Filling the GAPP: supporting young and women farmers to grow, adopt, produce and profit

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Abstract. To improve the productivity and profitability of a new generation of farmers in the Wimmera Mallee,Victoria, Birchip Cropping Group in partnership with the State Government (Agriculture Victoria), established the GAPP (growth, adoption, production and profit) program. Through local discussion groups, the initiative aimed to improve business skills and agronomic knowledge while establishing a network of farming professionals. This network was supported by local agronomists, researchers and leading industry professionals discussing emerging challenges and pursuing opportunities to grow their farm businesses. The GAPP initiative also supported members in technology adoption and improved management practices to enhance farm productivity and profitability. GAPP meetings were member-led and included presentations, discussions, crop walks and trips outside their regions. BCG facilitated meetings and organised relevant guest speakers to present on topics identified by members. A business management component linked all discussions, the aim being to deliver professional management skills to the next generation of farmers.

Keywords: professional development, Wimmera, Mallee, Birchip Cropping Group, extension, Agriculture Victoria, discussion group, adoption.

Introduction

The fundamental objective of the GAPP (Growth, adoption, production and profit) project was to increase on-farm production in ways that also maintained or increased profitability for farmers in the grains sector. The secondary objective of the three-year pilot was to determine if a new model for agricultural RD&E could stimulate adoption. The project was funded in collaboration with the State Government via Agriculture Victoria and also aimed to match BCG membership dollars for three years, providing a strong incentive for Birchip Cropping Group (BCG) to strive to increase grower membership through the GAPP groups.

Background

Funding grower groups is an extremely efficient way to extend research and stimulate adoption of innovation at the farm level. Grower groups are effective because they are started by, supported by and driven by local farmers. Typically, farmers believe in their grower groups and naturally trust their advice and impartiality.

Discussion groups offer farmers a relatively easy and practical way of gaining new information, skills, solutions and technologies. They also provide farmer-to-farmer learning and networking within the agricultural industry. Discussion groups are not a new idea, with groups like FM500, Topcrop and Landcare having been formerly established throughout the Wimmera and Mallee. FM500 provided a financial management focus, while Topcrop delivered more of an agronomic discussion group. These models were highly successful, with some groups still in existence today and a strong farmer base driving the sustainability of these groups. These existing groups were formed by the previous generation of farmers, thus existing groups tend to be comprised of an older demographic (45+ years).

A motivation behind the GAPP initiative was to address the increasing complexity of modern farm businesses and an understanding that farming, as a profession, involves so much more than just what occurs 'in the paddock'. The increasing scale of farms, the rapid adoption of new technology and the complexities of markets and risk management are challenging to even the most experienced and capable farmers.

Method

In 2014, a GAPP Reference Committee group was established involving BCG, Agriculture Victoria staff and several agricultural consultants, agronomists and farmers. The GAPP idea was pitched to the group and their feedback (opportunities and risks) recorded. This information was collated and analysed, feeding into terms of reference, to provide guiding principles to the groups and establish roles and responsibilities. It was also identified that the target audience would include a younger generation of farmers and women in the farm business because this audience:

- haven't previously been involved in a discussion group
- are more likely to engage if surrounded by peers
- are more confident in participating in conversations
- are currently under serviced in capability building formats

- have similar communication preferences
- are more likely to adopt new technologies and innovations.

The information collected from the reference group was used to establish the timing, number, location and content of group meetings. Key deliverables concentrated on highlighting the link between agronomic and farm business decisions and the impact these decisions had on the short and long-term performance of a farm business.

In year one, six 'GAPP' discussion groups were established in the Wimmera and Mallee at Manangatang, the southern Mallee (Birchip based), Hopetoun, Horsham, Rupanyup and a Birchip based women's group. In the second year, two more groups were established in Quambatook and the West Wimmera (Nhill) region. The groups targeted regions where access to local membership-based groups and/or private agronomic services was limited, but also areas where BCG had a membership footprint to ensure sustainability of the groups.

Initial promotion of GAPP occurred through an integrated communications campaign, encompassing advertisements in local papers, radio advertisements, phone calls, text messages, Facebook, Twitter and the BCG website. Further print and digital media channels were used for extension of the project.

Three to four meetings were held per year with a strong whole farm business focus, identifying business literacy as a key learning area in conjunction to addressing seasonal agronomic topics. The meetings included a diverse range of agricultural professionals from across south eastern Australia (farm business consultants, researchers, climate extension specialists and agronomists) including BCG and Agriculture Victoria. A local agronomist (in some cases more than one) was involved with each GAPP group to provide technical support and help in identifying key regional issues to discuss.

Decision support tools such as Yield Prophet®, Farm4Prophet and Yield Prophet® Lite were introduced to the groups. Each GAPP group had a Yield Prophet® focus paddock, hosted on a GAPP member's property, which was monitored throughout the growing season. This activity upskilled members in the use of this decision support tool, facilitating conversations about nutrition, input and logistical management. Harm Van Rees (Cropfacts), a leading agricultural consultant was also a Yield Prophet® mentor, providing support and technical help.

A farm business and agronomic management self-assessment (based on GRDC's farm business management checklist) was created for growers and undertaken at the start and end of the project. This was used to benchmark each businesses strengths, weaknesses, challenges, opportunities and changes, and aided discussion and topic identification for meetings.

In 2017, an external evaluation was completed on the project by Cumbre Consulting. The aim of the evaluation was to gain feedback from participants involved, to determine if the project had met its aims and milestones.

Results and discussion

Project participant reach

Since the establishment of the eight groups throughout the Wimmera and Mallee, nearly 200 growers (from 2015-2017) have attended GAPP meetings. The average number of growers that attended was 10-15 per meeting.

Grower engagement

One of the objectives within the project was to target a younger demographic of farmers as there was the perception that this demographic is currently under serviced for professional development opportunities. Most participants were aged between 20 to 39 years old (Table 2), which is a younger demographic than previous discussion groups formed in the region.

Total farm area covered by respondents was approximately 467,000 ha. Farm size varied, but the majority fell into the 2000 to 4999 ha land size (apart from Manangatang which was higher). Mallee farms were larger than Wimmera farms and 35 per cent of farms greater than 5000 ha were from the northern Mallee Manangatang area.

Table 1. The GAPP groups formed, commencement year, grower attendance and region covered

Group	Year commenced	Total no. attendees	Average no. attendees	Region covered
Horsham	2015-2016	27	10	Horsham
Rupanyup	2015	35	15	Rupanyup
Southern Mallee	2015	25	12	Birchip, Nullawil, Berriwillock
Hopetoun	2015	20	10	Hopetoun, Beulah
Manangatang	2015	25	12	Manangatang, Wemen
Women's	2015 (late)	30	15	Mallee and Wimmera area
Quambatook	2015	16	12	Quambatook, Boort, Lalbert
West Wimmera	2015	20	12	Nhill, Dimboola, Kaniva
Total		198	98	

Table 2. Age (years) category of participants at the formation of groups (2015 and 2016)

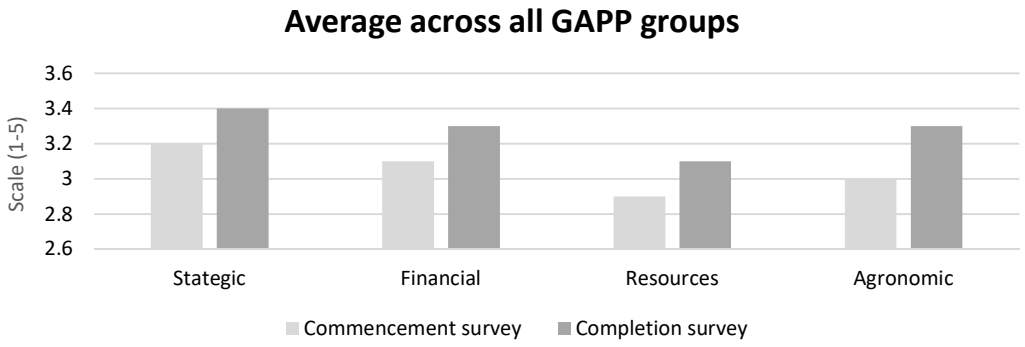
Region	Less than 20	20-29	30-39	40-49	50-59	Greater than 60
Horsham	0	4	3	2	0	0
Rupanyup	2	17	4	0	0	0
Southern Mallee	1	11	4	0	0	0
Hopetoun	0	2	7	2	1	2
Manangatang	1	6	13	1	0	0
Women's	0	10	7	7	2	2
Quambatook	0	8	9	0	0	0
West Wimmera	5	8	3	0	0	0
Total	9	66	50	12	3	4

Agronomic and business management survey results

The BCG internal survey results support the external evaluation, highlighting that there has been a shift in knowledge and practice change between groups as a result of the project.

When comparing the average of all GAPP groups over the three years of the project, the level of knowledge increased in all areas of the farm business; strategic, financial, resource management and agronomic (Figure 1).

Figure 1. Average level of knowledge across all GAPP groups in terms of strategic, financial, resource and agronomic management



*Questions were ranked on a scale of 1-5 (1 = low understanding and 5 = high understanding).

The survey also helped to identify key weaknesses in specific areas. This allowed the program to be shaped to accommodate emerging needs. For example, grain marketing was ranked overall as a low understanding (2.8 level of understanding out of 5). To meet grower needs and aid in building a greater understanding, two specialists presented at all GAPP groups. A grain marketing representative was also present at the majority of meetings, further providing support and seasonal updates on market outlooks. Consequently, understanding of grain marketing improved (3.3 out of 5) by the end of the project.

It was interesting to note, the biggest improvements in knowledge was in the agronomic area on average, suggesting that agronomic development is still critical for this target audience. It demonstrates that the approach of incorporating both business and agronomic aspects in the project was important.

Key results from the survey indicated:

- A 4 per cent increase in strategic, resource management and financial knowledge overall amongst groups.
- A 6 per cent increase in agronomic knowledge overall amongst groups.
- The biggest impact for individual groups was an 8 per cent increase in agronomic knowledge (Manangatang), 8 per cent on resource and strategic (Rupanyup), 4 per cent increase in resource (Hopetoun), 12 per cent increase in agronomic (Southern Mallee), 6 per cent increase in financial, strategic and resource (Women's group), 2 per cent increase in strategic and agronomic (Quambatook)and 8 per cent increase in agronomic (West Wimmera).
- The West Wimmera and Quambatook groups had the lowest overall level of change, most likely due to being established later than the other groups, hence not as much time for change to occur.

External evaluation

The external survey conducted through Cumbre Consulting was distributed to all participants involved in the project over its lifespan and 30 per cent of participants completed this survey. Overall, there was a strong positive reaction to the GAPP project with a demonstrable increase in knowledge and practice change as a result of participation in the program. Ninety-five per cent of respondents indicated they had learnt new information and/or about new tools as a result of the project. Some examples of the learnings included benchmarking, yield estimations, Yield Prophet®, hay production, grain marketing, climate modelling, nitrogen management, growth staging, social networking and learning from peers.

Approximately 77 per cent of participants said that they did something in their business as a result of participating in the project including preparing budgets, marketing grain and improved fertiliser and nitrogen planning. When asked if participants have improved the potential of their farm's productivity and profitability 58 per cent yes, and 28 per cent were not sure. When asked if they would participate in the project, should it continue, 90 per cent of growers said they would. When asked what the best thing about the project was, participants main responses were:

- networking: opportunity to network with like-minded farmers and the agricultural professionals
- young farmers: farmer to farmer learning and interaction
- high calibre presenters
- reflecting: getting off the farm and being able to reflect on things in an independent environment
- women's group: meeting similar women in similar situations
- learning: opportunity to learn from people they would not usually have access to
- organised meetings
- socialising.

The survey results highlight that the project was able to meet its original purpose and objectives. The strong result may be partially attributable to the success in targeting emerging farmers. Younger farmers may be more receptive to the adoption of new technologies and innovation, which is more likely to influence future farm productivity growth in the agriculture sector (Keogh 2016).

Industry engagement and change

All subject matter experts (SME's) who had presented at GAPP groups over the course of the program were also surveyed. Over 40 SME's were involved in the meetings. Of these SME's, 47 per cent completed the survey. Ninety-four per cent of SME's indicated they would continue to participate in and support the project.

Table 3. Amount and type of presenters included in the project

Presenter type	No. presentations
Business consultant	9
Agronomic (researcher/consultant)	6
Group agronomist	3*
Agriculture Victoria	9
Grower	9
BCG staff	8
Other (VFF, Communication)	3

* 3 sessions for every group agronomist

An additional 83 per cent of SME respondents indicated they had learnt new information and/or about new tools as a result of the project. When asked if the project had increased their potential to assist farmers to be more productive or profitable, 65 per cent agreed. One respondent indicated that 'being involved in detailed, face to face discussions with local groups of growers gave me a better understanding of issues relevant to them and improved my ability to communicate information and solutions to them effectively'. When asked if the project is of the nature to effectively extend useful research and development information to make a difference to the performance of farm businesses, all participants said it had either met, exceeded or very much exceeded their expectations.

Key observations and outcomes

Further strengths of the project identified by the external review included:

- Great opportunity for networking and enhanced communication channels through access to leading agricultural researchers and advisors in the industry.
- Engagement and support of emerging/young farmers and women in the farming business. Younger farmers said they felt more comfortable in a small discussion group, (among similar aged and experienced people) which encouraged greater discussion within groups.
- Provided an outlet for research and development extension for BCG and Agriculture Victoria and the diverse range of speakers led to further extension of other funded research initiatives.
- Gave farmers an opportunity to get off the farm and socialise and network with other farmers, plus review and reflect on their farm business. Farmer to farmer learning and social networking was a strong driver in the success of the project and 92 per cent of participants stated (from the external survey) that this was one of the best things about the project.
- Engagement of non-BCG members in the project. The GAPP project has led to greater promotion and reach to growers outside of BCG's membership, resulting in further awareness of the organisation.
- Achievement of end results, which was the improvement of farm productivity and profitability in farm businesses.
- A high percentage of growers and professionals would continue to be part of their discussion group/project.

Some of the key weaknesses and challenges of the project that have been identified include:

- Inconsistent meeting attendance by members. One of the contributing factors is that growers are time poor. Management operations are prioritised in the business first, and there is limited amount of weather permitting days for timely operations (e.g. spraying, fertiliser applications).
- The rate of conversion of new members to BCG membership was low. It was recorded that over the lifespan of the project, nearly 200 growers (at some point in project) attended GAPP meetings. Of this, 13 growers became new BCG members and 76 growers retained their BCG membership. Whilst the project didn't have a large increase of 'new' BCG members, it is possible that the project influenced BCG membership retention. This poses some interesting questions regarding future generations of farmers and their willingness to pay for farming system group memberships.
- The Horsham group ended in 2016 due to insufficient attendance at meetings. The primary reason the group lost sustainability and member support was that the group was previously run by a local agronomy business with a different structure and purpose. Trying to fit this group into the GAPP model didn't appear to work.
- Creating a self-driven sustainable group in only two to three years was challenging.

Further connections with the agricultural industry

A Melbourne supply chain tour in 2016 provided growers insight into agricultural supply chains, logistics, research and development. The trip further enabled growers the opportunity to network with industry professionals as well as interconnecting with other GAPP growers. A survey was undertaken, where growers rated each business visited on a scale of 1-5 of how informed they were on the presentation and tour given. Overall there was a high level of engagement between participants with growers indicating from the tours they were moderately informed to very informed.

Some of the growers' quotes were:

> I was really interested in post farm gate processes and how they affect us on farm. Export processes and opportunities are probably what I took out of it the most and the importance of keeping access to the Melbourne Port.
>
> …I thought it was going to also be a great opportunity to see things we wouldn't normally have access to. I got a good understanding of how much happens after our produce leaves the farm gate. I didn't know how much of our hay and grain is actually exported in containers, which probably highlighted opportunities for future marketing. Would gladly do another or recommend it to anyone else.
>
> I wanted to go on the trip because I haven't had an opportunity like this before. I wanted to know what happens to the product we produce after it leaves the farm gate. For example, I found it really interesting all the different processes needed to crush canola to extract the oil. I felt the trip gave me a really good understanding on the supply chain and the different places it goes and it gets used for.

Media and publications

Two case studies were undertaken per year on GAPP growers. The outcome for the case studies led to greater exposure for the GAPP project, and excellent promotion of young farmers in the region who have benefited from involvement in the GAPP program through learning new skills and changing practices on farm.

Quotes about the GAPP program from case studies include:

> The GAPP group is great because it allows a range of younger farmers, who are at different stages in their careers or succession, to meet and talk about similar problems and learn about new ideas. The informal nature of the meetings allows us to freely discuss and ask questions. GAPP has given me different ideas on varying challenges in our business. Constantly questioning what you are doing keeps you moving forward (Quambatook GAPP grower).
>
> I saw the GAPP program as a fantastic opportunity for networking and a chance for both young farmers and myself to interact with industry experts. It provides a great platform for communication and discussion about issues relevant in my area in a social environment where all growers feel welcome to contribute. I was grateful for the opportunity to contribute to discussions and to provide local information when required. The GAPP program provides a vital link between young growers and industry professionals. The level of information sharing has been exceptional with excellent speakers attending all sessions (Manangatang group agronomist).
>
> The GAPP concept is fantastic. Any opportunity to get together with your peers is always beneficial. Focus on younger people in ag is great. It allows younger people to open up and ask honest questions that they might be more reluctant to ask when more experienced farmers are present (Rupanyup GAPP grower).

The case studies were extended through BCG manuals, website and E-news. The BCG E-news had a high percentage open rate throughout the wider public, with an average 44 per cent open rate of the BCG e-news among over 900 subscribers. Readers that again clicked into the additional case study links, resulted in a click rate of 15 per cent (average all case studies) which is higher than the industry standard of approximately 2-5 per cent open rate. This fits anecdotal evidence from agricultural communications professionals that grower case studies are an effective communications mechanism (Pru Cook BCG 2017, pers. comm., 1 July).

Promotion and advertising of the GAPP project was valuable in exposing BCG to a wider target audience. Numerous articles, case studies, Twitter, Facebook and newsletters have been distributed through BCG publications, the website and local media (Table 7). Facebook was used as the main form of communication in the Women's group as an information board, whereas text messages worked best to communicate to the other groups. The 'WhatsApp' messaging app was established (per group) to contact group members outside of meetings and was initially set up to discuss and highlight local issues and to organise the September crop walks. This method worked well with some groups, but with other groups the level of engagement was low.

Table 4. Types of media and publications

Type of communication	Occurrence
Case studies	5 (grower) 4 (agronomist)
End of year newsletter	2
Local radio	3
BCG E-news and website	18
Newspaper	3
Podcast	3
Other (article in Grower Group Alliance)	1
Twitter, Facebook, WhatsApp	Numerous

Other linkages and opportunities

Other opportunities that have arisen throughout the GAPP program that provide further links to the agricultural industry have included:

- Australian Women in Agriculture Conference offered to the Women's group to further build skills and network within the industry.
- Grower Group Alliance in Western Australia, presenting a feature article to their members on the GAPP project.
- Involvement and access to agribusiness partners such as Bayer Crop Science offering free weed resistance tests as part of their 'Diversity Can't Wait' program. These were distributed to growers that expressed interest and results discussed at meetings with Bayer providing discussion on integrated weed management and resistance.
- Partnerships with Rural Bank offering BCG GAPP facilitators the opportunity to undertake a mentoring program. The aim of this program was to upskill GAPP facilitators in financial and business management.
- Opportunity to utilise graduates in the Agriculture Victoria Regional Research Agronomy Program. Four graduate students were involved over 2015, 2016 and 2017. This provided excellent exposure for the graduates to the local grower community and enabled them to be part of a valuable small farmer discussion group.

Conclusion

The GAPP project engaged nearly 200 young/emerging farmers and women in the farming business throughout the Wimmera Mallee. The project demonstrated that it achieved end results in respect to the project objective 'to increase on-farm production in ways that also maintain or increase the profitability for farmers in the grains sector'.

The GAPP project adopted a new model of R, D and E that has been successful in its approach and in the delivery of the project. The discussion groups delivered relevant information, challenged cultural practices and encouraged open discussion. It also opened local growers up to further networking throughout the industry and provided invaluable opportunities for farmer to farmer learning and social interaction. The combination of having a strong whole farm business focus identifying business literacy as a key learning area in addition to addressing seasonal agronomic topics was invaluable. Following this, to have most growers want to be involved in the project going forward, further highlights the impact the project has had on emerging farmers.

The key outcomes of the project highlight that there is still a real need for farmer discussion groups in the agricultural sector today. The project has been successful in engaging younger farmers, improving productivity and profitability in the grains sector, and has proven to be a successful model, that could be distributed to other farming systems groups. Further exposure and promotion of this project, may lead to future funding opportunities to continue to upskill young farmers in local regional communities throughout the Wimmera Mallee.

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