

Farmers determining their own destiny

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ABSTRACT

“Tell me and I forget, show me and I may remember, involve me and I will understand.”

The Birchip Cropping Group (BCG) is a farmer driven agricultural research organisation operating as a not-for-profit incorporated association, based in Birchip in north-west Victoria. Since its inception in 1993, the BCG has grown as a dynamic and innovative organisation with 500 farmer members across the Wimmera/Mallee regions of southern Australia, making it the largest regionally based research group of its kind in Australia. The research activities of the group are focused on agronomy, covering all major crops grown in the region including cereals, pulses and oilseeds.

The Group's activities are driven by producers needs and interests in adopting new technology to remain at the forefront of advancements in agriculture. An extensive number of collaborators assist with the Group's research activities. Current collaborators include five universities, various state and federal government agencies such as the CSIRO and an extensive list of chemical companies and other agribusinesses. Staff from these research collaborators join farmers from across the region, industry representatives and BCG staff on the General Committee, which oversees the BCG's activities.

RESEARCH AND EXTENSION, BCG STYLE

The extent of the research has expanded from running a single demonstration site to six sites, which encompass over 120 replicated research trials together with many demonstration trials. Current BCG research activities include:

- Three GRDC funded trial sites on different soil types representative of the Wimmera/Mallee region;
- A long term farming system trial supported by the GrainGrowers Association, containing 32 one hectare paddocks representing four farming systems – zero till, reduced or minimum till, conventional (known affectionately as the “fuel burners”) and heavy grazing (“hungry sheep”);
- NHT funded project looking at groundwater recharge under these different farming systems;
- Sponsorship of several PhD students working on projects relevant to agronomic problems in the region, previously identified by the Group and its collaborators;
- A self-funded diagnostic site for herbicides to facilitate the teaching, to industry, government and farmers, of the differing modes of action of various chemical groups;
- Mentoring of undergraduate students by local farmers while conducting industry sponsored projects;
- Numerous small on-farm trials and demonstrations across the region.

The BCG has six main sites for undertaking trials spread across a 100-kilometre radius from the town of Birchip. Trials concentrate on:

- Best herbicide options for current farming systems;
- Identifying limiting factors to production;
- Cereal nutrition;
- Improving the profitability of growing pulse and canola crops;
- Creating new opportunities (eg: different crop types) and adapting new technology;
- Stubble management;
- Disease control methods.

The purpose of the group has now been redefined into a more specific role of identifying critical success factors within the cropping program and integrating these into complete farming systems. Nevertheless,

the focus stated in the Group's mission statement continues to be central. That is "*improving profitability and long term viability of Mallee and Wimmera communities through research, demonstration and exchange of ideas amongst farmers and industry groups.*"

This is a key driver in the broad extension effort of the BCG, seeking to make information available as widely as possible. The Group has a successful program of disseminating information that is based on the following extension activities:

- Several public field days that attract between 200 to 800 people, depending on the location. The BCG receives in excess of 3000 visitors annually, including interstate and overseas groups;
- Maintaining an up-to-date agronomic Internet service (www.bcg.org.au)
- Trials review and R&D Update each February for BCG members to discuss all trial results;
- Grains R&D Expo in Birchip each July and coordinate a further five across SA and NSW;
- Group training courses for industry, tertiary students and government agency staff;
- 2020 Vision seminars for young farmers, and field days specifically for women;
- Seminars and workshops for members.

BCG publications target members first and foremost but then deliver to the wider audience throughout the Wimmera/Mallee region. Examples include:

- Bimonthly bulletins to members and sponsors;
- Fax bulletins to members on issues that need immediate attention during the growing season;
- Weekly columns in local and rural newspapers discussing topical issues;
- Publishing and distributing the *Mallee and Wimmera Crop and Pasture Production Manual with Ground Cover* in April each year. This summarises results of all trial work, reference material and farmer experiences during the previous season and is sent to 5000 farmers across the region.

The work undertaken by the group is largely driven by farmer needs. Farmer members have considerable input into trial planning and also interpretation of trial results. They are surveyed and their responses are summarised in the manual. All trials and demonstrations established have a practical implication for management. The great strength of the project is that farmers are working directly with industry to address immediate information needs.

Agronomic and social achievements of the BCG in the region include:

- Creation of a renowned research and demonstration site for groups to visit and exchange information with other farmers and see advances in agronomy;
- Attraction of an extensive list of research collaborators bringing knowledge and direct and indirect wealth to the region;
- Developing agronomic packages of production of differing crop types and varieties;
- Increasing adoption of canola and lentils as sustainable, profitable cropping alternatives
- Challenging farmers to raise the (production) bar by understanding what limits production;
- Greater water use efficiency through growing different crop types and monitoring paddock performance;
- Improved financial security for farmers in the region through better knowledge, improved efficiency and management skills;
- Stimulation of a climate of change in the area, a willingness of people to adopt new technologies and ideas.

FARMING SYSTEMS RESEARCH

Recent NHT funding to study the effect of differing farming systems on water recharge into the soil profile fits neatly into the BCG philosophy of ensuring the long-term future of the region. There are three main reasons why we believe this is the case.

1. BCG focuses on profit and viability

Experience tells us that if farmers make money, they are only too happy to return profit to their farm. After all, this is where most of them live. Farmers with spare cash spend more time controlling vermin and

noxious weeds, buying the right machinery for their production process, keeping the capital improvements in good condition and generally becoming better custodians of the environment. A destitute farmer has to cut corners, spend money on the vital production processes, generally rape the soil of valuable nutrients and pressure the environment to the limit. Such a farm can be clearly seen whilst driving along the road.

2. Focus production on water use efficiency

Many of the problems of rising water tables and salinity are due to the inefficient use of rainfall by plants. Once water passes the root zone it ultimately finishes in the water table. The best farmers know that good water use efficiency is a significant part of their income. They also know that many obstacles stand in the way of achieving optimal water use efficiency. The BCG is constantly helping farmers identify and find solutions to raise water use efficiency. Limitations to water use efficiency include nutrition, root disease, soil structure, sub soil constraints, variety, rotation, weed control, management practices and stubble management.

The demand on the farming community to learn new skills, absorb more information, adopt new technologies and understand the consequences is for many a daunting task. The BCG provides farmers with expertise and diversity to help them make successful management decisions. These decisions usually result in farms becoming more environmentally sustainable.

3. Conservation of soil is fundamental

At their heart, all farming systems require the conservation and improvement of soils. Economic sustainability however, has to accompany this soil conservation or any gains will be short lived. There has been much talk about stubble retention, minimum tillage and no till systems in the cropping community. There have been farmers however, who have gone bankrupt in the pursuit of these desirable objectives. Also, many farmers have lost valuable topsoil as a result of conventional cultivation. We have all seen many examples on the television of the dust storms over our countryside. The objectives for stubble conservation are clear. The processes are still uncertain.

The balance between chemicals and cultivation in rotation will continue to be debated for many years. It has been said that chemicals in agriculture are just a passing phase. Some think cultivation in agriculture has already been outdated. An aim of our group is to find ways where chemicals can economically be replaced by some other method or system. Competitive crops, rotations, new crops, biomass agriculture, biotechnology developments and varied farming systems are some of the areas the BCG is pursuing.

WHY HAVE FARMER GROUPS BEEN SUCCESSFUL?

The landcare movement has shown that the best people to solve problems in the country environment are the local communities. So too have farmer led groups managed to hit onto a formula that recognises farmers' problems, finds practical solutions and creates enough attention to transfer knowledge to the farming community.

This has not happened as a result of a single solution approach but rather by a multi-faceted involvement by a whole range of people, a choice of a number of learning mediums, and a momentum that has captured the interest and involvement of a large section of a community.

Even though members receive additional services, the mission of helping the whole community in a region is still paramount for groups like the BCG. The success varies from enthusiastic participation to indifference, however, no one has escaped being exposed to knowledge of the group or its information. This has resulted because information and activities have been aggressively marketed using gimmicks, a range of products and an enthusiasm to share success and failures.

The focus of farmer groups has enabled many industry and research institutions to have research cooperators, a friendly environment in which to work, and a platform to pass on and receive feedback of their work. In fact, industry has been able to change their image from sellers of products to partnerships of solving problems and increasing returns for whole industries. This is why the BCG has been able to attract industry sponsorship of about 30% of its budget.

There has been a shift over the years from all the single-issue research to more farming systems and whole farm problem solving. There also has been an encouraging shift from doing work on our own to working more in partnership with groups like DNRE on joint projects. There has been a greater recognition of each other's strengths and weaknesses and a more pragmatic approach as to the efficient use of equipment and people.

The BCG is in its eighth year and recognises that to survive and prosper it has to continue to re-create itself, adapt to a changing environment and continue to push farmers to think about better ways of making more sustainable profits.

The BCG proposes to work together with other like-minded groups, linking farmers Australia-wide to develop more profitable cropping and livestock enterprises. This concept, known as Shared Solutions, helps farmers understand agriculture in other parts of Australia and gives the stimulus to try new methods of achieving maximum profitability. The Group already plays an active role providing support to many other farmer groups in Victoria and other states.

All points towards a greater effectiveness of research and extension by all parties for a whole region.

"Anything is possible if it doesn't matter who gets the credit."

For more information, contact the BCG on (03) 5492 2787.