



IMPACT REPORT

Southern NSW Drought Resilience
Adoption and Innovation Hub

Adoption Officer Review

January 2025

ACKNOWLEDGEMENTS

This report is based on the experiences of the (Drought) Adoption Officers based across NSW and associated with the Drought and Innovations Hubs (SNSW and SQNNNSW) and their managers. Their willingness to contribute and to share their stories in the form of case studies has provided the rich insights needed to understand what is happening on the ground and how the roles can be (even) more effective going forward.

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SUMMARY

Report Purpose and Approach

The purpose of this report is to review the Adoption Officer (AO) program at the Southern NSW Innovation Hub with a view to determine its effectiveness and opportunities to improve its impact. Adoption Officers were funded by the Future Drought Fund (FDF) and associated with the Drought and Innovation Hubs to ensure a strong focus on farmers as the customer and the uptake of tools and drought resilience innovations at a localised, on-farm and community level.

The review was based on interviewing eight AOs available at the time across NSW to develop individual case studies and undertaking a cross-case analysis to examine common threads, issues and opportunities to understand how the positions are playing out in practice. The case studies should be read in full as these are the lived experiences of those who took on the challenge of these roles and who have been prepared to share that experience to raise understanding and opportunity.

Management from Local Land Services (LLS) and the Hubs were also interviewed, and relevant program reports reviewed.

Extension and Adoption Context

A brief review of how extension models have unfolded in Australia over recent decades and what adoption theory and practice tells us was undertaken to provide context. The traditional extension model (pre 1990s) under the state governments was based on district extension officers who worked primarily with individuals to solve problems and share latest developments. This moved to more proactive extension that was primarily group based in the 90s and beyond as Rural Development Corporations (RDCs) and federally funded targeted programs replaced the free state extension service. The emphasis in the 2000s has moved towards more participative models and recognition of the role of extension in the innovation system as a whole. Examples of historical adoption curves have shown that adoption can take time and often there is a period of 'socialisation' of new approaches to develop confidence before they become widely adopted.

Emerging Themes

The report explored themes of **value adding** and **strategic positioning**. In terms of value adding, there was a high level of agreement that Adoption Officer positions were 'adding value' to existing programs by having a dedicated role focused on drought preparedness approaches. With strategic positioning, there were opportunities to maximise influence in large and diverse regions, including increased use of group approaches (also piggy backing on to other program activities), building capacity in other extension deliverers, clarifying the scope and mandate of the AO, and monitoring and evaluation to better reflect their role. While one-one has value in understanding producer context, too much focus on this can limit broader impact.

Conclusions

1. The Adoption Officer program **has the potential to provide a critical outreach** arm of the Hubs – and broader FDF messaging and outputs.
2. The current Adoption Officers **have an appropriate and good range of experience and skills** which makes for a well-balanced team. The collegial support and mentoring from the more experienced members to the newer staff is evident and commendable. They are committed to their roles and have shown remarkable ability in finding their place in the complex regional agricultural innovation systems in which they are placed.
3. The **arrangement with LLS is working well** – providing an organisational and collegial base from which AOs can work and find openings for engagement. There is good management and professional support – including training opportunities. The one case considered that was not formally within LLS was also able to link in collaboratively with them. Issues around travel within the organisational setting were raised and require some attention.
4. The **Hub connections are important** to both the Hub and the AO role – and this has been seen to have improved over time. Given the matrix management, the Hubs will need to clarify their responsibility in providing direction and support for the role.
5. **Short-term contracts are a major impediment** to developing their place, trust, networks and facilitating change in the regions in which they work.
6. The **large areas and number of industries and farms to be covered by the AOs is a significant challenge** and while recognising that each situation is different and flexibility is important, there is a lack of a clear framework to assist in guiding the role and providing an achievable and effective scope.
7. There is **not a suite of ‘specific new innovative approaches or tools’** sitting within the Hubs or FDF more generally which the AOs are attempting to ‘have adopted’. Rather they are drawing from existing resources, tools, experience and expertise to progress attention and actions around better practices which will provide immediate benefits as well as benefit drought preparation.
8. The **AOs are essentially operating under the ‘model’ of the original government extension officers** where individuals were put into a region to find their way and support their nominated industry in the best way they could – with one-one extension and solving problems being a key mechanism. The difference is that they have a theme – rather than an industry – focus and they are largely on their own to cover the region.
9. For these positions to realise their potential, be effective in their role and have a manageable job, **there is a need for a clearer role framework to guide their**

prioritisation, scope and types of activities. This would include having a more generic Impact Pathway with the flexibility to adapt to their situation.

- 10. Monitoring and Evaluation should reflect this framework, scope and expectations** and should not be based on ‘numbers of producers who adopt practices’.

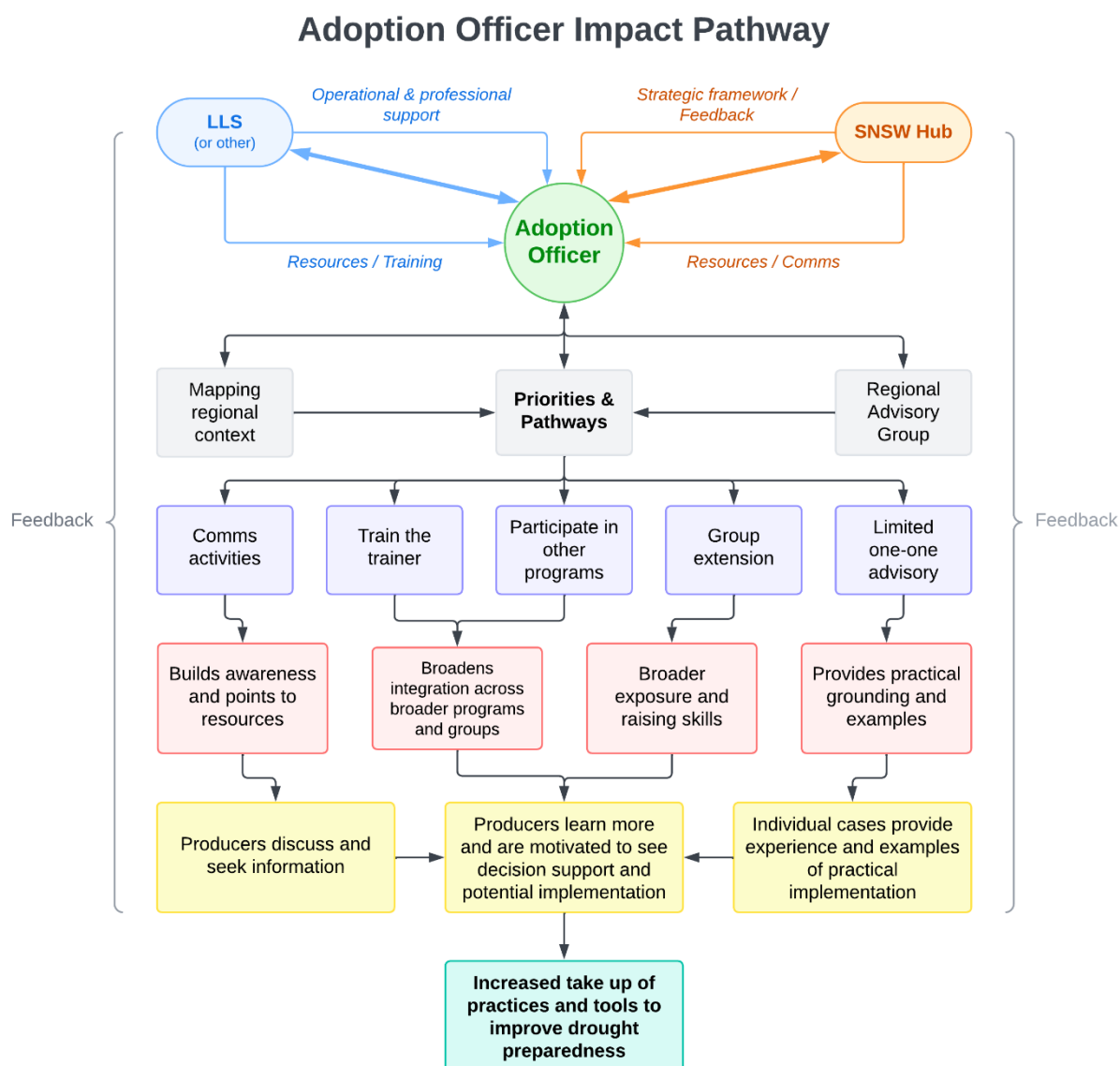
Recommendations

Based on the findings and conclusions the following recommendations are made:

- 1. Adoption Officers have the potential to be a critical element of the Hub and FDF impact in the regions and should be continued as funding allows.** Contracts should be based on the length of the next funding phase.
- 2. They should continue to be based in LLS [or similar alternative] to provide the organisational, collegial, professional, program linkages and training opportunities that have been evident.** Issues around access to vehicles and travels should be addressed.
- 3. The Hub should take a lead role in developing/revising the strategic and operational framework for the role to guide the scope, prioritisation and types of activities undertaken – while maintaining the flexibility needed.** The emphasis should be on integrating the messages and targeted practices within the broader programs and advisory network in the regions with an emphasis on working with other extension programs, undertaking train the trainer’ opportunities, group activities and limited one-one. Training should be given to suit this role.
- 4. As part of the guiding framework, Hubs should lay out the key drought/climate challenge messages and priority practices that would provide the focus for the role.**
- 5. Hubs should make every effort to bring together the range of existing – and new – resources and tools from their projects, the broader FDF programs and other existing sources that are relevant to these priority practices for ease of access and sharing across the region.** These should be updated as new resources are developed or discovered.
- 6. Consideration should be given to establishing – or using an existing – regional advisory group to provide guidance on priorities and pathways and regional context for the AO.** AOs should be provided time and support to ‘map’ the agricultural innovation system in their region to better determine the most effective opportunities to broaden their reach and impact.
- 7. A Monitoring and Evaluation and reporting framework should be developed to reflect the Strategic and Operational Framework developed for the role – in line with the logical Impact Pathway.** Narratives and case studies should capture efforts to better integrate the messages and resources into other programs and capability gains in extension and consultant network as well as increased awareness, interest

and actions in the producer community. Broader quantitative impact over time across the regions should be the responsibility of the Hubs.

Figure 1: Example of a potential Impact Pathway for Adoption Officers



1. INTRODUCTION

1.1 Purpose and Background

The purpose of this report is to review the Adoption Officer (AO) program at the Southern NSW Innovation Hub with a view to determine its effectiveness and opportunities to improve its impact. While the initial focus was on AOs associated directly with the Southern NSW Hub and employed by Local Land Services LLS, the scope was broadened to include the experiences of AOs associated with the Southern Queensland and Northern New South Wales (SQNNSW) Hub.

Initial Contractual requirements

Annexure D of the commonwealth Standard Grant Agreement stated that:

Adoption Officers will be engaged or employed by the Grantee to ensure a strong focus on farmers as the customer and the uptake of Future Drought Fund tools and drought resilience innovations at a localised, on-farm and community level. It is expected that Adoption Officers will be engaged or employed for hours that equivalent to approximately 2.5 FTE. The Adoption Officers will perform the role in accordance with the role statement set out below as may be adjusted by the Hub Director in consultation with the Commonwealth.

The role of the Adoption Officers was described as:

- **Driving uptake** of new innovations on-farm/at local level for improved drought resilience, including guiding farmers to relevant knowledge, helping translate that knowledge into on-farm adoption and by explaining the benefits of innovation.
- **Providing feedback** to the regional Hub about drought resilience needs and successful approaches in their region.
- Helping **identify and engage individuals and hard to reach cohorts** who could benefit from the services and support that could be provided by the hubs.
- Potentially **assisting in developing and facilitating appropriate networks** among Research and Development providers and industry with the goal of supporting development of regionally coordinated approaches to extension and adoption.
- **Disseminating information** about the Future Drought Fund to relevant parties through a range of mediums (e.g. social media, face-to-face events, podcasts).
- **Supporting farmers to use the tools developed** through the Future Drought Fund (e.g., use DRSAT, undertake Farm Business Resilience training).

The Hub contracted LLS to undertake the role of hosting and managing the Adoption Officers on behalf of the Hub. LLS was to receive \$500,000 per annum for providing 3.0 full-time-equivalent (FTE) Adoption Officers – there are currently 4.5 Adoption Officers operating in the role linked to the SNSW Hub and a further 4.5 AOs linked to the SQNNSW Hub. The Adoption Officer program fits within the major projects section of the LLS (only exists because of external funding).

Reported Progress

The LLS Adoption Officer Report (January to June 2024) detailed activities undertaken by Adoption Officers including the co-delivery of workshops, participation in relevant meetings and events, and multiple farm and demonstration site visits. Impact examples included narratives of Adoption Officers working with producers implementing new practices (e.g. confinement feeding, feed calculators). Issues around short-term contracts (staff retention), difficulty measuring practice change (short time frames), and current relevance of drought terminology were also noted.

Table 1: LLS Adoption Officer Report (January to June 2024) summary

Activities undertaken	<ul style="list-style-type: none"> • Co-delivered workshops with Western LLS across the rangelands, all well-attended. • Consultations during this period which were focused on drought planning, early weaning, and creep feeding strategies. • Participation in: <ul style="list-style-type: none"> ◦ Community meetings such as the Nyngan Community Interagency Meeting ◦ Regional Drought Resilience Planning sessions across multiple regions, with technical inquiries primarily related to feed testing and winter feed gaps. ◦ Attendance at the SNSW and SQNNSW Hub's Advance NSW conference - a great opportunity to network and learn from the variety of presenters ◦ Ruminant Nutrition workshops co-run across North West, Hunter and North Coast regions with the SQNNSW Drought Hub. ◦ Events like the AUSVEG Resilience workshop, CWFS Resilient pastures field walk, and local events fostering strong networks and ongoing dialogue with local landholders regarding drought preparedness. • Multiple farm visits were conducted for confinement feeding case studies in collaboration with the FDF Saving Our Soils During Drought Project, and demonstration site visits for reports developed for the FDF Resilient Pastures Project, enhancing outreach and practical support efforts in the community.
Impact examples	<ul style="list-style-type: none"> • Belmore' – property located at Oberne Creek, landholder has been working with an adoption officer to implement a cattle and possibly dual confinement feeding area on his property. Landholder has accepted the design proposed and will start construction once it is dry enough for excavation work to begin. • Pat E (Forbes) - Did a farm visit in Feb. Pat cuts his own hay (and silage in previous years), buys hay and grain in and regularly feeds his cattle and sheep in small paddocks. He had never done feed tests and just goes by whatever he thinks will be enough. Set him up with some feed tests and helped him interpret the results and helped him set up the drought and supp feed calculator on his phone which he used to determine what/how much he should be feeding. Have had a few calls from him since about feed test interpretation and he is still using the calculator
Issues/concerns	<ul style="list-style-type: none"> • As this is a short-term contracted program, there are issues with staff retention, short term contracts and staff not feeling secure within their role • Implemented practice change is very difficult to measure within the time frame of program • Current relevance of drought and drought terminology is waning, need to pivot on language used to engage landholders across the state

1.2 Review Approach

Scope

This impact assessment is based on the current NSW Adoption Officers directly linked to the SNSW and SQNNSW Hubs (via LLS) and their reported impact to date as well as potential impact if their role continues forward to the next phase. Key considerations included:

- **Extension and adoption context:** Current theory and practice around extension and adoption were drawn from to provide a context for the positions.
- **Impact in terms of value adding:** Impact was primarily assessed in terms of how their roles add value to other programs, projects and Hub related activities in facilitating/assisting/contributing towards the type, rate and effectiveness of adoption.
- **Pathways to impact:** Impacts were considered in context of the different roles which were outlined in the initial contract; the actual roles/activities in which they have been reported to have undertaken; and the potential roles in which they could maximise their impact. A complementary Impact Pathway was developed to demonstrate the actual and potential impact of these roles.
- **Potential benefits and implications:** Potential resulting benefits were considered in terms of economic, environmental and social benefits; with implications for the future program explored.

Case Studies

The approach used was to treat each of the Adoption Officers as a **case study** followed by a **cross-case analysis** – under emerging roles, themes and impacts. In-depth interviews (with follow-up) were used with each of the Adoption officers – as well as interviews with their manager and others who are closely associated with the program. Interviewees had the opportunity to approve the summaries of their case that was to be included in the report. It did not involve interviews with producers with whom they have worked – rather their own records and recollections of the type of activities they have done and observed impacts and influencing factors. Reports of the program also provided context, activities and roles undertaken – as well as recorded examples of impact to date.

Importantly, the roles other than direct engagement with producers were explored in the case and how their contribution has or could impact on the change pathway. Barriers and enabling factors were also explored as well as insights into how the role could be more effective in the future. Concrete examples of impact on adoption – in terms of individual producers and/or through better networks, awareness or project processes – was captured where available and highlighted through the data capture and analysis.

2. Extension and Adoption

This section provides a background discussion on adoption models and theories. This is considered important when assessing what is happening in the Adoption Officer program and provide a context for understanding adoption pathways and impacts.

2.1 Research to Adoption models

Figure 2 below¹ tracks the different thinking – or models – conceptualising the development and adoption of innovation over time. As the diagram shows, there has been a move from a more linear ‘Research to Extension to Farmer’ model, to a more participative and holistic approach to fostering innovation and positive practice change on farms. In practice, however, all of these different models are still being used across the RD&E landscape in Australia, depending on the organisation, industry and type of innovations or practices involved.

The ‘Technology Transfer Model’ assumes that there are ‘farm ready’ innovations, tools and new practices that have been developed and that producers are ready, able and willing to adopt these if only they were aware and ‘educated’ in their use. Although this can be the case with innovations which are relatively low cost and fit easily into a current farming system (e.g. new variety of seed) the reality of the complexities of farming systems means that it is rare to find such easy transmission from research designed innovations to on farm practice adoption.

The subsequent models sought to gain much more insight and involvement from the producers to whom the research and innovations were meant to benefit. This has informed the Future Drought Fund’s and Hubs’ emphasis on ‘co-design’. The latest thinking is around how extension can impact on the overall ‘innovation system’ – recognising that the farming system is part of a greater arena in which it operates. Synergies and changes in the broader innovation system can provide the context for on-farm change and benefits that can arise from this.

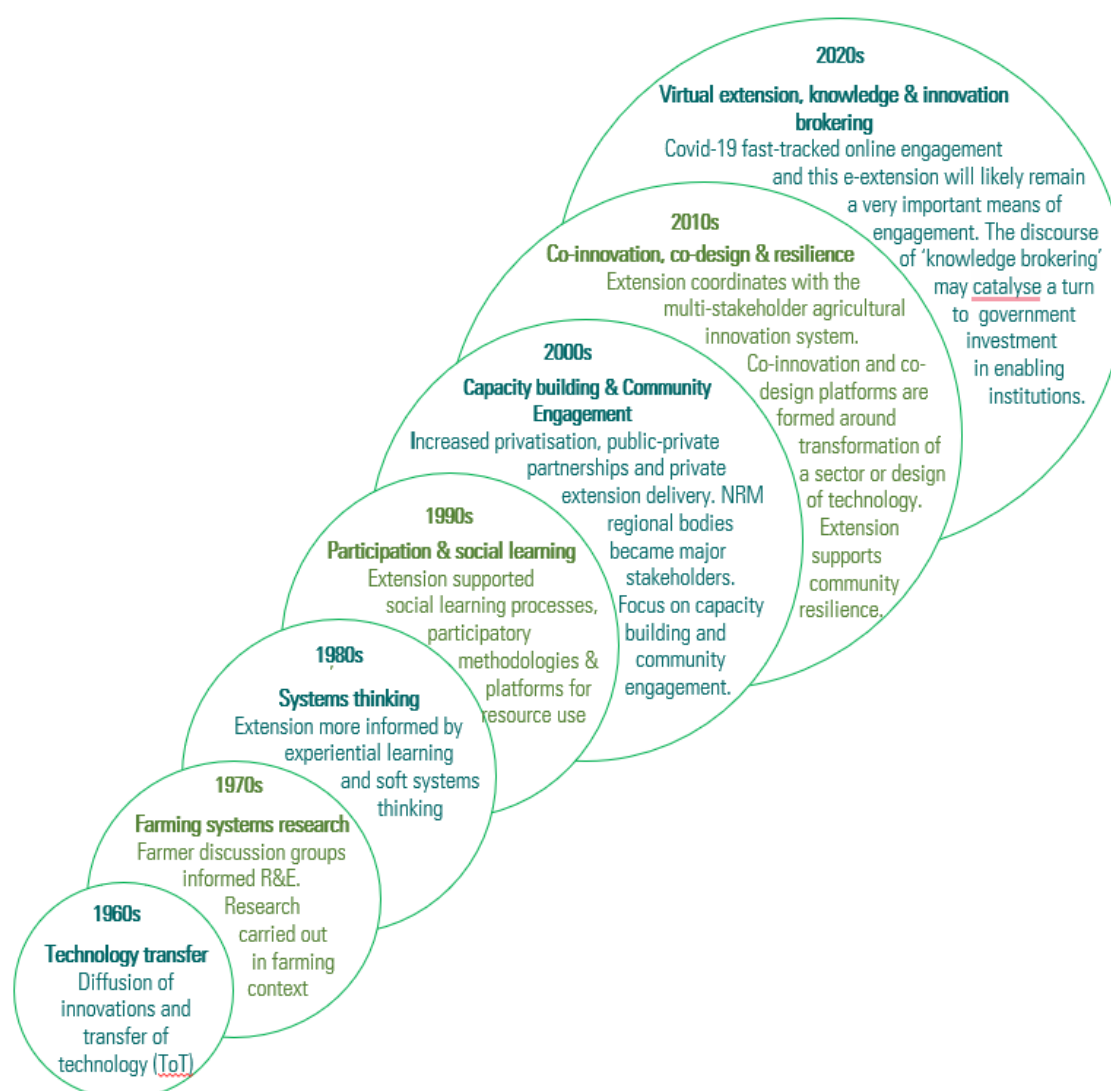
The state government agricultural extension officer – especially pre-1990s before their roles were put into question – operated outside of these models. Extension Officers were more of a point of contact for producers with whom they would apply their expertise around different farming needs – largely responding to requests. They shared information picked up from producers, researchers or their own experience relevant to the need at hand – without thinking of themselves as an ‘extension of research’ as such. They also referred producers to other sources of assistance where they could not help them. They were involved in the local shows and agricultural field days and were very much part of the rural community. Even then, however, it was recognised that they only got to deal with a small percentage of producers and that they were largely reactive rather than proactive.

The state extension model changed due to a combination of influences: there were questions around government providing free advice and so competing with the private sector; there was also a recognition that proactive approaches were better than reactive ones; and relying on one-one approaches limited the engagement opportunities across a region or sector.

¹ van Bommel, S; Coutts, J; James, J; Nettle, R (2024) Trends in extension in Australia, in *Rural Development for Sustainable Social-Ecological Systems*, eds. C. Baldwin and S. van Bommel, Palgrave

The Adoption Officers are (currently) a short-term initiative with the purpose of *connecting farmers and communities to support available take up of information and tools from the Hub (and other FDF programs)*. The underlying assumption was that there was a suite of ‘farm-ready’ information and tools sitting ‘within the Hub’ that needed to be extended out to producers for take up. It was expected that they would engage with a broader group of ‘hard to reach’ producers, develop and facilitate better connections between producers and R&D providers and use a range of techniques to disseminate information. This would be challenging to achieve with the small number of officers over a large farming area, the limited number of farm ready tools from the FDF program to date and the short-term nature of the appointments – given the importance of developing industry understanding, relationships and trust.

Figure 2: Trends in extension models over time



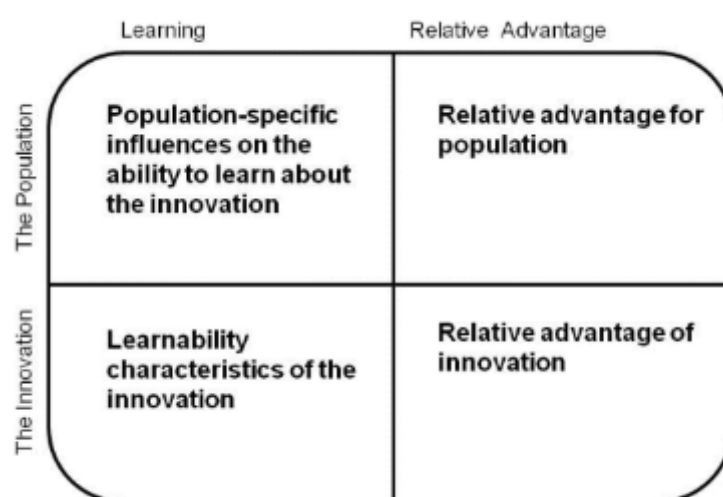
2.2 Adoption Theory and Practice

Based on the Technology Transfer Model work by Rogers², the initial way that the adoption process was viewed was that adoption was based on the personality of the farmer – his/her level of ‘innovativeness.’ The concept was that producers who were more forward thinking and innovative would see the innovation and its benefits quickly and adopt it. The majority of farmers would follow over time based on their own level of innovativeness – while those who were slow to adopt – or who didn’t adopt at all – were referred to as ‘laggards’.

Over time, it was recognised that different propensity and decisions whether to adopt an innovation or not was affected by many other factors apart from farmer ‘innovativeness’. In later editions, Rogers conceded that the characteristics of an innovation were an important element which affected its ‘adoptability’.

CSIRO drew from Rogers’ work, other authors and their own analysis of adoption of agricultural innovation over time to develop a computer tool called ‘ADOPT’³. This model considers 22 factors that can influence adoption spread across the four quadrants below.

Figure 3: ADOPT Model influences on adoption



The four quadrants of the ADOPT model

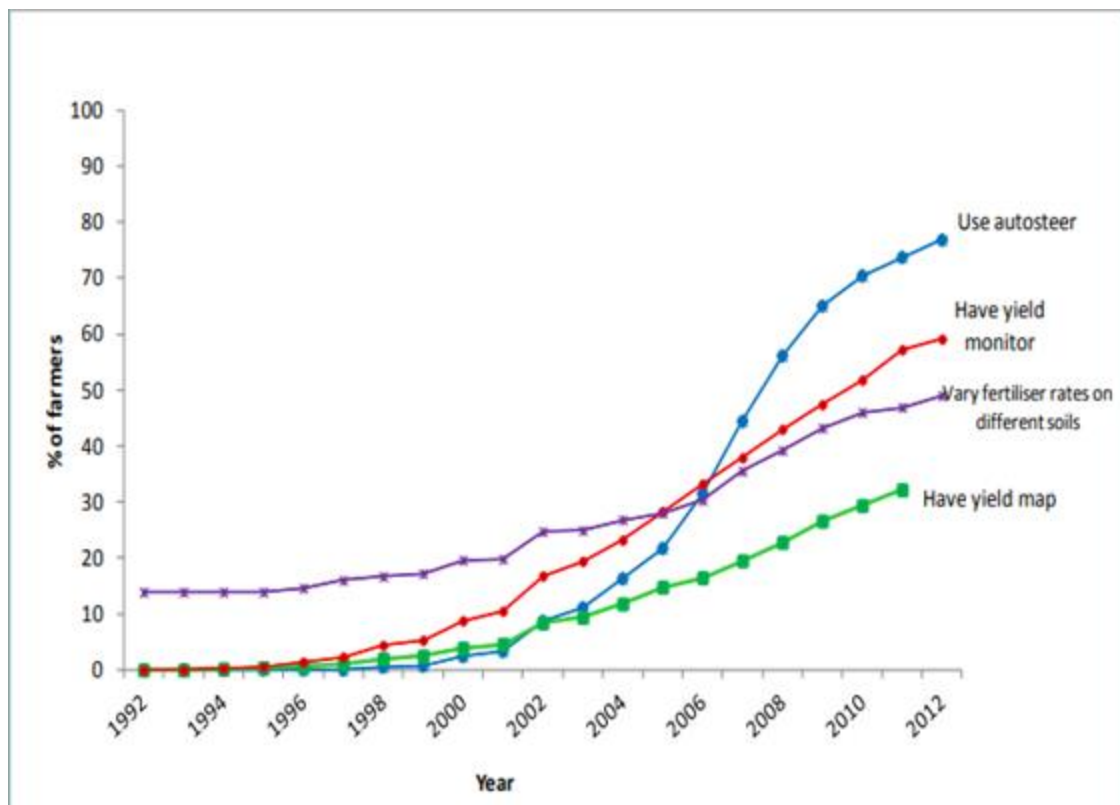
Based on the responses to the 22 questions, ADOPT ‘predicts’ the likely rate of adoption of a specific innovation across an agricultural population. It provides an insight into what factors might be most important in encouraging adoption – or in limiting the rate of adoption.

It is important to recognise that adoption of agricultural innovations and practices can take time and that time will vary based on the factors included in the ADOPT model, seasons, prices, markets and priorities of ‘targeted’ producers – and the extension/engagement processes used. The following diagram provides examples of the adoption rates and times for precision agricultural technologies over time – as these different factors play out in practice

² Rogers, Everett M. (1962). *Diffusion of Innovations*. New York: The Free Press of Glencoe.

³ <https://adopt.csiro.au/>

Figure 4: Adoption of Precision Ag tools over time



Looking at the ‘start-up times’ for these relatively simple innovations shows it took almost a decade to gain traction and for the adoption rate to start increasing. Considering this in the context of a short-term project, it highlights how expectations of adoption within the timeframe can be at the best optimistic or even unrealistic – depending on the type of practices.

Note that AOs are not focusing on specific innovations to ‘have adopted’ but rather using their skills and networks to expose people to existing knowledge and tools and how they can use these to their advantage.

3. FINDINGS

3.1 The Adoption Office Niche – where it is adding value in the drought and climate arena

Summary

A central question in evaluating an investment in RD&E is the extent to which that investment is adding value to what is already in place in achieving the funding objectives. In the Standard Contract Agreement, the purpose of the funding and hence role was that *Adoption Officers will be engaged or employed by the Grantee to ensure a strong focus on farmers as the customer and the uptake of Future Drought Fund tools and drought resilience innovations at a localised, on-farm and community level.*

Adoption Officers *are* providing an extra proactive focus on messaging and practices relevant to drought preparedness than otherwise would be in place – which is seen to complement other extension programs and meeting a gap not filled by other (LLS) staff. Individual Adoption Officers fulfill this role in different ways depending on the regional context, their own skills and networks, and where they see scope to act. They are limited by short term-contracts; their low number to producer ratio; regional contexts; experience; time needed to develop trust relationships in their regions; and a lack of a clear strategic pathway. They are well positioned to provide on-ground intelligence to the Hubs on needs, what is working and on how best to engage with producers and so facilitate change.

Emerging Themes

- **Effective in providing an added ‘drought’ voice:** The focus on providing a ‘drought preparedness lens’ is at the forefront of minds of the AOs and their management. It is clear that they are providing an added voice in the mix of programs and messaging around preparing for and managing drought and dry times.
- **Navigating different contexts and priorities:** The positions, however, have had to find their place in the locations and agricultural/grazing context in which they find themselves in. This also means dealing with the current priorities of producers who may well be facing floods or good seasons – which may not be strictly a drought focus but can aid in making producers more sustainable.
- **Leveraging existing activities/programs:** The low AO to producer ratio and the fact that many are effectively ‘on their own’ geographically means that it is important that they can ‘attach themselves’ to the activities of other programs and add their messaging to other program objectives.

- **Contributing to environmental outcomes:** Their work does have the potential to contribute to positive environmental outcomes in that better pastures, water management and management in dry times will increase ground cover and decrease erosion and poor water quality outcomes.

Interview Feedback

The following is a summary of Management and Adoption Officer interview feedback relating to the program's niche and where it is adding value in the drought and climate arena.

Management	<ul style="list-style-type: none"> • Important for promoting drought preparedness and sustainable agricultural practices, filling critical gaps in regional support and extending the capacity of LLS – flexibility to adapt roles to local needs. • Provide tailored advice, run workshops, and offer consistent engagement with landholders, ensuring continuity in education and proactive resilience-building. • Address areas not covered by other staff particularly when resources are stretched. • Challenges around short-term contracts, limited resources, and the demands of managing large, diverse regions. • Need for clearer support and role definitions.
Adoption Officers	<ul style="list-style-type: none"> • Filling critical gaps in agricultural extension programs, particularly in under-supported sectors (e.g. small landholders). • Role emphasises personalised, one-on-one support tailored to the specific needs of farmers, distinguishing them from broader group-based approaches. • Requires working across diverse audiences and industries, addressing varying priorities and regional contexts. • Prioritises drought resilience and management, focusing on feeding strategies, stocking, water management, and integrating resilience into farm practices. • Collaboration and awareness-building are key aspects of the work, involving partnerships with farming groups, advisers, and organisations through activities such as webinars and events. <p>Example Adoption Officer Quotes</p> <p><i>“Really excited coming into this role to be able to talk to people who wanted to learn”</i></p> <p><i>“There to fill the gaps where the usual Ag team are not operating in – we operate in a preparedness space. Anything that makes a farmer a better manager.”</i></p> <p><i>“Provided us with more time to focus on adoption of practises for drought management.”</i></p>

3.2 Program Structure and Management

Summary

The Adoption Officers work under a *matrix management model* where they are funded through the Hubs and employed by a contracting organisation. In NSW, this is mainly through LLS with the SQNNNSW Hub also having two AOs managed by Southern Cross University. The matrix model, while working well for the AOs does add some challenges around communication and guidance for the positions from the Hubs. Travel restrictions have impacted on activities at times. Being linked to LLS has provided a collegial and professional base for AOs and opportunities to link to activities being run by the organisation. There is good mentoring and support within the AO network and increasing linking to the Hubs.

Emerging Themes

- **Success of matrix management model:** While matrix management can be challenge, the partnership with LLS has many benefits in allowing the positions to be spread across regions, to have a base from which to operate and colleagues and programs which can support their work. LLS also provides training and HR support for the positions. The SNSW Hub is increasing its contact with the AOs which is important in strengthening the interchange with the Hub and providing a seamless engagement with producer communities.
- **Valuable mentoring and support provided:** LLS has provided good stability and professional support and a mechanism to develop the AO network and internal support. There is good evidence of more senior and experienced staff providing mentoring and practical experience to younger and less experienced staff.
- **Variety of challenges facing AOs in their roles:** These positions appear to be at risk of being swamped by the size of their regions, the wide choice of potential directions they could take and/or the expectations being put on them to facilitate and demonstrate 'adoption'. There is a real risk of 'sink or swim' depending on their experience, personality, level of regional support and central guidance provided. The limited time and short-term contracts work against individuals establishing their niche and developing the relationships needed to achieve strong outcomes.
- **Limited strategic guidance:** There is a lack of a strategic and operational framework to provide the direction and progress indicators for AOs – both as a group and as individuals – in terms of realistic and significant objectives and milestones within their resource and time limits.

Interview Feedback

The following is a summary of Management and Adoption Officer interview feedback relating to the program structure and management.

Management	<ul style="list-style-type: none"> • Effective collaboration between SNSW Hub and LSS – <i>sharing common goals and working closely to engage landholders.</i> • Regular meetings between LLS and the Hub helped ensure smooth collaboration and provide a platform for ongoing feedback. • Operational management of AOs by LLS leverages existing networks to connect with landholders. • AO manager within LSS focuses on <i>team empowerment and management rather than direct technical engagement.</i> • Flexibility in roles allowing AOs to tailor their work based on local needs and personal skills. • Effectiveness of AOs determined by variety of factors including levels of experience, support, and resources; and challenges associated with working over large geographic areas with diverse farming systems.
Adoption Officers	<ul style="list-style-type: none"> • Access to/development of strong networks/collaborations (e.g. farming groups, financial counsellors, mental health experts) allowed for more holistic support to farmers. • Participation in partner events and integration with broader programs (e.g. Farm Business Resilience) further amplified reach and effectiveness. • Practical resources provided have been highly useful (e.g. Farming Forecasts, feed calculators, and drought booklets). • Valuable ongoing professional development opportunities provided (e.g. training programs, workshops, webinars). • Positive and flexible work environment, backed by strong managerial support and mentorship – fostering autonomy and problem-solving. • Variety of challenges encountered – including: <ul style="list-style-type: none"> ○ Resource constraints, dispersed teams, limited mentoring opportunities, and fragmented support. ○ Logistical issues around extensive travel across vast regions (e.g. limited vehicle access). ○ Engagement barriers resulting from limited farmers awareness of SNSW Hub and/or LLS. ○ Uncertainty caused by short-term contracts, unclear responsibilities, and bureaucracy – complicating long-term planning and stakeholder relationships. ○ Difficulty balancing one-on-one farm visits with broader outreach.

3.3 Activities and Topics

Summary

Adoption Officers undertake many of the traditional extension activities. Because they work as individuals and are not part of a specific funded project with designated objectives and operational plans, they often leveraged their work off other programs and activities (e.g. field days and workshops) where they found opportunities to provide input around drought preparedness, engage with other extension staff and meet producers. This allowed contact with a broader range of producers and provided individual contacts to follow up on specific needs. Experience and links to previous networks made a difference in their ability to undertake certain activities and engage in the community. One-one was a common engagement method used, with some AOs also running dedicated webinars and workshops on specific topics across regions. The topics addressed are generally all very relevant to drought management and resilience – for example livestock containment, pasture and farm water management.

Emerging Themes

- **AOs demonstrating flexibility and adaptability:** The AOs have shown remarkable flexibility and adaptation as they have taken on this role in the different regions. The farm contexts, other extension staff and programs in their region and their own experience and networks – or lack thereof – have meant that they have had to determine how best to undertake their mandate, what to focus on and how to make inroads into the producer community. It has been particularly challenging where there have been good seasons or even floods which has worked against interest in drought preparation as such.
- **Effectiveness of support and opportunities provided by LLS:** The co-location of LLS AOs with other extension teams has provided opportunities to learn more of the region and its needs and to join in on activities being run and organised by other extension programs. Without this, it would have been very difficult, especially for the new and less experienced AOs. Officers have expressed appreciation for the community of practice within LLS, which fosters peer learning and support – enhancing their ability to collaborate and share insights.
- **Strong reliance on traditional extension models:** The extension model being used is very much following that of the early government extension officers where they were appointed to a specific region and it was up to them to engage with industry members in their service area and deal with issues as they emerged. There was then a strong focus on one-one extension with those who showed interest and wanted assistance. The difference with AOs is they are not limited to a specific industry, and they have a more focused scope of work around drought preparedness.

Activities & Topics

The tables below provide an overview of the types of activities delivered as reported by Adoption Officers and examples of topics presented.

Activities

One-on-one consultations / farm visits	<ul style="list-style-type: none"> • On-farm or phone advisory sessions widely mentioned. • AOs dedicating significant time to addressing individual farmers' needs. • Consultations often focused on tailored drought adaptation strategies (e.g. feed management, irrigation improvements, and livestock containment areas.) • Most AOs conducted regular farm visits resulting in substantial engagement – many conducting follow-up visits to assist any practice implementation.
Group events	<ul style="list-style-type: none"> • Attending/presenting at field days, workshops, and seminars • Used to raise awareness and promote drought preparedness and engage with individual farmers. • A few officers noted low attendance at seminars prompted a shift toward more individualised, one-on-one engagements.
Webinars / online engagement	<ul style="list-style-type: none"> • Several AOs organised and promoted webinars allowing broader reach to farmers unable to attend in-person events.
Other examples / comments	<ul style="list-style-type: none"> • AOs actively involved in helping farmers implement practical solutions (e.g. designing containment feeding areas, water management plans, and improving irrigation systems). • Many officers contributed to other programs/projects (e.g. other FDF initiatives) and participated in extension program planning sessions or regional meetings. • Examples of AOs proposing/leading innovative activities (e.g. rice irrigation study tour) and addressing complex challenges (e.g. working with multidisciplinary teams).

Topics

Drought Resilience and Preparedness	<ul style="list-style-type: none"> • Presentations often promoted sustainable practices, encouraging farmers to adopt strategies for long-term drought adaptation and disaster preparedness. • Practical advice tailored to specific regional challenges addressing unique landscape challenges in diverse farming environments.
Livestock Containment and Feeding	<ul style="list-style-type: none"> • Addressed confinement feeding practices as a critical strategy for managing livestock during droughts or floods. • Support provided around areas including supplementary feeding, feeding plans, pasture degradation/dieback, cost-effective feeding area design, and livestock nutrition and parasite control.
Water Management	<ul style="list-style-type: none"> • AOs shared advice on managing water resources during dry conditions (e.g. water conservation, quality testing, optimising water systems, addressing runoff and environmental impacts of poor irrigation). • A few officers prioritised practical cost-effective irrigation improvements rather than high-tech solutions.

Digital tools	<ul style="list-style-type: none"> • Some AOs trained farmers on using tools such as the Farming Forecaster, drought calculators, and feed planning software to improve decision-making and farm resilience.
Other topics	<ul style="list-style-type: none"> • Grain market trends and how they impact farm planning. • Biosecurity and its role in farm resilience. • Grazing operations in cropping-dominated regions.

3.4 Strengths and Barriers

Summary

As described in earlier sections, Adoption Officers benefited from being co-located with other LLS staff and programs allowing them more and quicker access to understanding the regions and needs and being able to link into activities being run. This also assisted in linking into networks, engaging individual producers and sourcing resources and expertise. Training and support through LLS was also a positive. A significant barrier was the lack of more specific guidance on their priorities and navigating the size and complexities of their regions. There were some issues around travel and organisational restrictions. The short-term funding was a major limitation in gaining momentum and retaining staff.

Emerging Themes

- **LLS key to Adoption Officer success:** The LLS connection has been quite critical to the role in terms of providing access, support and professional training. Being part of a team – albeit geographically dispersed – has enabled a degree of mentoring and extra support. These types of benefits appear to more than counter some of the organisational and travel issues raised.
- **Challenges with short-term funding:** The short-term nature of an ‘adoption’ role has again been shown as a major limitation – especially in terms of the time needed to understand the context, access networks and gain confidence and engagement with the producer community.
- **Strategic guidance needed:** This also reinforces the issue of a need for better guidance in terms of scope and prioritising time, topics and target groups to make the role manageable and achieving within a more focused expectation.

Interview Feedback

The following is a summary of Management and Adoption Officer interview feedback on the Adoption Officer program’s strengths/positives and any issues/concerns encountered.

	Management	Adoption Officers
Strengths/Positives		
Effective collaborations, networking and partnerships	<ul style="list-style-type: none"> Officers highlighted the importance of local knowledge, relationship-building, and informal networks as essential components for successful adoption of practices. 	<ul style="list-style-type: none"> Good connections with farming systems groups and other stakeholders. Collaboration with local regional staff providing valuable insights into specific local conditions and challenges. Collaborative efforts with district veterinarians, financial counsellors, and mental health services enhanced holistic support for farmers. Networking and attending events provided deeper insights into local needs and conditions. Participation in regional meetings ensured alignment with broader initiatives.
Benefits of LLS leadership and support	<ul style="list-style-type: none"> LLS provides local leadership and support, ensuring officers are connected to the broader regional agricultural community. Hybrid model, where officers work within regions but are not directly accountable to them, allows for a broader, state-wide impact. Despite challenges from working in large and diverse regions, AOs feel well-integrated into the broader network and appreciate the collaborative environment. Appreciation for the community of practice within LLS, which fosters peer learning and support, enhancing their ability to collaborate and share insights. 	<ul style="list-style-type: none"> Access to LLS training programs and resources enabled continuous professional growth. Workshops and webinars offered opportunities for shared learning and skill enhancement. Practical resources like LLS drought and confinement feeding booklets proved invaluable. Positive and flexible work environment encouraged productivity despite funding limitations Ongoing mentorship from team leaders and experienced colleagues facilitated knowledge sharing and problem-solving.
Effective collaboration between LSS and SNSW Hub	<ul style="list-style-type: none"> Collaboration seen to be effective, with both LLS and the Hub sharing common goals and working closely to engage landholders. Regular informal meetings between LLS and the Hub project manager help ensure smooth collaboration and provide a platform for ongoing feedback. 	
Flexibility and autonomy of role	<ul style="list-style-type: none"> The ability to travel and attend regional events has helped officers build connections and influence change more effectively. 	<ul style="list-style-type: none"> Strong managerial support provided autonomy and guidance for shaping the role. Flexible work arrangements improved time management and responsiveness to farmer needs.
Other positives	<ul style="list-style-type: none"> Concentration on specific drought-related projects allowed for personalised, impactful support for landholders 	<ul style="list-style-type: none"> Effective use of tools such as Farming Forecaster and supplementary feed calculators to support decision-making. Positive feedback from farmers and stakeholders reinforced the impact and value of the program.
Issues/Concerns		
Short term funding / contracts	<ul style="list-style-type: none"> The program's sustainability heavily relies on continued funding from the hubs; if funding stops, the program will cease. 	<ul style="list-style-type: none"> Short-term contracts created uncertainty, impacting long-term planning and relationship-building.

	<ul style="list-style-type: none"> • Short-term contracts create uncertainty, preventing officers from establishing long-term relationships or contributing to sustainable, ongoing projects – can lead to inconsistent performance, as officers often have to navigate multiple responsibilities without structured support. • Program's limited duration and staffing constraints have hindered its full potential – extending the program would provide more time for meaningful impacts. 	<ul style="list-style-type: none"> • Unclear funding and responsibilities led to resistance to the role from stakeholders.
Engagement barriers /challenges		<ul style="list-style-type: none"> • Limited awareness among landholders about LLS and Drought Hub services hindered initial engagement. • Difficulty engaging with private advisers due to differing philosophies. • Resistance to adopting initiatives due to the role's sole focus on drought-related issues. • Challenges in balancing one-on-one farm visits with broader outreach efforts. • Difficulty engaging with older, more experienced farmers who were resistant to change. • balancing the needs of small landholders with those of larger producers required tailored strategies.
Geographic challenges	<ul style="list-style-type: none"> • Geographic spread of landholders and limited staff availability make it difficult to maintain effective coverage across large areas. 	<ul style="list-style-type: none"> • Logistical difficulties in covering large regions effectively impacted service delivery – e.g. significant time lost due to travel, vehicle access issues. • Dispersed teams with limited opportunities for personal mentoring.
Lack of strategic direction		<ul style="list-style-type: none"> • Lack of a mapped-out plan for the coming months left priorities unclear in some cases. • Minimal direction from hubs restricted effectiveness.
Demonstrating impact	<ul style="list-style-type: none"> • A significant challenge is measuring the impact of short engagements, as AOs often have brief but meaningful interactions, which are not easily captured by traditional surveys or quantitative methods. • Current reporting mechanisms fail to adequately capture the full scope and impact of the adoption officers' work, making it harder to demonstrate value. 	
Other issues/concerns	<ul style="list-style-type: none"> • Some AOs have a heavy workload due to their broad responsibilities and long-term engagement with landholders. 	<ul style="list-style-type: none"> • Government bureaucracy and regional politics slowed decision-making processes and program execution. • Initial lack of team members delayed program implementation and impact. • Difficulty integrating with other teams, such as irrigation specialists and private advisers. • Slow interdepartmental communication and resistance from other staff hindered new initiatives;

Example Adoption Officer Quotes

Positive experiences

"Induction into the role is probably the most helpful part of it - having close by some really experienced members of the team."

"Some quite experienced people with the team. With a fairly small team of people, we've been able to mentor and coach some of those new guys into their roles a little bit."

Issues/concerns

"I can't keep doing 6 months extensions – I love the job, but I need job security."

"If they were funded for four years, I think it would make collaboration with the regions a lot easier because they would feel more inclined to converse."

"We've only got a couple vehicles, so you kind of need to book in advance, otherwise you might get stuck without and I have had to use my personal one a couple times."

"I could have more impact, but then I didn't find that there was any direction at all from the Drought Hubs. I saw our role was to extend new information and technologies from the Hubs and I'm not sure they've had too many outputs yet to be extending."

3.5 Effectiveness and Impact

Summary

Adoption Officers and their managers overseeing the program consider that the positions are effectively targeting the area of proactively addressing drought preparedness – through filling gaps and providing a focal point. Each AO can point to individual producers with whom they have had contact and who they have prompted or assisted in making positive changes around key practices. Managers and AOs highlight the broader impacts of the roles around raising awareness, linking into networks and socialising the importance of considering preparedness – which goes beyond counting changes. All see a need for better approaches to reporting and demonstrating their impact – using such things as case studies and impact narratives. These have scope to show impacts beyond only on-farm. The short-term contracts, large areas and agricultural diversity have a significant impact on the ability of the positions to build trust and focus on manageable objectives.

Emerging Themes

- **Acknowledging effectiveness more broadly:** Effectiveness can mean many different things depending on the lens used. If it was limited to the number of producers who have 'adopted' a new technology or approach to drought preparedness directly as a result of the AO, then – although there are some specific examples provided of this – the effectiveness would be quite limited. If it was raising the profile, awareness and messaging of being prepared for climate challenges – then the effectiveness would be greater.

- **Considering achievements in context of time frames:** Given the short-term contracts and time frames any gains should be considered positive. It's about socialising the concept and ideas, and preparing the groundwork for significant change –this takes understanding of the region, engaging within the networks and building such capability in those in other extension programs.
- **Strategic positioning and objectives needed:** The key issue is around how these positions can best be strategically deployed – given the geographical size of regions, the diversity of climate, and agricultural enterprises. The positions need a realistic objective and scope within their constraints.
- **Reconsider impact metrics used:** Demonstrating impact is an issue – not just of 'numbers of producers' who are influenced and assisted in making a change, but in the broader influence on awareness and capability building within the region.

Interview Feedback

The following is a summary of Management and Adoption Officer interview feedback relating to effectiveness and impact.

Management	Effectiveness
	<ul style="list-style-type: none"> • Managers considered that the activities undertaken by the AOs, such as running workshops, providing drought resources, and advising landholders, <i>are crucial for long-term drought resilience – increasing reach and support</i> to landholders... <i>they provide tailored advice, helping landholders prepare for issues like fodder preservation and drought management, which is a gap not filled by other staff.</i> They were seen to serve as a dedicated and constant presence for drought-related services, offering continuous assistance where regional services may be sporadic. It was noted that, while direct, visible impact is sometimes limited, <i>officers contribute significantly to long-term sustainability by promoting resilient agricultural practices.</i> • Adoption Officers were seen to build relationships with farmers, fostering trust and providing informed advice on a range of agricultural practices and serve as key connectors between farmers and available resources, including tools, knowledge, and training opportunities. AOs <i>play a critical role in increasing awareness about drought resilience and ensuring farmers are equipped with the knowledge needed to make informed decisions in the face of climate variability.</i>
	Capturing Impact <ul style="list-style-type: none"> • It was suggested that current reporting is insufficient to capture the full impact of the adoption officers, and improvements are needed to accurately reflect their contributions. A view was that the impact of adoption officers should be measured beyond the adoption of specific practices; metrics should include the development of local networks, informed decision-making, and the promotion of long-term drought resilience. Capturing their role in strategic input into projects aimed at improving the agricultural community's climate resilience was also raised. • Flexible reporting frameworks were seen as essential, <i>as officers' roles vary based on their regions and personal strengths, making standardized measurements difficult to implement.</i> Metrics should focus on qualitative outcomes, such as building trust and fostering lasting relationships,

	<p>alongside more traditional quantitative measures like the number of practices adopted and that not only tracks activities but also demonstrates the broader, long-term value provided to landholders.</p> <ul style="list-style-type: none"> • It was pointed out that case studies, detailed impact reports, and better data collection will be essential in securing future funding and improving communication with stakeholders – and that AOs <i>should be more involved in sharing success stories and lessons learned to raise awareness of the program’s impact</i>. Implementing a system for AOs to input brief, narrative-style reports regularly would help to ensure timely capture of qualitative data, reducing the reliance on retrospective surveys.
Adoption Officers	<ul style="list-style-type: none"> • AOs considered that the positions were widely recognised as effective in providing tailored and practical farming system specific advice to support farmers for drought preparedness. • Impact was reported to vary depending on target groups - smaller producers and hobby farmers saw clear benefits but were harder to track quantitatively; Larger, more commercial operations benefited from specific tools and strategies but were often serviced by their own consultants. • Some AOs highlighted systemic issues, such as lack of direction from drought hubs and the challenge of measuring long-term impact, particularly in regions experiencing favourable seasons. Limited measurable results due to short tenure or early stages of the project. • Examples of impact areas: <ul style="list-style-type: none"> ○ Livestock Containment and Feeding Advice – e.g. designing and redesigning stock containment feeding areas for efficiency; Assisting farmers with supplementary feeding strategies and feed budgeting; Providing tailored feeding plans to optimize livestock nutrition and reduce costs. ○ Water Management and Quality – e.g. Identifying and resolving water quality issues that impacted livestock health; Advising on irrigation system upgrades to reduce runoff and improve efficiency; Collaborating with horticulture teams to integrate irrigation strategies into broader agronomic plans. ○ Pasture Health and Resilience – e.g. Pasture degradation caused by cockchafer infestations; Offering tailored advice to address unique landscape challenges in diverse farming environments.

3.6 Looking Forward

Summary

The suggested key areas that need addressing going forward included funding to allow for scaling up, stability, reduced turnover and a realistic time frame for Adoption Officers to engage effectively in their regions to facilitate change over time. There was also a call to broaden the role beyond drought (to climate challenges) to maximise entry points with producers and encourage engagement. The need was raised to provide better direction, guidance and reporting that reflected their broader role and impact (beyond direct on farm adoption). Increased organisational and professional support was also flagged with the benefits of working alongside an organisation such as LLS seen as critical to the success and effectiveness of the role.

Emerging Themes

- **Need for realistic time frames and job security:** There is a strong belief in the ongoing value of the AO positions provided that they are given a reasonable time commitment to reduce turnover and allow AOs to properly understand their regions and the needs/opportunities, engage and build relationships, and develop broader capability in the area of preparedness.
- **Limitations of drought focus:** The tag of being a 'drought' adoption officer gives a clear niche and focus, however the on ground experience is that 'drought' is a limitation in times of flood or good rain – yet the principles of preparing for drought is also consistent with overall risk management and managing for good environmental outcomes.
- **Need for clear well-defined performance measures:** The issue of having a clear and manageable focus and realistic well-defined performance measures were reiterated. This is about having a mandate in line with Hub/FDF priorities, improved reporting to accurately reflect their roles and potential for impact (including beyond directly on-farm), and better methods for capturing and reporting this impact.
- **Benefits of matrix management model:** Links with LLS (in the NSW case) – whether formal or less formal – would continue to be a key base for the program, providing the organisational and collegial support needed to engage in the regions. The mechanism for on-going matrix management will need to be reassessed and strengthened where possible.

Interview Feedback

The following is a summary of Management and Adoption Officer interview feedback relating to looking forward.

Management	<ul style="list-style-type: none">• Need for continuity of funding: A key issue for the sustainability of the program was seen as securing consistent, long-term funding and offering clear contracts that allow officers to settle into their roles and build relationships over time. This was seen as critical to reduce turnover and staffing disruption by avoiding short-term contracts and offering more stable roles for adoption officers.
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- **Broader focus:** It was suggested that the focus should expand beyond just drought management to include broader climate resilience and preparedness, acknowledging the changing agricultural landscape and the need for adaptation.
- **Scope to scale up the program:** This would require increasing staff in under-served regions (e.g. western areas) which face challenges in receiving adequate support. It was pointed out that for this to happen, there was a need for clearer frameworks to define their roles, stronger support systems, and longer-term contracts to ensure retention and continuity. If the program is extended, clearer long-term goals and expectations were seen as needed to improve planning, execution, and impact.
- **Role focus:** It was suggested that AOs could be integrated more into broader strategic planning for agricultural projects, allowing them to provide valuable insights based on local knowledge and experience. A more strategic role for AOs in broader initiatives was also suggested – such as farm planning or drought preparedness projects to amplify their impact.
- **New approaches:** Introducing peer-to-peer groups among landholders was suggested as a way of creating a support network for learning and sharing drought management strategies, with AOs facilitating these groups. It was proposed that AOs could play a pivotal role in embedding drought resilience and sustainable practices into broader agricultural programs, especially if they are supported with adequate training, clear guidance, and ongoing engagement with the Hub.
- **Increasing professional support:** Investing in the development of a stronger community of practice within LLS was suggested to allow officers to share knowledge, improve performance, and build networks of support. Formal mentorship programs or structured opportunities for peer engagement was seen as a way to support skill development and knowledge sharing, increasing the overall effectiveness of the program. A need was seen for a more integrated approach between LLS and the Hub, ensuring that adoption officers have access to the broader organisational support network. There is a need seen for greater support and training in areas such as strategic thinking, project development, and understanding the adoption process to better contribute to broader initiatives.
- **Increased organisational support:** It was noted that the Hub(s) could strengthen its relationship with the Adoption Officer Program by providing more direct support, greater involvement in project planning, and creating more opportunities for engagement with other Hub partners. Clearer governance and more defined roles for both LLS and the Hub could help foster a more cohesive and effective working relationship. Developing strategic relationships between the adoption officers and other program streams (e.g., biosecurity, sustainable agriculture) was proposed to amplify their impact and broaden their reach. This would give Adoption Officers greater access to support networks, resources, and knowledge from other teams engaged in similar extension activities.
- **Improvements in reporting systems:** Better data capture for qualitative insights was suggested to help demonstrate the program's value and help

	<p>secure future funding. More comprehensive and strategic reporting on outcomes would help highlight the program's successes and ensure that the value of their work is recognised across the organisation and beyond.</p>
Adoption Officers	<ul style="list-style-type: none"> • Improved impact reporting: Need to better capture and showcase the on-the-ground impacts of adoption officers – addressing the difficulties tracking long-term adoption and implementing better methods to evaluate and communicate program success and achievements. • Ensure adequate resourcing: The challenges with limited resources over a large diverse area need to be addressed, ensuring staff can efficiently and effectively (e.g. access to vehicles, more staff) deliver services across an extensive and diverse farming area. • Longer contracts and job stability: Longer-term contracts needed to foster sustainable outcomes and relationship-building with landholders – ensuring continuity in roles to retain expertise and reduce turnover. • Strategic planning/guidance: Development of mapped-out activity plans to maintain focus, more strategic involvement across regions to improve consistency and effectiveness, and an emphasis on integration with other programs to enhance the role's strategic value. Potential for AOs to have greater strategic input in shaping programs to improve approaches and outcomes and empowering local nodes for region-specific, bottom-up decision-making. • Limitations of adoption and drought focus: The term 'Adoption Officer' was considered misleading by some, as it implies immediate change rather than a facilitative and supportive role – need for rebranding the role to encompass broader climate resilience, beyond just drought. • Increased awareness raising initiatives: Increased promotion of LLS and Drought Hub services to enhance landholder engagement – e.g. using impact videos to communicate program outcomes effectively. • Focus on practical tools: Emphasis on practical, farmer-focused solutions over reliance on high-tech tools that may not be as accessible or effective. Better dissemination of available tools and resources to maximise their usage by farmers. • Continued mentoring and Hub/LSS support: Access to mentors or experienced advisors to enhance knowledge-sharing and capacity-building. Regular engagement between AOs Hubs are essential; • Engagement of smaller landholders: Dedicated resources for small landholders to ensure equitable support – e.g. Free or subsidised agricultural education programs for small landholders, or basic agricultural certificates to address knowledge gaps among hobby farmers. • Strengthened partnerships: Between regional teams, Hubs, and external networks.

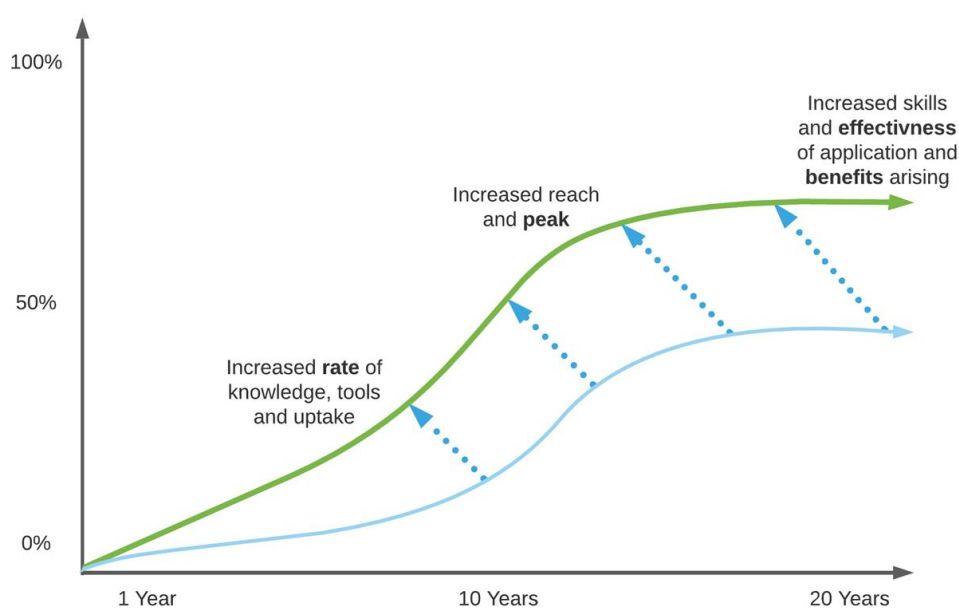
4. DISCUSSION

4.1 Value Adding

A key question around reviewing any investment is whether a program – or position – has added sufficient value to what was already in place to justify that investment. In the case of Adoption Officers, an investment was made to advance: *a strong focus on farmers as the customer and the uptake of Future Drought Fund tools and drought resilience innovations at a localised, on-farm and community level*. The implicit underpinning logic was that this focus and rate of uptake was not occurring at the desired level – or would be limited without the positions.

The following graph reflects this logic for intervention. While uptake of desired practices would inevitably occur over time (if they were beneficial), the logic is that with targeted intervention, this rate of uptake could be increased – reaching more producers, and with good education and learning experiences, practices would be implemented more effectively. This increased rate, reach and application would result in more quickly increasing the benefits arising.

Figure 5: Benefits of intervention



There was a high level of agreement that Adoption Officer positions were ‘adding value’ to existing programs by having a dedicated role focused on drought preparedness approaches. Those in the AO positions linked in to other programs and activities with this drought preparedness focus, running specific events and undertaking one-one advisory roles to assist with decision-making and implementation at some level.

As this review showed, engagement had to be based around the context and perceived needs of the regions and that drought focus was not always an entry point. Nevertheless, the topics and practices that the AOs addressed were almost all relevant to improving risk management, improved pasture, feeding and water management – all very relevant to the cause.

As Figure 5 shows – and the adoption curves included earlier in this report (Figure 4) – significant adoption of new tools and practices can take considerable time for momentum to take hold. Extension requires building relationships, understanding needs and entry points, and developing trust. In the early years it is also very much about socialising concepts, new approaches and practices. The small number of AOs, the short time frames and short contracts work against these essential processes. Although it is clear that some gains and inroads have been made despite the constraints, expectations need to be realistic.

The gains that have been made and reported to date do demonstrate the potential that these type of positions could have if they were strategically used and had the support and time frame needed.

4.2 Strategic Positioning

One-one

One-one extension works very well for individuals and provides concrete examples of a program achieving practice change. It is also very satisfying for an extension person when they can work at this level – seeing results and gaining positive feedback. **However, when there is a single AO in a region it is not a viable option for facilitating widespread change and risks overwhelming the AO given the large number and contexts of farms in the region.**

The **advantage of some one-one is that it helps to ground the AO** at the practical level and they gain a greater understanding and appreciation of the thinking, understanding and practical issues around implementation that can inform their broader activities. This approach needs to be seen in this context.

Group Approaches

It makes sense to use group approaches to reach more people in a given time period where possible. AOs use a mix of group approaches – either running their own event or piggy-backing off events run by other programs. **It was evident that for stand-alone events, the topic had to be a priority to producers at the time** – and more general ‘drought preparedness’ topics were not always seen as a high priority given the season or other demands. Some AOs worked on topics (such as irrigation) to which producers responded well. Others reported low numbers attending seminars and other such events and so looked to alternative approaches.

The advantage of piggy-backing on other events is that it takes the planning pressure off the AO, broadens the reach and provides opportunity to increase awareness and interest in their topics. It also helps to normalise and socialise thinking and discussion around drought preparedness and raising awareness of available tools and resources; and build awareness and understanding for the other extension people involved in the activity.

The distinction needs to be made between this notion of awareness raising and socialising a concept and that of facilitating learning, building understanding, raising skills and motivating action. In the former, the key indicator of success is the level of awareness and interest. In the latter, it is about changes in capability and subsequent actions.

Build Capacity and Awareness in other Deliverers

A key way to maximise the efforts of a single AO is to direct effort and building the understanding and skills of other extension staff and consultants who work with producers. This has been referred to as targeting the 'next users' as a realistic alternative to attempting to do all of the change process on your own. Some AOs are already doing this by providing specific training for this group, and as already noted, joining in on other program activities also has this benefit.

Another element of this is for the AO to take opportunities to assist other programs to better incorporate the key messages and resources into their programs to best integrate the key principles and approaches and so maximising impact.

Resources and Adoption

Part of the mandate of the AOs is to support farmers to use the tools developed through the Future Drought Fund (e.g. use DRSAT, undertake Farm Business Resilience training). There is also the directive to drive uptake of new innovations on-farm/at local level for improved drought resilience – including guiding farmers to relevant knowledge, helping translate that knowledge into on-farm adoption and by explaining the benefits of innovation.

This leads into the question about what it is that AOs are meant to be driving uptake on. There appears to be a notion in FDF that there are a variety of new tools being developed by the Hubs – (and other FDF programs) which just need to be extended and adopted by producers. However, in practice, apart from 'My Climate View' (a long-term climate forecasting tool), **there is not a pool of new innovations or tools to be 'extended' as such.** There are trials being supported which are expected to assist in decision making around crop and pasture management, but these are not necessarily providing new innovations or tools into the mix – and some have only just commenced.

AOs are using some existing resources – for example, Farming Forecaster; supplementary feed calculators; LLS drought and confinement feeding booklets – which they found very useful and practical. This is primarily not about 'extending' specific new tools or innovations created by the FDF or Hubs, but rather, **using available resources and 'better practice' approaches to raise awareness, understanding and interest and make the resources that will be most useful in making positive changes accessible to advisers and producers.**

This reflects the original role of the Hubs to be facilitators, knowledge brokers, and supporting more targeted and effective extension to improve drought readiness – drawing on whatever resources and expertise is available to raise awareness, develop interest, raise understanding and skills and provide access to decision-making support as needed.

What is lacking for AOs is a comprehensive list of the available relevant resources, what they can be used to support and how to access and use them.

AO Capability Building

If AOs are to be effective in their work, they need appropriate skill building themselves – which will vary according to the experience and skill levels of officers. Training needs to ensure they have the necessary understanding of the issues around risk and drought in agriculture and grazing and understanding of the resources and expertise available – while also the extension and social skills

needed to strategically engage in their regions. **LLS has provided good training opportunities for AOs which is another advantage of being within a larger organisation.**

The appropriate knowledge and skills needed for the position going forward need to be reassessed and training planned. Note that work has recently been done looking at extension skills needed for different contexts (Coutts et al 2024 <https://www.couttsjr.com.au/papers/#papers/kn-asset/2-2-14-67885e91f74e2402d620d6d8/professionalexensionpathwayspaper.pdf>)

Communication and Messaging

Another mandate of the AOs is to disseminate information about the Future Drought Fund to relevant parties through a range of mediums (e.g. social media, face-to-face events, podcasts). Communication and messaging of course would include raising awareness of the need, better approaches, available resources and activities, and events being undertaken to progress the intent of the FDF.

There are some good examples of the Hubs and LLS supporting the AO role and this mandate in the regions and communities. This would seem to be a broader Hub and FDF role rather than being on the shoulders of the AOs. There is a lot of opportunity to add information into existing newsletters and communication to continue the socialisation and awareness of the messages as well as very specific unique communications – such as webinars and podcast, etc.

A key element to ask is what are the key messages that are needed so they can be focused and tracked over time.

Scope and Mandate

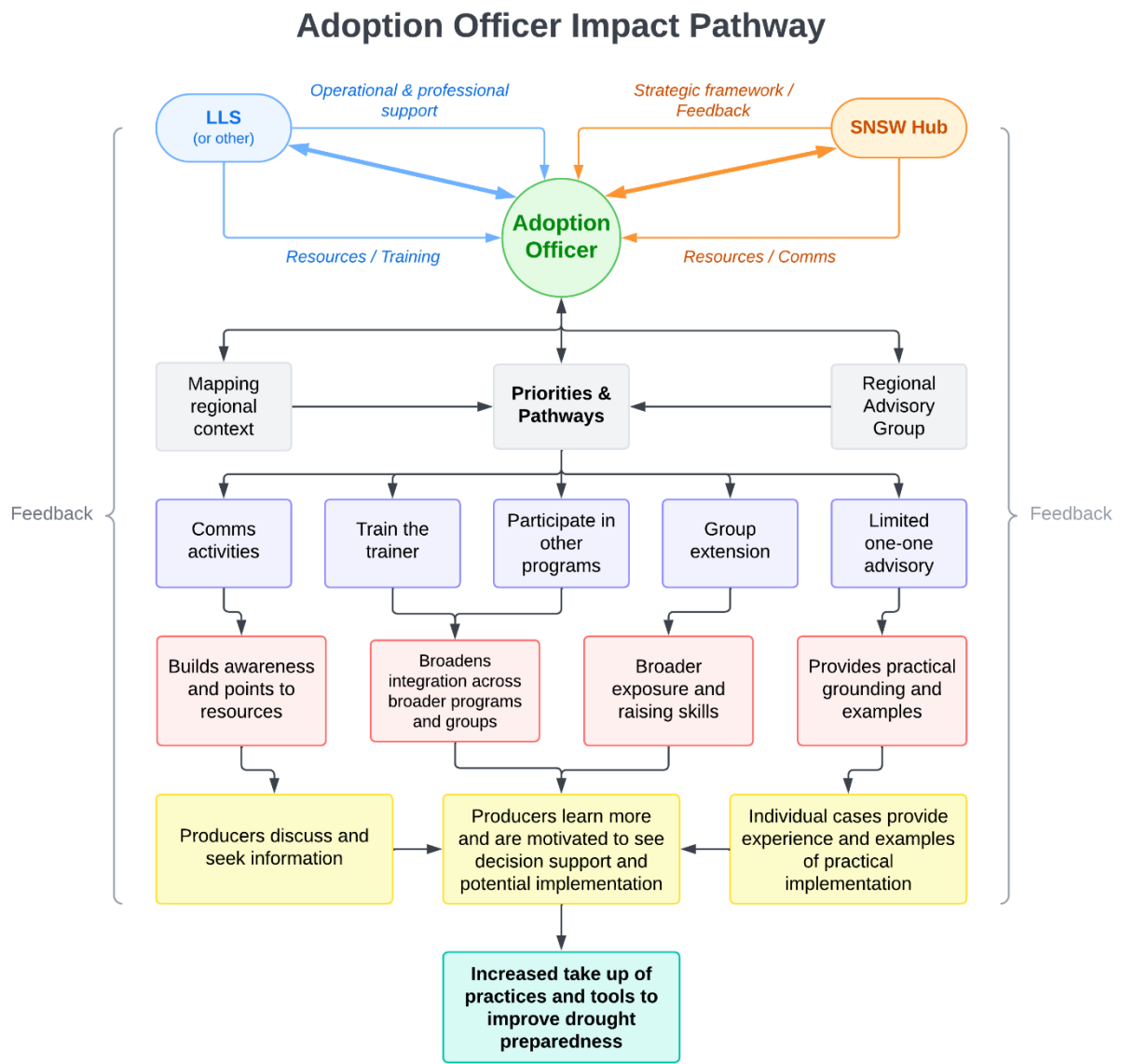
AOs have had to find their niche within their regional context and capability in the best way they can. There has been some good assistance from program management and also from AOs in other regions – and there are some good examples of the value of this peer mentoring and support. This approach has provided AOs with a lot of flexibility to adapt in the best way they can. It is a fact that ‘one size was not going to fit all’. **However, there is a case that a single position with such a mandate across a region can be like a small fish in large sea.** This can be overwhelming – ‘where do I start? who do I engage with? what is my scope?’. In most cases, AOs have looked for gaps and opportunities and done the best they can in pursuing these.

What did come through the interviews, however, was **the need for a clearer framework in which to work, prioritise and report on.** This is needed both to strengthen direction (without being a straight-jacket) and give AOs ‘permission’ to say no and focus on what is strategic, practical and impactful within their time and resources. It is also about **taking pressure off about the numbers of producers who ‘adopt’ from their efforts and being able to work in alternative performance measures.**

Decisions also need to be made about the priorities in locations of AOs based on numbers and needs in the different regions – and then how other regions without AOs can be better supported from a distance.

Developing visual Impact pathways so that AOs and others can better understand their scope and role would be useful. A simple example of what this could be is shown in the figure below.

Figure 6: Example of a potential Impact Pathway for Adoption Officers



4.3 Monitoring and Evaluation

There has been a lot of concern about how to best evaluate and demonstrate the impact of the AO program. As discussed earlier, the onus to bring about significant adoption can weigh heavily on the shoulders of the AOs and their managers.

Monitoring and Evaluation (M&E) should reflect the Impact Pathway and test the assumptions implicit in the arrows. Based on the above example diagram, Key Evaluation Questions (KEQ) could include:

- To what extent is the Hub providing the strategic guidance, resources and feedback to the AOs?
- To what extent is the employing organisation providing the operational, professional and training support needed for the position?
- To what extent is the AO informing the Hub about the needs, practicalities and opportunities in their regions – and how is that being used?
- How have the priorities and pathways been developed – and what engagement has occurred with the local producer community/regional advisory group in determining these? How has this shaped the activities and messages?
- What activities – and topics - have been undertaken to build awareness, socialisation, understanding, capability development and decision-support with next users and producers? What was the level and range of engagement?
- To what extent have the messages and resources been incorporated into other programs, projects, or advisory activities in the region?
- What evidence is there that gains were made in awareness, understanding, interest, skills and intended actions as a result of this engagement?
- What examples are available of actions taken/practice made to improve drought/climate challenge readiness based on Hub/FDF/AO activity.

Methods for capturing this type of data would need to be developed further, but it could be a combination of:

- **Short Impact Narratives** capturing activities, reactions, capacity gains and actions taken as the AO becomes aware of these (essential an on-going 'survey' based on observation).
- **Case studies** capturing the causes, costs and benefits of producers making changes.
- **Feedback surveys and/or structured presenter reflections** from activities run or supported by the AO.
- **Questions in follow up surveys** that may be undertaken by those running events.
- **Questions in the annual Hub survey** across the regions specifically relevant to the AO.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the case studies, manager interviews and discussion the following conclusions and recommendations are made:

5.1 Conclusions

1. The Adoption Officer program **has the potential to provide a critical outreach** arm of the Hubs – and broader FDF messaging and outputs.
2. The current Adoption Officers **have an appropriate and good range of experience and skills** which makes for a well-balanced team. The collegial support and mentoring from the more experienced members to the newer staff is evident and commendable. They are committed to their roles and have shown remarkable ability in finding their place in the complex regional agricultural innovation systems in which they are placed.
3. The **arrangement with LLS is working well** – providing an organisational and collegial base from which AOs can work and find openings for engagement. There is good management and professional support – including training opportunities. The one case considered that was not formally within LLS was also able to link in collaboratively with them. Issues around travel within the organisational setting were raised and require some attention.
4. The **Hub connections are important** to both the Hub and the AO role – and this has been seen to have improved over time. Given the matrix management, the Hubs will need to clarify their responsibility in providing direction and support for the role.
5. **Short-term contracts are a major impediment** to developing their place, trust, networks and facilitating change in the regions in which they work.
6. The **large areas and number of industries and farms to be covered by the AOs is a significant challenge** and while recognising that each situation is different and flexibility is important, there is a lack of a clear framework to assist in guiding the role and providing an achievable and effective scope.
7. There is **not a suite of ‘specific new innovative approaches or tools’** sitting within the Hubs or FDF more general which the AOs are attempting to ‘have adopted’. Rather they are drawing from existing resources, tools, experience and expertise to progress attention and actions around better practices which will provide immediate benefits as well as benefit drought preparation.
8. The **AOs are essentially operating under the ‘model’ of the original government extension officers** where individuals were put into a region to find their way and support their nominated industry in the best way they could – with one-one extension and solving problems being a key mechanism. The difference is that they have a theme – rather than an industry – focus and they are largely on their own to cover the region.

9. For these positions to realise their potential, be effective in their role and have a manageable job, **there is a need for a clearer role framework to guide their prioritisation, scope and types of activities.** This would include having a more generic Impact Pathway with the flexibility to adapt to their situation.
10. **Monitoring and Evaluation should reflect this framework, scope and expectations** and should not be based on 'numbers of producers who adopt practices'.

5.2 Recommendations

Based on the finding and conclusions the following recommendations are made:

1. **Adoption Officers have the potential to be a critical element of the Hub and FDF impact in the regions and should be continued as funding allows.** Contracts should be based on the length of the next funding phase.
2. **They should continue to be based in LLS [or similar alternative] to provide the organisational, collegial, professional, program linkages and training opportunities that have been evident.** Issues around access to vehicles and travels should be addressed.
3. **The Hub should take a lead role in developing/revising the strategic and operational framework for the role to guide the scope, prioritisation and types of activities undertaken – while maintaining the flexibility needed.** The emphasis should be on integrating the messages and targeted practices within the broader programs and advisory network in the regions with an emphasis on working with other extension programs, undertaking train the trainer' opportunities, group activities and limited one-one. Training should be given to suit this role.
4. **As part of the guiding framework, Hubs should lay out the key drought/climate challenge messages and priority practices that would provide the focus for the role.**
5. **Hubs should make every effort to bring together the range of existing – and new – resources and tools from their projects, the broader FDF programs and other existing sources that are relevant to these priority practices for ease of access and sharing across the region.** These should be updated as new resources are developed or discovered.
6. **Consideration should be given to establishing – or using an existing – regional advisory group to provide guidance on priorities and pathways and regional context for the AO.** AOs should be provided time and support to 'map' the agricultural innovation system in their region to better determine the most effective opportunities to broaden their reach and impact.
7. **A Monitoring and Evaluation and reporting framework should be developed to reflect the Strategic and Operational Framework developed for the role – in line with the logical Impact Pathway.** Narratives and case studies should capture efforts to better integrate the messages and resources into other programs and capability gains in extension and consultant network as well as increased awareness, interest and actions in the producer community. Broader quantitative impact over time across the regions should be the responsibility of the Hubs.

6. ADOPTION OFFICER CASE STUDIES

The following tables are short case studies summarising the interviews undertaken with the Adoption Officers and their experiences undertaking the role.

6.1 Case Study 1

Affiliated Hub	SNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Focuses on drought preparedness, an area often overlooked by regional teams unless in a dry season, ensuring long-term resilience. • Bridges the gap by proactively helping farmers prepare for droughts, addressing a key need for strategic, forward-thinking planning in the industry.
Effectiveness of AO program	<ul style="list-style-type: none"> • Role works well due to support from experienced regional staff: Regularly consults with regional agricultural officers and attends their planning meetings for guidance and feedback. • Collaborates closely with regional teams, ensuring alignment with broader initiatives: Attends regional staff meetings and coordinates efforts to align drought-focused work with ongoing regional projects. • Contributes to workshops and events related to drought management and farm preparedness: Organised and presented at a confinement feeding roadshow, which led to multiple farmers implementing confinement feeding strategies. • Events like the confinement feeding roadshow received positive feedback: Showing tangible outcomes such as farmers implementing new strategies based on the advice provided.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Collaborates regularly with LLS regional staff, providing on-the-ground support and insights into local conditions. • Works alongside Farming Systems Groups, private consultants, and other agricultural organisations to ensure a comprehensive approach to farm management.
Activities undertaken	<ul style="list-style-type: none"> • One-on-one advisory work: Spends about one day a week offering personalised support to farmers, either visiting farms or consulting over the phone on topics like drought management and farm productivity. Assisted a farmer in reducing feed costs by helping them switch feed suppliers, based on insights from the workshops and consultations. • Workshops and field days: Participates in or presents at one to two events per week, focusing on hands-on learning and practical advice for farmers. Leads sessions on topics like drought preparedness, feeding strategies, and farm management, providing actionable insights to farmers.

Topics presented and advice provided	<ul style="list-style-type: none"> • Delivers workshops on drought preparedness, supplementary feed management, confinement feeding, and farm nutrition to help farmers optimise operations during dry spells. • Utilises tools like the drought and supplementary feed calculator to help farmers plan for future conditions and manage resources effectively.
Issues/barriers	<ul style="list-style-type: none"> • Short-term contract: Creates uncertainty, making it challenging to plan long-term projects and strategies, with limited job security. • Lack of a mapped-out plan: Struggles with defining clear priorities, especially during good seasons when immediate drought concerns are less urgent.
Useful support provided	<ul style="list-style-type: none"> • Support from local regional staff: Valuable for gaining insights into local farming conditions and best practices. • Attending regional meetings: Helps align drought-related work with broader regional initiatives and ensures consistent communication with the team.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • Longer-term contracts: Providing more job security would enable more effective long-term planning and project implementation. • Clearer mapped-out plans: A more structured plan for future months would help focus efforts and avoid uncertainty around priorities, especially during slower periods.
Other observations	<ul style="list-style-type: none"> • Enjoys the freedom and responsibility of the role but occasionally struggles with the lack of clear guidance or direction. • Networking and peer-to-peer learning at regional events are seen as highly valuable, fostering best practices and creating a sense of community among farmers.

6.2 Case Study 2

Affiliated Hub	SNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Adds significant value by addressing the gaps in existing agricultural programs, particularly for small-scale producers and hobby farmers who are often overlooked. • Provides personalised support on topics such as animal welfare, feeding practices, and drought management.
Effectiveness of AO program	<ul style="list-style-type: none"> • Effective in reaching smaller producers and hobby farmers, providing crucial support in times of need. • Difficulty in measuring direct impact due to the nature of the work, but overall value to producers is apparent – feedback from seminars and one-on-one consultations is largely positive, indicating the program's impact.
Collaborations / interactions with	<ul style="list-style-type: none"> • External groups receptive and supportive, eager to engage with the program – Collaborated easily with district vets, rural financial

other programs and organisation	<p>counsellors, and mental health services to offer a broad range of support to landholders.</p> <ul style="list-style-type: none"> • Limited involvement with broader LLS projects due to internal communication challenges and lack of integration across teams.
Activities undertaken	<ul style="list-style-type: none"> • Organised seminars, farm visits, and individual consultations to provide targeted advice.
Topics presented and advice provided	<ul style="list-style-type: none"> • Focused on key issues such as animal welfare, feed management, and drought strategies – for example: <ul style="list-style-type: none"> ○ Advised a landholder with cattle suffering from malnutrition, providing guidance on feeding and parasite control to prevent further losses. ○ Helped a small-scale beef producer develop a targeted feeding plan for their herd, ensuring proper nutrition during challenging conditions.
Issues/barriers	<ul style="list-style-type: none"> • Slow communication within LLS and between departments, which delayed action and coordination. • Resistance from other staff to new initiatives, especially in areas where roles overlapped. • Role limited to drought-related issues, excluding opportunities to address other pressing concerns like floods or post-drought recovery. • Balancing time and resources between small landholders and larger producers posed a challenge, as smaller producers often required more basic, time-consuming support.
Useful support provided	<ul style="list-style-type: none"> • Collaboration with external agencies like vets and financial counsellors proved invaluable in providing holistic support. • Access to practical resources like LLS-produced drought and confinement feeding booklets helped deliver clear, actionable advice to landholders.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • More programs for small landholders – e.g. introduction of free basic agricultural education programs would empower hobby farmers to improve their farm management skills. This would allow advisors to focus on larger producers allowing more efficient use of resources.
Other observations	<ul style="list-style-type: none"> • Measuring impact remains challenging, as many landholders don't follow through on advice or changes are gradual. • Short-term contract nature of the role created uncertainty and hindered long-term planning – job security and better resource allocation would allow for more strategic action and planning. • Greater integration with LLS initiatives and improved communication would streamline efforts and maximise the program's impact.

6.3 Case Study 3

Affiliated Hub	SQNNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Focus on irrigation and water management: Addressed a critical gap in LLS programs around irrigation (particularly in the horticulture and dairy industries). • Strategic resource allocation: Avoided duplicating efforts in industries like cotton and rice, which had established funding and extension services. Instead, concentrated on under-supported sectors like horticulture, where fragmented systems presented opportunities for significant impact.
Effectiveness of AO program	<ul style="list-style-type: none"> • Identified and addressed critical gaps in irrigation support, particularly in under-resourced sectors, creating targeted initiatives and laying the groundwork for long-term improvements.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Collaboration with Hubs/LLS: Established strong ties with the Northern Hub's Lismore node, actively supporting their activities and aligning efforts to address local irrigation challenges. Worked with regional LLS teams, DPI, and other drought Hub nodes to develop solutions and share insights on irrigation and water management. • Engagement with horticulture teams: Partnered with local horticulture teams to identify and address poor irrigation designs contributing to runoff and environmental issues.
Activities undertaken	<ul style="list-style-type: none"> • Farm visits: Conducted approximately 20 farm visits, identifying critical irrigation design flaws and offering practical advice to improve water efficiency and reduce runoff. • Field days and training: Participated in local field days, sharing expertise on water management, and engaged in internal LLS training for professional development. • Extension program development: Designed programs focused on intensive horticulture irrigation, addressing industry fragmentation and knowledge gaps. • Innovative project proposals: Initiated projects such as a proposed rice irrigation study tour to the Burdekin, aiming to expose farmers to advanced systems and practices.
Topics presented and advice provided	<ul style="list-style-type: none"> • Environmental impacts of irrigation: Addressing runoff issues caused by poor irrigation practices, particularly in steep, high-rainfall areas prone to soil erosion and waterway pollution. • Practical irrigation solutions: Advocated for cost-effective, on-ground improvements in irrigation design and management as a priority over high-tech tools, emphasising accessibility and tangible benefits for farmers.
Issues/barriers	<ul style="list-style-type: none"> • Lack of clear direction from Drought Hubs: Experienced minimal guidance from Drought Hubs, resulting in unclear priorities and limited strategic alignment, which restricted ability to plan effectively.

	<ul style="list-style-type: none"> • Short-term contracts: The temporary nature of contracts made it difficult to commit to long-term projects, build lasting relationships, or implement sustainable solutions. • Limited outputs from Hubs: Hubs had produced few actionable tools or technologies to extend, limiting opportunities to drive practical adoption among farmers. • Travel restrictions: Departmental travel bans significantly limited the ability to visit farms, attend key events, and coordinate with stakeholders, reducing the overall reach and impact of programs. However, the Hubs were supportive in finding ways around the travel bans. • Fragmented irrigation support: Noted that irrigation assistance varied widely across industries, leading to inconsistent support and missed opportunities for coordinated, cross-sector improvements.
Useful support provided	<ul style="list-style-type: none"> • Supportive management: Received strong backing from managers who facilitated critical connections, advocated for proposed initiatives, and provided autonomy to shape the role effectively. • Value of support and resources provided by LSS: <ul style="list-style-type: none"> ○ Collaboration with experienced staff: Worked closely with seasoned LLS staff, benefiting from their technical expertise and deep understanding of regional agricultural systems. ○ Professional development opportunities: Participated in internal LLS training programs, which enhanced technical skills and provided valuable insights into organisational processes. ○ Access to resources: Leveraged the support and tools provided by LLS to address irrigation challenges and implement targeted solutions efficiently.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • Longer-term contracts: Of at least three years to allow sufficient time for understanding regional challenges, building farmer trust, and implementing impactful projects with measurable outcomes. • Bottom-up decision-making: Empowering local nodes to identify and prioritise region-specific issues, ensuring that initiatives are tailored to local needs rather than dictated by top-down directives from hubs. • Improved integration and collaboration: Better coordination between hubs, regional teams, and stakeholders, fostering a unified approach to solving agricultural challenges and improving resource sharing. • Strategic focus: Aligning projects with both immediate and long-term regional priorities, ensuring efforts are practical, relevant, and sustainable for local communities. • Rebranding the role: Renaming the 'Drought Adoption Officer' position to reflect broader climate resilience responsibilities, allowing for a more comprehensive approach to addressing regional agricultural challenges, including floods and other climate-related issues. • Focus on practical solutions: Delivering practical, hands-on solutions tailored to farmers' needs, rather than over-relying on high-tech tools,

	which may have limited applicability without addressing foundational practices.
Other observations	<ul style="list-style-type: none"> • Reasons for leaving role: <ul style="list-style-type: none"> ○ Opted for stability: Accepted a secure four-year project to overcome the uncertainty of short-term contract renewals in the adoption officer role. ○ Professional advancement: The new opportunity provided a chance to focus on long-term goals, build stronger relationships, and create lasting impact, which were limited by the short-term nature of his previous role.

6.4 Case Study 4

Affiliated Hub	SNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Filling gaps between government and private-sector initiatives – collaborates with farming systems groups, advisers, and private organisations. • Provides free government support versus private consultants who charge for similar advice. • Helps integrate resilience into farm management as a core practice.
Effectiveness of AO program	<ul style="list-style-type: none"> • Very effective in networking and providing practical, tailored advice to landholders. • Ability to prepare farmers for specific drought and climate related challenges to ensure resilience regardless of conditions (e.g. stock containment feeding strategies). • Positive feedback from farmers and stakeholders reinforcing the program's impact.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Participates in and presentations at workshops, field days, and disaster management events and contributes to strategic planning and co-designs programs with various stakeholders – for example: <ul style="list-style-type: none"> ○ Holbrook Landcare: Farm Water Management Plan (WFMP) Workshops regarding how landholders can audit the existing farm water supply against what is actually required during a hot summer and dry spells. ○ Murray LLS: Co-hosted Green Drought drop-in days, providing feed planning advice and training on tools like Farming Forecaster. ○ Riverine Plains: Presented at pasture management and confinement feeding field days, focusing on grazing strategies to maintain ground cover during dry conditions. ○ Western Murray Land Improvement Group: Delivered talks on confinement feeding at disaster management workshops, helping farmers prepare for drought, fire and floods in communities like Moulamein and Barham.

Activities undertaken	<ul style="list-style-type: none"> • Hosted and contributed to field days, workshops, and webinars. • Visits 2-4 farms per month; recorded 96 consultations and 15 property visits over 12 months. • Designed drought resilience tools. • Participated in planning sessions for extension programs.
Topics presented and advice provided	<ul style="list-style-type: none"> • Drought resilience: Strategies for integrating resilience into farm planning, including feed storage, water storage, grazing management, and early weaning. <ul style="list-style-type: none"> ○ Designed stock containment feeding areas for efficient feeding. ○ Identified and resolved water quality issues causing livestock health problems. ○ Diagnosed pasture degradation due to cockchafer infestations, enabling effective remediation. • Digital tools: Training on tools like Farming Forecaster and drought and supplementary feed calculators for pasture prediction and feeding strategies.
Issues/barriers	<ul style="list-style-type: none"> • Time lost in travel due to the vast area covered (e.g., 3-hour drives). • Limited awareness among landholders about LLS and Drought Hub services. • Difficulty engaging with private advisers initially due to differing philosophies. • Challenge of balancing one-on-one farm visits with broader outreach efforts.
Useful support provided	<ul style="list-style-type: none"> • Strong network with farming systems groups and other stakeholders. • Access to effective tools like Farming Forecaster and supplementary feed calculators. • Opportunities for collaboration and shared learning at workshops and webinars.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • Strategic alignment of resources to reduce travel inefficiencies. • Continued collaboration and leveraging between networks to amplify reach. • Increased awareness and communication about the services available through LLS and Drought Hub – better promotion of available tools and resources to landholders.
Other observations	<ul style="list-style-type: none"> • Values being in the field and directly interacting with farmers over administrative work. • Finds the term ‘adoption officer’ misleading as it implies immediate changes rather than a facilitative role. • Sees networking with farming system groups and tailored advice to landholders as critical components of success.

6.5 Case Study 5

Affiliated Hub	SNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Focused on drought management strategies: Deliverers targeted, in-depth support for landholders to build resilience during drought conditions. • Tailored one-on-one assistance: Provides personalised guidance, contrasting with broader group-based approaches in other roles, ensuring engagement is more effective and relevant.
Effectiveness of AO program	<ul style="list-style-type: none"> • Focused attention on drought adaptation strategies: Prioritised drought resilience, providing landholders with targeted solutions to meet their immediate and long-term needs. • Close collaboration with landholders: Worked hand-in-hand with landholders to implement practical, on-the-ground solutions tailored to their unique circumstances, ensuring effective outcomes and enhanced adoption of drought management practices. • More targeted support than broader programs: Provided specialised, one-on-one support that was more effective than general group-based approaches, leading to a higher rate of adoption and impact on farm operations.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Engaged with variety of stakeholders – e.g. <ul style="list-style-type: none"> ○ Farming systems groups: Sharing expertise and integrating drought adaptation into broader farming practices. ○ Other FDF programs: Contributing to funded initiatives aimed at improving long-term drought preparedness. ○ Climate-smart agriculture projects: Partnered with organisations to promote sustainable farming practices that reduce vulnerability to climate change. • Integrated drought adaptation into broader initiatives: Worked alongside other programs to incorporate tailored drought management strategies, ensuring a cohesive approach to landholder support across different projects.
Activities undertaken	<ul style="list-style-type: none"> • Group activities: Led sessions and presented at field days, workshops, and seminars, sharing expert knowledge on drought management strategies and fostering peer-to-peer learning. • One-on-one and hands-on support: Provided tailored guidance to landholders and assisted implementing drought adaptation strategies, ensuring practical, on-the-ground solutions that improved farm sustainability and resilience.
Topics presented and advice provided	<ul style="list-style-type: none"> • Water management practices: Emphasised efficient use of water resources and developed water management plans to ensure efficient water use and stock watering during dry periods • Containment feeding strategies: Provided detailed guidance on designing and implementing containment feeding systems to help

	<p>landholders manage livestock during feed shortages, ensuring animal welfare and reducing feed costs.</p> <ul style="list-style-type: none"> • Follow-up visits: Conducted follow-up visits to assess the effectiveness of changes made and making adjustments as needed to ensure it met the landholder's operational needs.
Issues/barriers	<ul style="list-style-type: none"> • Large regions to cover: The vast coverage area created logistical difficulties in reaching all landholders, especially in remote locations, limiting the scope of engagement. Limited access to dedicated vehicles reduced travel efficiency. • Initial staffing shortages: The program faced delays due to insufficient team members during the early phases, slowing down the roll-out and reducing the immediate impact on landholders.
Useful support provided	<ul style="list-style-type: none"> • Blend of experienced staff and new recruits: The combination of seasoned professionals and new team members facilitated a dynamic exchange of knowledge, fostering mentoring opportunities and ensuring the team benefited from diverse perspectives and skills. • Focused drought-related projects: The ability to dedicate time and resources to specific drought projects allowed for deeper engagement with landholders, offering more personalised and effective solutions tailored to their unique circumstances. • Flexible work arrangements: Flexibility in working hours and location enabled better time management, improving responsiveness to urgent landholder needs and allowing for on-the-ground support during critical drought periods. • Ongoing team leader support: The team leader provided consistent guidance, offering strategic direction, feedback, and troubleshooting assistance to help navigate challenges, maintain focus, and adapt the program to emerging needs.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • More staff for broader coverage: Expanding the team would allow for better regional coverage, ensuring more landholders receive the support they need, especially in underserved or remote areas. • Permanent vehicle access: Dedicated vehicles for each team member would streamline travel logistics, increase the efficiency of farm visits, and enhance the ability to support landholders in a timely manner. • Increased funding: Additional funding would enable the program to expand its initiatives, improve landholder engagement efforts, and invest in tools and resources that enhance the effectiveness of drought management strategies. • Greater continuity in roles: Retaining experienced staff and reducing turnover would maintain a high level of expertise and ensure consistent, long-term support for landholders. • Strategic influence: Adoption Officers could play a greater role in shaping the direction of programs, using their on-the-ground insights to inform decision-making and improve overall program effectiveness.
Other observations	<ul style="list-style-type: none"> • Capturing and demonstrating impact: Importance of effectively showcasing the real-world outcomes and successes of Adoption Officers

to highlight the value of their work. Recommended using impact videos and other digital media to provide tangible evidence of program success, ensuring clear communication of outcomes to stakeholders and landholders.

6.6 Case Study 6

Affiliated Hub	SNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Fills gaps in agricultural extension: Targets areas outside the scope of regular extension programs, particularly in times of drought or when resources are stretched – e.g. specialised workshops and advice on water conservation, storage, and feed planning
Effectiveness of AO program	<ul style="list-style-type: none"> • Direct farmer engagement: Focused on building relationships with farmers to understand their challenges and provide tailored solutions. • Collaboration driven: Actively reaches out to relevant programs and stakeholders to foster connections and share expertise.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Proactively engaged with Farm Business Resilience program: Worked with these groups to share knowledge on drought management and preparedness strategies.
Activities undertaken	<ul style="list-style-type: none"> • Runs workshops: Organises and leads practical workshops, such as silage and hay making, to improve farmers' skills and preparedness for dry conditions. • Provides on-farm consultations: Visits farms to assess specific challenges and offer tailored advice on water management, feed budgeting, and other operational issues. • Regular interaction with farmers: Maintains ongoing communication with farmers to stay informed about their needs and provide ongoing, relevant support. • Attends regional meetings and contributes to strategic projects: Participates in key regional meetings, collaborating with other stakeholders to shape strategies and improve drought resilience.
Topics presented and advice provided	<ul style="list-style-type: none"> • Assisted a farmer with feed budgeting, reducing overstocking and improving preparedness for dry conditions by ensuring better feed allocation. • Delivered water management workshops in the Upper Hunter, addressing water shortages and storage issues that weren't covered by regular extension programs. • Informed 60 farmers about managing pasture dieback, equipping them with tools to detect and mitigate its impact on pasture health through proactive management and prevention strategies. • Tailors advice to local challenges: Customises recommendations based on specific regional issues, such as unique weather patterns or water scarcity, ensuring relevant and actionable support for farmers.

Issues/barriers	<ul style="list-style-type: none"> • Uncertainty around funding and role longevity: Short-term funding and unclear role duration hinder long-term planning and limit the ability to form stable collaborations with regional teams. • Government bureaucracy and regional politics: Varying priorities within LLS impacts on decision-making.
Useful support provided	<ul style="list-style-type: none"> • Strong network and easy access to assistance: A well-established network within LLS and beyond enables quick access to expertise and resources when needed, enhancing the effectiveness of the role.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • Greater job stability and long-term funding: Securing long-term funding and a stable role would enable better strategic planning, consistency in program delivery, and stronger relationships with stakeholders. • Improved collaboration across regions and LLS programs: More coordinated efforts and clearer communication between regions and LLS programs would enhance efficiency and impact. Regular and ongoing involvement with regional teams would improve alignment with local needs and ensure that strategic planning is both proactive and well-integrated.
Other observations	<ul style="list-style-type: none"> • Improved transparency and communication: Better communication between AOs and Hubs would clarify roles and enhance collaboration, making the program more effective. Some Hub staff were unaware of the AOs' contributions, suggesting the need for more regular updates and engagement to foster stronger collaboration. • Role's strategic potential: The AO role has the potential to support and enhance other programs.

6.7 Case Study 7

Affiliated Hub	SQNNSW Hub and LLS
Value added by the AO program	<ul style="list-style-type: none"> • Focuses on delivering advice and extension services related to drought preparedness and farm sustainability. • Acts as a connector by identifying knowledge gaps and providing tailored advice to farmers.
Effectiveness of AO program	<ul style="list-style-type: none"> • Due to favourable seasonal conditions, there has been limited interest in drought-related inquiries, affecting immediate measurable impact. • Focus has been on raising awareness and providing support for future preparedness rather than urgent intervention. Efforts to increase awareness through these events have been valuable but challenging to quantify immediate impact.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Networking with local farming systems groups and other LLS teams, including actively participating in regional agricultural events.

Activities undertaken	<ul style="list-style-type: none"> • Attends and presents at regional agricultural events, focusing on drought preparedness and livestock management. • Conducts farm visits and engages with local farmers to provide practical advice and implement solutions. • Organised a webinar on grain markets, leveraging team leader feedback from similar successful events.
Topics presented and advice provided	<ul style="list-style-type: none"> • Drought preparedness and strategies to mitigate drought impacts on farming operations – including stock management and nutritional support. • Livestock nutrition, with a focus on confinement feeding during drought conditions. • Grain market trends, particularly relevant to the current harvest season and its implications for local farmers.
Issues/barriers	<ul style="list-style-type: none"> • Limited direct communication with the Hub, which could provide additional resources and support to enhance the role. • Lack of direct mentoring and limited opportunities for face-to-face interaction with more experienced colleagues – the isolated nature of the role, with a dispersed team, makes collaboration challenging. • Difficulty engaging older more traditional farmers, with a tendency to engage more readily with female farmers and farm wives. • Limited vehicle availability and the need to book vehicles in advance, which impacts travel to events and farm visits.
Useful support provided	<ul style="list-style-type: none"> • Being part of a regional team with regular meetings allows for ongoing sharing of information and updates and drawing on team experience for effective advice. • Support from experienced LLS colleagues and access to resources like drought manuals and confinement feeding guides has been invaluable. • Networking at events and meetings to gather feedback from farmers and understand local needs has helped refine advice and improve outreach efforts.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • Improved communication and resource sharing between the local team and the Hub to ensure adoption officers have easy access to updated materials and expert guidance. • Dedicated mentor or more experienced advisor. • Additional resources for targeted outreach, such as better identification of local landholders and strategies for personal engagement, could increase effectiveness.
Other observations	<ul style="list-style-type: none"> • The role of AOs and their impact on farm-level change is not always well understood, leading to a disconnect between what the role is expected to achieve and the resources provided. • The agricultural community, especially women in farming, is an essential network for AOs, and engaging them has proven to be a good strategy for fostering change.

6.8 Case Study 8

Affiliated Hub	SQNNNSW Hub and SCU
Value added by the AO program	<ul style="list-style-type: none"> • Connecting farmers with resources, integration with local programs, and bridging knowledge gaps.
Effectiveness of AO program	<ul style="list-style-type: none"> • Successfully organised initiatives already yielding positive outcomes – e.g. pollinator workshop, drought resilience roundtables, and a collaborative business planning workshop for local farmers.
Collaborations / interactions with other programs and organisation	<ul style="list-style-type: none"> • Collaboration with local groups: Works closely with local Land Care groups and Land Services to coordinate programs and share information across organisations. Cultivated supportive relationships with local groups, becoming a trusted partner in the region. • Fostering partnerships: Ensures projects complement each other by connecting different groups, including local councils and farming organisations, to prevent duplication of efforts.
Activities undertaken	<ul style="list-style-type: none"> • Workshops and field trips: Ran educational workshops and field/bus trips to showcase farm management techniques and sustainable practices. • Roundtables: Organised community roundtables to disseminate drought preparedness and land management strategies. • Drought resilience plans: Engaged local stakeholders in the development of drought resilience plans. • Resource development: Created educational fact sheets and other resources to help farmers adopt sustainable practices.
Topics presented and advice provided	<ul style="list-style-type: none"> • Drought resilience: Focused on strategies to improve farm preparedness for drought conditions, including water management and soil health. • Biodiversity and sustainability: Delivered content on enhancing biodiversity, managing farm dams, and water conservation practices. • Pollinator health: Organized a successful pollinator workshop with researchers from UNE, focusing on the role of non-bee pollinators in agriculture. • Farm visits: Observed local farms to provide tailored advice on cattle management and sustainable land practices, including pasture management and water conservation.
Issues/barriers	<ul style="list-style-type: none"> • Consistent funding: Lack of consistent funding has hindered the implementation of planned projects, such as farm dam enhancements and larger-scale water conservation initiatives. • Building local relationships: Initial challenges in building trust and gaining support from local farmers and stakeholders, though this has improved over time.
Useful support provided	<ul style="list-style-type: none"> • Expertise of Adoption Officer: Deep knowledge in plant systems and sustainable agriculture has been invaluable in connecting with local farmers.

	<ul style="list-style-type: none"> • Partnerships: Support from local organisations has been crucial for water-related projects. • Ability to influence delivery strategy: The ability to personally shape strategic plans and approach has been helpful in addressing the specific needs of the community.
Improving the effectiveness of the role	<ul style="list-style-type: none"> • Increased funding for projects: More funding for on-the-ground projects alongside the position itself would greatly enhance the role's impact. • Longer-term relationship-building: More time to build deeper relationships with local farmers and community groups to ensure long-term success.
Other observations	<ul style="list-style-type: none"> • Importance of slowly socialising key concepts like drought preparedness, rather than expecting immediate changes in practices.