



Workshop Paper:

Farmers adopting and farmers benefitting from R&D – where are we now?

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Economic Development,
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Background

The purpose of this workshop paper is to focus and assist the workshop discussion. The paper provides a synthesis of the most significant findings from regional 'focus-group' forums with farmers and advisers held in Queensland, New South Wales, Victoria and South Australia (n=143) and a national survey of farmers (n=1003)¹ and advisers (n=655)² regarding:

- Farmers' current use of advice and extension services and on-farm changes; **[CHANGE]**
- The demand for and supply of advisory and extension services (information, advice and support)³ (including current funding sources of adviser roles and farmers willingness to pay for advice); and **[SERVICES]**
- Issues in the advisory and extension system⁴ related to farmers' and advisers' engagement with research and RD&E; collaboration and coordination amongst private and public organisations, advisers' capacity to fulfil extension roles and the role of government **[SYSTEM]**

An appreciative inquiry approach⁵ was used to identify trends, issues and gaps related to the current system of agricultural advice and extension in order to highlight potential opportunities or actions for improving and/or transforming the situation positively. The focus is on the private sector role to improve returns from R&D on-farm. The focus relates to services and systems to meet future challenges, with opportunities identified by posing the question: "Will business-as-usual meet the needs of Australian agriculture?"

¹ Farmer survey: a stratified sampling scheme (sector/main enterprise and State) employing both on-line (non-random) and telephone interview (random) methods. The respondent sample reflects the range of enterprises, age and education of the national farming population (ABS). With a total population of farm businesses between 92,329 and 126,000, the survey reports a margin of error (all farmers) of approximately 3%.

² Adviser survey: Employing both on-line (non-random) and telephone interview (random) methods, the sample targeted a range of advisers and advisory organisations. The sample achieved reflects a range of adviser types and organisations servicing most agricultural industries (beef, sheep, grains, dairy, horticulture, cotton, sugar, pork/poultry, etc) as well as responses from: independent (fee-for-service) advice (36% of sample) and sole operators (6%); product re-sellers/farm input suppliers (commercial) (22%); R&D corporations/industry organisations (7%); farmer-owned/farming systems groups/NGO's (9%); government (federal, state, local/catchment) (18%).

³ 'Demand' for advisory and extension services included farmer's attitudes towards information/advice and the importance of this in their farming, who they use for information and advice and how they access services, as well as involvement in extension projects and willingness to pay. 'Supply of advisory and extension services' included the modes and topics for service delivery, the types of farms targeted for provision of services, the skills and capabilities of the sector related to technical and advisory and extension roles and professional association and accreditation.

⁴ The term 'advisory and extension system' or 'advisory services' has been chosen because of the declining identity with, or utility of, the word 'extension' to describe the roles and practices of people and organisations 'doing extension'. It is a term increasingly recognized internationally and refers to the set of organisations and people that enable farmers to develop farm-level solutions by establishing service relationships to produce knowledge and enhance skills (Birner, et al, 2009: From Best Practice to Best Fit: A Framework for Designing and Analyzing Pluralistic Agricultural Advisory Services Worldwide. The Journal of Agricultural Education and Extension 15 (4): 341–355)). The need for co-ordination and collaboration amongst different advisory services and organisations in improving the impact from R&D investment is well recognised internationally.

⁵ 'Appreciative inquiry' is a method for collecting and analysing information to support systemic change. Focusing on what is working well and why and not just identifying market and systems failures can assist build collaborative intent toward desired change (<https://appreciativeinquiry.case.edu>).

ON-FARM CHANGE

Findings	Potential opportunities/action areas
<p>Adoption/practice change is happening</p> <ul style="list-style-type: none"> Over 70% of farmers mentioned specific changes made to the management or operation of their farm as a result of interaction with a 'main' source of information, advice or support. Changes mentioned related to: use of farm inputs; purchase/use of farm machinery/infrastructure; farm business; farm practices. Amongst these farmers making changes, all providers were covered (i.e. Government; Independent (fee-for-service) advisers; R&D corporations) 81% of farmers nominating their main source as independent 'fee-for service' advisers agreed/strongly agreed that the advice was relevant/useful. (cf average of all = 69%). 	<ol style="list-style-type: none"> No single provider has a monopoly on supporting farm change. How can R&D investors ensure they are working with <u>all providers</u> to enhance adoption? How can independent (fee-for-service) advisers and their organisations be more engaged in RD&E?
<p>However, there is also some ambivalence of farmers to the trustworthiness, independence and value of information, advice and support they pay for or received from their 'main source' (n=978):</p> <ul style="list-style-type: none"> On average, 63% of farmers agreed/strongly agreed they trusted the advice received (75% of those selecting 'government', 72% independent; 62% RDC's) and 59% agreed/strongly agreed it represented value for money) (69% for independent fee for service advisers; 57% government; 49% RDCs). Between 29% and 36% of farms neither agreed or disagreed that advice was relevant, useful, trusted or value for money. Forums held with farmers indicated they placed great value on the trustworthiness; value/benefit and independence of information advice and support they sought. 	<ol style="list-style-type: none"> How to increase and highlight the value of information, advice and support to farmers? How to improve reality or perceptions of 'trust' and 'value for money' amongst services/advice?
<p>Attributes of trusted advisers identified in the farmer forums included: Whole farm system understanding; practical; "connected": with research, with what other farmers were doing, and to trends; bring new ideas; a reputation amongst other farmers of delivering value/benefit.</p>	<ol style="list-style-type: none"> How to efficiently and effectively connect the range of advisers into R&D? How to build capacity of new advisers in these attributes?

ADVISORY AND EXTENSION SERVICES

Findings	Potential opportunities/action areas
<p>TREND TO INCREASING DEMAND FROM FARMERS for information, advice and support</p> <p>Positive attitudes to the need for information, advice and support</p> <ul style="list-style-type: none"> 76% of farmers (n=1003) agreed it is important to look for new opportunities in farming, and 78% agreed information on farm performance assists control in farming, and 62% agreed profit is an important focus in farming On average a net 21% of farmers expected their use of information, advice and support from their MAIN source to INCREASE (more/a lot more) over the next five years. This was across advisory types. E.g. <ul style="list-style-type: none"> Independent fee-for service advisers (net 27% said increase); RDC's (net 31% said increase); Government (net 5% increase) (25% more, 20% less); Larger farms were most likely to drive the overall increase in demand for services (38% 'more' 1001+ha vs 26% 0-1000ha). This was also the case for farms in NSW (38% 'more'). Those who expected to use services 'less' tended to be older (17% 60+ years), sole decision makers (15%) and those who had mainly used government in the past (20%). Those expanding had an increasing need for these services (39% 'more'). 	<p>6. How should service providers prepare for increased demand?</p> <p>7. What will increased demand look like?</p>
<p>Farmer learning behaviours</p> <ul style="list-style-type: none"> Only 56% of farmers agreed that they have all the skills and knowledge needed to manage their properties Farmers don't always know where to get information, advice and support they need (only 40% agreed they 'always know' where to get the services) The preferred methods for sourcing information amongst farmers included: attending field days/workshops, searching on the internet, talking to other farmers. Whilst social media was noted as a source of information by 27% of farms when prompted, only 4% used twitter, face-book or online discussion forums as a method for this purpose and only 2% preferred this mode as a source. Younger, tertiary qualified grains and dairy farmers had higher use of social media 	<p>8. Farmers see that new skills and capabilities are required in farming. How can service providers best respond to this demand?</p> <p>9. How can services be more widely known/accessible?</p> <ul style="list-style-type: none"> Better 'search' functions? Non-traditional information/advice? More sign-posting to services?

<p>Attitudes toward paying for advice</p> <ul style="list-style-type: none"> Independent (fee for service) advisers were a source of information, advice and support for 63% of farmers ranging from 48% (beef farmers) and 96% (cotton farmers). 32% of farmers said fee for service advisers were their <u>main source</u> of information, advice and support. 35% of farmers intend to pay for advice (related to farm management) in the next 12 months Therefore 28% of farmers are familiar with, and have access to a 'fee-for-service' adviser, but are not willing to pay for this as an individualised service. In terms of farmer attitudes towards advice whether they currently paid for advice or not, 37% see benefit from paying for advice, 31% felt that paying for advice would be profitable, 40% were unsure of the benefit and 21% said they believed it would have no benefit Affordability is an issue for 28% who said paying for advice would be difficult in the next 12 months. A large proportion of farmers are 'fence sitting' (i.e. not overtly positive or negative) on this topic and appear to be waiting to be convinced about the benefits Some farmers could 'miss out' if there are expectations farmers need to increasingly pay for advice. <ul style="list-style-type: none"> Farmers 'starting out' were significantly less likely to pay for independent fee-for-service advice: Smaller farms (were significantly less likely to pay for advice) 	<p>10. A concerted effort/campaign related to awareness of the value of information/advice and the added value of paying for advice</p> <ul style="list-style-type: none"> Close to 30% of farmers could be convinced of the value of advice and use this pathway to enhance farm performance. <p>11. Ways to support:</p> <ul style="list-style-type: none"> 'Starting out' farmers with individualised, independent advice? E.g. a 'start-out' advice loan Small farms may be a source of community/public interest (land-use/biosecurity)? Product re-sellers/farm input suppliers are a key source for this group.
<p>SERVICES APPEAR WILLING AND ABLE TO RESPOND TO INCREASED DEMAND</p> <ul style="list-style-type: none"> 87% of adviser organisation 'leads' (n=290) said providing information, advice and support services to farmers was 'moderately or extremely important to their business' and said their capability was strong/moderately strong in providing extension services. Of this group, greater capability was sought in: targeting farmers with tailored information based on their goals and values; designing and delivering farmer training; and, design of extension programs for adoption were areas where. Advisers 'main' services related to livestock (21%) and crop production (15%), whole farm management/farm business management (11%), with most advisers nominating on average 3 service areas. Whilst 30 % of advisers said they provided environmental services, only 7% noted this as a main service. Advisers targeted different farm types (across income categories of commercial farms) so overall no particular farm size was excluded from services. <ul style="list-style-type: none"> Some specific categories of farmers may not be targeted for particular services including women and young farmers, sharefarmers, employees, hobby farmers, urban farmers (i.e. less than 16% of advisers 'open to working with these groups' if not already). Advisers are using a range of methods to provide services (n=365) including: 1-1 advice (74% of advisers), farmer groups (64%), technical and analytical services (57%), media/web-based communication (49%), product sales (22%), supplier relations (15%). 	<p>12. Potential service gaps related to:</p> <ol style="list-style-type: none"> long-term planning, environmental services tailored services to young farmers, sharefarmers/ employees. <p>13. How to enhance alignment of services?</p>

<p>Adviser learning behaviours</p> <ul style="list-style-type: none"> • 80% of advisers (n=265) said it was very important to keep up to date with the latest research in agriculture. • A range of organisations were used to keep up to date with Research and Development Corporations,(23%) the advisers own organisation (20%) and research and government organisations (11%) the 'main' sources noted (n=365) • Similar to farmers, advisers preferred field days (16%), the internet (16%) and access to technical specialists at events (14%) as preferred methods to source information and knowledge related to their work with farmers (n=365) • 50% of advisers (n=655) had undertaken professional development (PD) or training related to agricultural extension in the last 12 months. Industry advisers were significantly more likely to have attended PD/training (73%) compared with private commercial (53%), private- consulting (48%) • Sole operators (n=41) were significantly less likely to have participated in professional development or training in the last 12 months compared to other advisers (27%) • The majority of agricultural extension related training was provided "in-house" 	<p>14. Organisations seeking to engage a range of advisory services in RD&E could consider:</p> <ul style="list-style-type: none"> • Better 'search' functions' for advisers • Targeted events • Methods to support PD for sole operators • Formalise extension training.
<p>Professional associations of advisers:</p> <ul style="list-style-type: none"> • 58% of advisers were not members of any professional association. • 26% of advisers were members of technical or discipline-based professions (20 different associations listed) rather than members of advisory and extension practice organisations such as APEN and the Ag Institute. Of those in associations, 43% were accredited through these associations. 	<p>15. Encourage advisers into membership of professional associations.</p> <p>16. Engage a larger range of professional associations in the development of extension skills and capacity to reach a wider range of advisers</p>

THE ADVISORY AND EXTENSION SYSTEM

Findings	Potential opportunities/action areas
<p>Private advisory businesses have a range of income sources that reflect the diversity of funding arrangements in RD&E:</p> <ul style="list-style-type: none"> Private (consulting), sole operators and private (commercial) gained most of their income direct from farmers (average 85% of these advisers) These groups were less likely to receive income from government than the other types (industry, NGO's) (34% of consulting advisers; 12% commercial advisers), except sole operators (39% of these advisers received income from government) 'Commercial' advisers were significantly less likely to obtain industry funding compared to other types (13% noted this funding source). The average proportion of income contribution from different sources across all advisers (n=359) reflects the following funding pattern: <ul style="list-style-type: none"> Direct from farmers: 32% Government: 29% Industry: 23% Private company/co-operative: 13% NGO/Other: 3% 	<p>17. Is this an "ideal" shared investment model for the extension system going forward (public-private-industry-NGO)?</p>
<p>There is not one 'source' that farmers rely on for information, advice or support in any sector or state.</p> <ul style="list-style-type: none"> Product re-sellers/farm-input suppliers are a source for 85% of farmers, with 20% saying they were their 'main source'. These tended to be smaller farms (<\$500,000 average gross farm income) Research and Development Corporations are a source for 72% of farmers and a main source for 14%. Farmer owned information/advice groups and organisations were a source for 69% of farmers and a main source for 11% Government was a source for 64% of farmers and a main source for 10%. These tended to be small farms/low farm income. Independent (fee-for-service) advisers (i.e. farm management consultants, agronomists, specialist/technical advisers) were a source for 63% of farmers and a main source for 32%. These tended to be the larger farms (>\$501,000 average gross farm income). Processing companies farmers supplied were a source for 53% of farms and a main source for 7% 	<p>18. Ways to have greater engagement with and coordination amongst service providers related to RD&E.</p>
<p>Farmer and adviser engagement with researchers/research organisations is happening, but more interaction is still desired by farmers</p> <ul style="list-style-type: none"> On average, 80% of farmers had at least 1 interaction with agricultural researchers/research organisations in the last 12 months (n=1003), yet 50% of farmers said they would like a little or a lot more interaction with researchers/research organisations than now. On average, 68% of advisers said they were engaging at least quarterly with researchers/research organisations (n=365) 	<p>19. Way to engage researchers/research organisations in interactions with farmers and advisers.</p>
<p>Farmers not necessarily identifying with extension projects/programs</p> <ul style="list-style-type: none"> Changes to the funding, delivery and 'branding' of extension efforts may explain why 69% of farmers said they were not currently participating in extension programs or projects. Of the different industries, dairy farmers had the most involvement (41% of farms) as did vegetable growers (45%). Older farmers (those over 40) with a tertiary qualification, earning between \$1-5M average gross farm income and with between 1-2 additional decision makers involved in the business were more likely to be involved in extension projects. 	<p>20. To what extent do extension investments need to be identifiable as 'projects'?</p>

<p>Farmers uncertain about the private sector role in extension and paying to be involved</p> <ul style="list-style-type: none"> • Whilst a third of farmers on average endorsed the quality and effectiveness in delivery of non-government extension services only 18% were willing to pay to be involved with agricultural extension programs delivered by non-government organisations. • Results were not consistent, with some farmers within a single sector polarised between agree/disagree with the role and payment of non-government extension service providers. 	<p>21. Greater transparency for farmers on funding of extension and extension projects/programs</p> <ul style="list-style-type: none"> • Clarity on the payment for involvement in extension projects.
<p>Private sector providers were less likely to be directly involved in the RD&E system than others (i.e. industry, government) (n=365)</p> <ul style="list-style-type: none"> • People in industry and public organisations were significantly more likely to be heavily involved in the design, development or delivery of extension projects or programs for government, research or industry bodies (33% and 28% 'heavily involved' respectively). • People in Industry organisations were also significantly more likely to be involved or consulted in setting research priorities related to their area of expertise (33% 'heavily involved') • Private commercial organisations (e.g. product re-sellers/farm input suppliers) and sole operators were significantly <u>less likely</u> to be involved (37% and 32% 'not involved' respectively). • Private-commercial and private-consulting advisers were significantly less likely than other advisory organisations to be directly engaged by government or industry to deliver training or extension programs / projects within the past 12 months (n=365) (40%-39% 'not involved' respectively) 	<p>22. How to increase private-sector involvement in RD&E activities related to :</p> <ul style="list-style-type: none"> • Priority setting • Research translation • Design, development and delivery of extension
<p>Advisers seek greater involvement with the RD&E 'system' (n=365)</p> <p>In particular, invitations to discuss and provide input to:</p> <ul style="list-style-type: none"> • Be kept up to date on extension projects (32% a lot more; 40% some more) • Research priority setting and translation of research to meet client needs (24% a lot more; 42% some more) • Design, development and delivery of extension projects (25% a lot more; 38% some more) <p>On average 46% of advisers said they were rarely or not involved currently in these activities. (n=365)</p>	
<p>Advisory organisations are interested in partnerships with RD&E organisations:</p> <ul style="list-style-type: none"> - 60% of organisation leads (n=290) said they were extremely interested in partnerships with RD&E groups to support farm productivity. (28% moderately interested) 	<p>23. What partnership models could be used to bring advisory organisations into the RD&E system?</p> <ul style="list-style-type: none"> • E.g. Joint ventures?
<p>There is some willingness amongst advisers (n=265) to collaborate/coordinate services with others</p> <ul style="list-style-type: none"> - Most advisers were likely to collaborate with Public and Farmer-owned organisations. - Advisers were polarised when it came to collaborating with Farm input providers / product re-sellers, Independent (fee-for-service) advisers and private companies 	<p>24. Government, industry and farming systems groups to develop principles of collaboration/co-ordination related to:</p> <ul style="list-style-type: none"> • Farm input providers / product re-sellers, • Independent (fee-for-service) advisers and • private companies