one participant 'The twelve mentor sessions we had have given me the confidence to now keep going with this entire concept and do it well' (peer-to-peer mentoring group participant, P3).

There is resounding interest in sharing learnings and continuing activities together. Moving into the second year, members are now looking to bring in other key speakers and experts to compliment the innovation and practice change already underway.

Next round of peer-to-peer mentoring groups

Word of mouth from the success of the first peer-to-peer mentoring group has spread, resulting in a second cohort of interested participants from RegenAG® Biofertiliser courses held in Moura and Springsure. The next round of workshop attendees is also working towards formation of a similar group to the first to continue their learning with like-minded individuals from across the Fitzroy region. In this way, the peer-to-peer approach has proven effective at creating networks, disseminating information, and engaging geographically dispersed landholders. Although still in the preliminary phase, the second peer-to-peer mentoring group is expected to follow the same model as the original group. This in turn adds value and support to existing programs in the Fitzroy region that are seeking to facilitate widespread adoption of sustainable practices.

Key components

The success of the peer-to-peer mentoring group is not an accident. It can be attributed to a blend of several key factors:

- FBA staff hearing and then responding to landholder wishes and areas of interest.
- Suitability of the peer-to-peer approach in a regional context combined with trial sites for demonstrations and hands-on experience.
- The influence of RegenAG® as a highly respected and knowledgeable organisation.
- A pertinent practice that brings about environmental as well as financial gains.
- Ongoing facilitation and extension to build capacity.
- A group of people willing to learn, share and grow collaboratively.

The outcome is a motivated and empowered collective that have increased knowledge but more importantly, the self-efficacy to regenerate their farming landscapes and the skills to pass this information onto others. Member feedback highlights the significance and impact of this community of practice. Enlightening comments include: 'This has been a thoroughly enjoyable, valuable programme because it has given me long-term, usable, practical and affordable options/skills that I can make, apply and control myself' (peer-to-peer mentoring group participant, P1). Also, 'It is the single best thing I have done to date, it is practical, economical and ecological and in my view is the most environmentally conscious way to turn the tables on conventional farming practices' (peer-to-peer mentoring group participant, P11).

Conclusion

Regenerative agriculture is a highly relevant and important alternative to traditional agriculture. It promotes a reduction in synthetic and chemical use which, by extension and along with other practice changes, reduces costs and environmental impacts. Combining this approach with a peer-to-peer learning format acknowledges regionally specific contexts, recognises the human imperative for connection, encourages shared learning, and empowers participants to drive the direction and objectives of the group with the support of tailored extension provision. Inclusion of trial sites, field days, meetings and baseline testing mean peer-to-peer mentoring group participants are not passive recipients of instruction or information. Rather, they are directly involved in the generation of data and the efficacy of new technologies for their farming enterprise. This facilitates the sharing and refining of successful approaches for local conditions and encourages buy-in from other landholders.

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