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The value of skills audits as an effective evaluation tool of agricultural extension programs

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Executive summary

The evaluation objectives and methodologies of extension programs have evolved as the objectives, delivery methods and funding models of agricultural extension have changed. This paper will explore the use of skills audits as an effective evaluation tool of agricultural extension programs where skill development and practice change are the objectives. For the purposes of this review, skills audits are defined either as a written survey or a practical test, which include technical questions or tasks which directly test the skills and knowledge of a participant prior to and on completion of an extension program. The need for an improved understanding of skills audits has been brought about by the recent implementation of Meat and Livestock Australia's new adoption program, Profitable Grazing Systems.

It was found that evaluation may be threatening to extension deliverers but there was no evidence to indicate that it is threatening to participants (this finding was not specific to skills audits but also included other forms of extension program evaluation). Additionally, the literature review indicated that many extension deliverers are inexperienced in evaluation generally, but especially in developing and delivering skills audits to maximise their effectiveness.

Skills audits appear to be effective at assessing how successful an extension program has been on upskilling participants when they are well designed and implemented, and when participants and extension deliverers are pro-actively engaged.

There is some confusion in the literature regarding the terminology used to describe various monitoring and evaluation tools used throughout agricultural extension, including skills audits and there is a need for consistent terminology to ensure reliability in evaluation processes across the whole industry.

Recommendations based on this literature review include ensuring that program participants understand the value of evaluation and how the results will be used, and that extension deliverers are well trained in designing and conducting skills audits and that they fully understand the purpose of the evaluation. Another key recommendation is that further research be conducted into the correlation between skills audit results of participants and their business performance.

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1 Background

This literature review has been undertaken to increase the understanding of skills audits as an evaluation method for measuring skill development, practice change and impact on business performance. The key driver for an improved understanding of skills audits as an evaluation method has been the recent implementation of Meat and Livestock Australia's new adoption program, Profitable Grazing Systems (PGS), in which the impact of the program on participant skills, knowledge and current practices is intended to be directly measured using a skills audit methodology. Impact on the profitability and related key performance indicators (KPI's) of participating businesses can be indirectly determined by drawing links between skills audit results, participants' practices and business performance. This review will provide some background on evaluation of agricultural extension programs in Australia, including methods of evaluation with a focus on skills audits, in order to understand how they can most effectively be used as an evaluation tool.

2 Definition of evaluation

In this review, evaluation is defined as determining the merit or worth of, and placing value on a program, project or product (Scriven, 1991). The evaluation of a program involves the systematic collection of information about the activities, characteristics and outcomes to make judgements about the program and improve its effectiveness, or influence decision making about future program delivery (Patton, 1967). Evaluation is typically motivated by the need to address program related issues and helps explain how specific policies and programs achieve results (Mackay and Horton, 2003). In the context of the PGS monitoring and evaluation plan, evaluation is undertaken to ensure that the project meets its objectives, a high standard of delivery is maintained and the program's value to key stakeholders (including industry investors and producer participants) can be demonstrated.

3 Overview of evaluation in Australian agricultural extension

It is difficult to give an overview of evaluation in Australian agricultural extension without giving an overview of extension delivery itself, as the two are strongly linked. The objectives, and methodologies of evaluation for agricultural extension have changed over the years as agricultural

extension has evolved. A key change in the past fifty years has been the transfer of extension delivery from the public to the private sector (Marsh & Pannel, 2007).

From Australian colonisation until late in the twentieth century, agriculture was a significant contributor to the economy and dominated Australian exports (Coutts, 2015). During this time, agricultural extension and education was delivered by state governments to returned soldiers taking up parcels of land on their return home (Jennings et al 2011, Coutts 2005). For this period, success of these agricultural extension services was measured by how well they were received by the rural voter base and the contribution of agricultural exports to the national economy (Coutts, 2015).

During the latter half of the twentieth century, agricultural production and its contribution to the Australian economy declined dramatically. This decline raised discussions about the role of governments in providing and funding agricultural extension services (Hunt et al, 2012) and caused budgetary pressure to be placed on public funding for extension services. This, coupled with a rise in private sector extension, caused the role of public services in delivering agricultural extension and education to be brought into question (Coutts 1994, in Coutts 2015). This questioning led to new extension policies which focussed on 'market failure' and 'user-pays' being developed. As a result, government extension programs then had to demonstrate whether they were providing services which would not be provided by the private sector, and ultimately, how they contributed to national outcomes and benefitted the industry (Coutts, 2015). Applying a user-pays principle was seen as the most effective way to overcome the decline in extension budgets (Dart et al, 1998). This could be described as determining the merit of government funding based on public versus private goods benefit.

Prior to the late 1970s there was an emphasis on providing educational services to farmers to aid in solving their problems. Evaluation, when it was conducted at all, was intended to provide feedback to program developers and deliverers so that farmers' needs could be better meet (Dart et al, 1998).

In the late 1970's, governments at state and federal levels began to demand more accountability and demonstration of value in extension delivery. Extension was seen more as a tool to bring about changes sought by the government rather than as an educational process targeted at on-farm productivity. This increased demand for accountability for the expenditure of public funds necessitated a change in evaluation process (Dart et al,1998). Where evaluation was once undertaken by extension service providers for the benefit of participants and improving program delivery, the motive changed to assess the effect extension had on adoption rates of new technologies (Dart et al, 1998).

The transition from public to private sector extension delivery began in the 1970s and is still occurring. The role of government in supporting agricultural extension services has constricted across the country and those state governments which are continuing to maintain support for extension services link their funding to priority government objectives. The private sector and non-government organisations providing extension services now also operate with specific outcomes in mind (Coutts, 2015), and require evaluation against these outcomes.

There is increasing competition between research, development and extension organisations on where best to spend funds. Therefore, there is a compelling need to evaluate projects and capture their contributions towards achievement of objectives (Coutts, 2015).

Within Australian agricultural extension in the twenty-first century, there has been increased pressure on businesses and organisations funding extension activities, through both government funds and producer levies, to demonstrate the benefits gained from such programs. This increased interest in monitoring and evaluation by donors, governments and research and development corporations (RDC's) is affected by a trend towards performance-based accountability and a scarcity of funds which demands a demonstration of success (Murray, 2000).

Although the evaluation of extension programs has increased over time, there remains a strong level of inconsistency in the way evaluation is undertaken (Mackay and Horton, 2003). This inconsistency influences how program outcomes are reported on, as there is a variation in how results are obtained and presented.

As extension delivery has transitioned from the public to the private sector, evaluation methods have become more participative and aimed to capture how the program content has impacted on the understanding, attitudes, skills and motivation of the participant (Coutts, 2015). Additionally, it has been noted that because of the increased requirement for accountability, evaluation needs to deliver results which are quantifiable, and acceptable and intelligible to funding bodies or sponsors (Murray 2000).

Suvedi and Vander Stoep (2016), elaborated on Murray's (2000) observation with the explanation that demand for accountability has increased partly due to increased competition for resources among agribusinesses offering extension services (because of the decrease in the available funds to subsidise agricultural extension activities) and that proof of effective programs, through the use of high quality, integrated evaluation will help to address the issue of accountability and distribution of monetary resources (Suvedi and Van der Stoep, 2016).

For Rural Research and Development Corporations, the link between extension and adoption and research and development outputs and outcomes is becoming more important. Being able to measure the uptake of research and development is a critical component to being able to assess the return on investment of research to industry. However, being able to effectively measure practice change (skill development) and adoption and correlate this with research and development is lacking (MLA, pers comm).

4 The use of evaluation in agricultural extension

There are two main types of evaluation, formative and summative. Formative evaluation gathers information for the development of an effective program (van den Ban and Hawkins, 1996). Formative evaluation is generally conducted to provide program deliverers with findings that could be useful in improving the program (Scriven 1991).

Summative evaluation aims to measure the end results of a program and inform decisions surrounding its continuity and scale (van den ban and Hawkins, 1996). Summative evaluation is also used to justify program expenditure and benefits to external audiences such as program investors and is usually conducted after program completion or once the program has stabilised (Scriven 1991, cited in Dart et al 1998). The key difference between formative and summative evaluation is that formative evaluation reports to the program, while summative evaluation reports on the program (Scriven, 1991).

Evaluation methods and the data generated from them may either be qualitative, quantitative or a combination of the two. Quantitative data usually refers to approaches which involve numerical measurement and data analysis methods, for example, rating scale questions. Alternatively, qualitative data is made up of observations, descriptions and interpretations rather than numerical observations. Qualitative data sources may include open-ended questions and are typically used in gathering feedback and opinion. Qualitative data can provide evaluators with rich, first-hand information on how programs are implemented and the interactions between stakeholders, deliverers and participants. It can also be valuable in determining the problems extension officers may encounter when delivering the program (Scriven, 1991).

The purpose of the evaluation determines what type of data will be collected for evaluating an extension program (Horton & Mackay, 2003; van den Ban and Hawkins, 1996). Budgetary restrictions will also play a part in determining what evaluation method is used. Therefore, the evaluation method chosen should be the best fit for collecting the desired data and for using that

data to meet monitoring and evaluation (M&E) objectives whilst also fitting within the available budget. Table 1 is based on a similar table by Coutts (2015) and provides examples of appropriate evaluation methods for different evaluation questions.

Table 1 Examples of evaluation methods

Components of extension project	Questions to be answered by evaluation	Purpose of evaluation	Suitable evaluation methods
Project process, activity outputs, and objectives	• Are the planned structures, management and staffing in place and operating effectively? • How well were any proposed collaborations managed? • Were the activities undertaken as planned? – How well were they implemented? • What were the barriers/enablers identified and lessons learned from implementing the project? • Did the project deliver on agreed outputs? • Did the project achieve agreed objectives? • Did the project meet budget?	• Justification of project • Accountability to stakeholders • Delivery improvement • Project development	• **Detailed project delivery records** • **Structured debriefs** with project developers & collaborators • **Peer review** of process and content • **Participant feedback sheets** • **Participant skills audits** • **Detailed interviews and surveys of participants** • **Assessment of outputs** • **Assessment of objectives** • **Project financial records**
Identification of potential benefits and broader impacts	• What were the benefits arising as a result of the project? • What were the unexpected benefits/consequences that arose? • What contributions has this project made to industry? Has it met industry priorities? • What are recommendations for future investment decisions?	• Justification of project • Accountability to stakeholders	• **Skills audits** to measure participants' knowledge and skills gained from participating in project. • Assessment of **participant confidence** gained from participating in the project • Assessment of **practice change** by participants • **Participant demographics** (i.e. scale and reach of the project) • Assessment against **industry priorities** • **Storytelling evaluation**, **case studies & interviews** to capture the expected/unexpected benefits/consequences of participating in the program • **Benefit-cost analysis**

Awareness raising	• What key messages of the project have been recalled by participants? • What key messages of the project have been recalled by the broader industry?	• Accountability to stakeholders • Delivery improvement	• **Project records** on program distribution and access of related information and tools (including web-based tools) • **Media analysis** (including social media) • **Industry survey**
Change in skills, knowledge and confidence of participants	• What gains were made by participants in terms of skills, knowledge or confidence development and practice change?	• Accountability to stakeholders • Delivery improvement • Project development	• Assessment of **practice change** by participants • Assessment of **participant confidence** gained from participating in the project • **Skills audits** to measure participants' knowledge and skills gained from participating in program. • **Participant feedback sheets** with specific questions around confidence in implementing specific skills and practices
Practice change	• What practice change occurred as a result of the project? • What kind of practice change occurred (i.e. skills based changes, technology adoption, etc)? • What are the indications for practice change beyond the projects' lifetime? – What is needed to continue this practice change? • What were the barriers/enablers to participant practice change?	• Project development • Delivery improvement • Accountability to stakeholders • Justification of project	• Assessment of **practice change** by participants • **Follow up surveys** of participants to identify barriers/enablers/project influence • **Skills audits** to identify the impact the program had on participant's skills, knowledge, confidence and adoption of industry best practice • **Story telling evaluation** – capturing instances of practice change as they are observed or reported • **Case studies** • **Participant interviews or surveys** asking about observed benefits/consequences (longitudinal studies)

5 Skills Audits

Skills audits are a quantitative evaluation approach and are commonly implemented in the form of a written survey or practical test given to participants to complete prior to, and again on conclusion of the extension program. The skills audit aims to determine the level of skill and knowledge possessed by the participant before and after completing a program (Doonan and Goodwin, 2012). The value in performing pre and post skills audits lies in being able to compare results and use the data to analyse the effectiveness of programs.

While skills audits may have a component to measure participant satisfaction with the program, their key assessment methodology asks participants questions which require technical understanding to answer. There must be questions or tasks which test both knowledge and skills.

Skills audits are commonly used to judge the effectiveness of programs implementing a supported learning approach. Supported learning approaches are most often seen in programs which aim to achieve on-farm practice change, as opposed to programs which are intended to raise awareness. Supported learning projects often have much higher costs for project development and delivery, and as such an evaluation method effective at assessing project outcomes is essential.

The skills audit results are used to determine how successful the project has been at upskilling participants and thus achieving the project objectives. Individual results are often shared with participants on request.

The term “skills audit” is used in this review and in Profitable Grazing Systems however, there does not appear to be a universal term for an evaluation method which tests participant’s skills and knowledge. In the literature, skills audits, as described here, are referred to as questionnaires, surveys and performance tests. For the purposes of consistency where an evaluation method fits the PGS definition of skills audit, they are referred to as skills audits (although they may have been labelled differently in the source article).

6 The effectiveness of skills audits

Skills audits enable a participant in an extension project to demonstrate the skills or knowledge they have gained. The skill may be demonstrated practically, verbally or analytically. When demonstrated practically, the participant would be asked to perform a skill related task based on what they have

acquired through the program to an evaluator. The accuracy, quality of the skill and time taken to complete the demonstration could all be things that aid in the evaluation (Phillips, 1991).

According to Posavac (2011), a written survey, such as a skills audit, provides the most information for the level of effort and expense required. However, depending on the type of questions asked and the topic area, skills audits will differ in their accuracy and validity. For example, in instances where questions are asked about the participant's opinion of the program's effectiveness in developing their skills, the results will differ from cases where questions are asked which assess the actual skills of the participant. The reasons for the variance can be attributed to the individual value the participant places on the program rather than the actual knowledge gained by participation in the program.

Another challenge which could influence the effectiveness of skills audits is that, according to Dart et al 1998, extension deliverers lack confidence on how to design evaluations, select appropriate methods and utilise the results. Because of this lack of confidence there is a tendency to stick to familiar methods, even though they may not be able to gather or utilise as much useful information as a different approach would. This may be caused by a lack of understanding of evaluation as a whole process (Dart et al, 1998).

Posavac (2011), states that there may be a concern by participants that their answers to surveys or interviews will not be treated as confidential. According to Posavac, many participants do not understand that evaluators are less interested in individual results but more so the necessity of using them to create group averages and proportions for evaluation reports. This suggests that for participants to feel comfortable participating in skills audits and providing honest answers, effective communication from extension deliverers to explain the purpose of the skills audit and how the data will be used is critical. In a recent survey of red meat industry extension providers, it was identified that 60% of respondents felt comfortable with asking participants to complete monitoring and evaluation audits. In a separate question, only 37% of respondents answered by saying they found it straightforward to engage participants in monitoring and evaluation, while 37% identified that they found it hard to engage participants in monitoring and evaluation and 26% neither agreed nor disagreed. While these answers seem to contradict each other, it is important to note that neither the survey or the respondents defined what the monitoring and evaluation methods were that the questions were based upon. This may identify a discrepancy in what people classify as 'engaging producers in monitoring and evaluation. To some, this term may mean simply asking participants to complete feedback sheets, while to others it may mean conducting more intense evaluations such as skills audits.

Another question designed to gain an insight into how much extension deliverers valued evaluation indicated that monitoring and evaluation is commonly seen as a compliance activity rather than a process to aid in program improvement. This finding contradicted results collected from a different question in which respondents rated monitoring and evaluation as being of high value to continuous improvement of programs and enabling them (extension service providers) to provide a better service to their clients. From these results, it seems that there is a disconnect between theory and practice when it comes to evaluation (Sherriff et al, 2016).

The variance in these results could be explained by Phillips (1991) who observed that there may be cases in evaluation where respondents (in this case red meat extension service providers) tend to answer questions in the way they think the evaluators would want them to answer and not in a way which accurately demonstrates their attitudes, behaviours or skills.

Whilst there have been concerns raised by some extension providers that participants may feel threatened by evaluation in the form of a skills audit (Sherriff L, personal communication), there is very little evidence in the literature that either supports or rejects this. However, there is evidence from the literature that extension deliverers may perceive monitoring and evaluation processes (including skills audits) as a threat and this has been noted as a challenge for effective evaluation (van den Ban and Hawkins, 1996; Posavac, 2011). Posavac (2011), observed that evaluation of a program is in some ways an evaluation of the deliverers' performance as they are directly involved with the delivery of the program to participants. Evaluation can have negative consequences if the results cause a perceived injury to someone's reputation or are not seen as a positive way to increase the quality of their work. van den Ban and Hawkins (1996) noted cases where participants of extension programs were considered lazy or uneducated if evaluation results didn't reflect the desired outcomes of the activity, rather than extension deliverers looking to themselves for causes. For example, it may be that the participant group is not highly educated and has issues with literacy or numeracy, but the extension deliverers should have taken this factor into account and compensated for it in their planning and delivery. As with participants, the context and the way the evaluation is conducted, and the data analysed, used and shared with those involved, appears to be critical in effectively engaging deliverers.

7 Designing skills audits which are more effective

Phillips (1991) notes that program deliverers and leaders have a significant role in achieving accurate evaluation results. It is important that skills audits are well designed and collect information that will

enable an accurate assessment of skills and knowledge. Audits which are not well thought out or designed often cause problems for data collection as they can be frustrating and confusing for participants and embarrassing for extension deliverers (Phillips, 1991). Equally, poorly designed evaluations can be problematic to analyse and extract meaningful data from.

Phillips (1991), outlines a process for designing questionnaires, which are also applicable to skills audits, to help ensure a valid, effective and reliable evaluation tool.

- Determine the information needed
- Select the type(s) of questions
- Develop the questions
- Test the questions
- Develop the completed questionnaire and prepare a data summary

Phillips (1991) outlined some ways to improve the validity of evaluations. These have been adapted to increase their relevance for skills audits.

1. *Include an ample number of appropriate items:* Including an appropriate number of questions to test skills and knowledge improves the validity of the evaluation results. Too few questions can reduce validity, while too many questions can be frustrating and time-consuming for participants and evaluators.
2. *Reduce response bias:* The use of multiple choice questions with an 'unsure' option gives respondents an outlet to answer honestly without forcing them to pick an answer they don't know is correct and consequently negatively influencing the results. Designing questions which don't have an obvious answer and require some thinking before answering will also reduce response bias.
3. *Be objective in administering the instrument:* In skills audits, it is important that deliverers do not coach participants to the correct answers as this will influence the evaluation results. This bias may negatively influence the results if it causes participants to give answers which demonstrate improvement when those improvements do not exist. The same could be said if evaluators reflect negative attitudes to the evaluation process – this may cause the participants to not take the evaluation seriously or to not provide honest answers. Evaluators should convey to participants that it is in their best interests to provide honest information about their attitudes, behaviours and practices - this is the most efficient way they can help improve the program content and delivery for other participants and for themselves (van den Ban and Hawkins, 1996).

4. *Recognise the weak link between skills/knowledge and behaviour:* Extension program deliverers, developers and stakeholders should recognise that knowledge and certain technical skills do not always result in practice change. This relationship will be explored further in a second paper in this series. While skills audits ultimately aim to assess the effectiveness of the program in upskilling the participants, they can also be designed to include separate sections to measure the practice change implemented and to rate participant confidence in using the skills developed. Skills audits and other evaluation tools which use questions to assess participant knowledge and skills should avoid giving the impression that they are an examination of whether the participant has paid attention to the program and deliverers (van den Ban and Hawkins, 1996). It is essential that program deliverers conduct and administer program monitoring and evaluation in an effective manner so that the content and reasons for evaluation are well understood (Phillips, 1991). If participants clearly understand the purpose of the evaluation and how their data will be used then they are more likely to engage honestly and in good faith.

The way in which feedback is given to extension deliverers is critical in making evaluations non-threatening. Posavac (2011) recommends that deliverer confidentiality and engaging deliverers in discussions about the results gained from the evaluation analysis is key to their engagement.

A key to implementing effective skills audits in agricultural extension is to have deliverers who are trained in administering evaluations and are well informed of the purpose, need and challenges involved with program evaluation. In 1998, Dart et al observed that while extension agents were expected to cope with a range of social science concepts on top of the applied science requirements of their job, most had never studied evaluation or had training in administering evaluation tools. Dart et al (1998) noted that there was an obvious need to address this issue if extension organisations were to improve their abilities in evaluation practice.

Considering the growing importance of evaluation in agricultural extension, these results make it evident that while education about the value of evaluation is on the rise amongst agricultural extension providers, there is still a proportion of extension deliverers with inadequate experience in evaluation and who aren't confident in developing suitable questions for evaluation purposes or conducting evaluations in a context appropriate for producer participants.

8 The correlation between skills audit results and on-farm business performance

For the Tasmanian Dairy Industry Skills Audit in 2012, Macquarie Franklin developed a skills audit, which contained questions relating to grazing, business, animal nutrition and herd management skills and knowledge. Results from the skills audit survey were compared with the on-farm business performance of participants. Analysis showed a positive relationship between skills audit performance and farm business profit (measured as return on capital). It was also observed that participant demographics (age, education and attitude to business growth) did not influence skills audits results or farm business profit. This may reduce the opportunity for extension programs to be targeted at readily defined groups (Doonan and Goodwin, 2012). However, this could also mean that it is possible to increase the technical skills and knowledge of all participants – regardless of their individual demographics. This was the only reference found which had researched the correlation between skills audit results and the farm business performance of an extension program participant. However, such correlations are valuable as they provide an opportunity to evaluate the return on investment for funders of extension programs.

9 Conclusion

Evaluation is important to inform and justify spending and meet investor and stakeholder requirements for monetary justification. It is also equally important that evaluation is used to improve program development and delivery and meet the needs of both participants and extension deliverers. For this to happen, evaluation methods which are appropriate to the type of extension activity being evaluated are required (Murray, 2000). The overall test of evaluation in agricultural extension programs is whether better data collection, analysis and reporting provides investors, program developers and other stakeholders with the information they need to be able to understand fully what is being achieved by implementing these programs and whether there is adequate justification for monetary expense. From this information, decisions around program continuation and improvement can be made (Coutts, 2015).

In 1998, Dart et al observed that there was a lack of current and relevant literature on evaluation techniques for agricultural extension. On completion of this review, it is clear that there is still limited information available on evaluation of agricultural extension activities (particularly those relating to producer skill development), including a lack of consistency around both terminology and methodology. This lack of consistency regarding terminology is related to a lack of consistency in delivery of the tools both of which limit the potential to amalgamate the results of skills audits

across Australian agricultural extension programs and collaboratively evaluate methodologies and extension program content.

After reviewing the available literature related to evaluation and skills audits in agricultural extension it has become clear that skills audits are an effective evaluation technique when well designed and implemented and when participants and deliverers are engaged. All stakeholders participating in evaluation activities must be clear on the purpose and value of the evaluation and assured of the confidentiality of data.

10 Recommendations

After reviewing the available literature regarding evaluation and skills audits in agricultural extension programs, the following recommendations are made.

1. Consistency in terminology for the different methodologies available for evaluation of extension programs in agriculture is required. In addition to this, it is proposed that skills audits be defined as a method of evaluation in the form of either a written survey or a practical test, which include technical questions or tasks to directly test the skills and knowledge of a participant prior to and on completion of an extension program. While the primary aim of a skills audit is to assess how successful a program has been at upskilling participants and to aid in decision making for future program improvement, skills audits can be modified to include questions which assess the confidence level of the participant in implementing the skills and knowledge gained, and the level of practice change that the program has enabled in participant businesses.
2. Skills audits should be designed so they are straightforward to understand and answer. This includes having an adequate number of questions that the skills audit results will be valid but not frustrating or time consuming for the respondent. It is also important that skills audit questions are technically based and avoid obvious answers.
3. Reducing response bias can be done by designing multiple choice questions with an unsure option and by ensuring that the questions are written in such a way that the correct answer isn't obvious and requires some thought and skill to identify.
4. The evaluation process should be well explained to program participants. This includes information on the purpose of the evaluation, instructions on how to answer the questions and reminding participants that their answers will be confidential.
5. Extension officers and deliverers should also be reminded of the purpose of the evaluation and why it is undertaken. Deliverers should be given detailed feedback collated from the

evaluation results as this will help to reinforce the value of evaluation to the program and their own professional development and help them to understand the way the collected information was used.

6. Extension officers/deliverers should have training in evaluation (including developing questions and delivering skills audits) which will help to provide more accurate results
7. Further research is needed on the correlation between participants' skills audit results and their business performance and on-farm practice change.
8. Feedback gained from skills audit results should be circulated to all parties involved. This includes not only the program developers and investors but also the extension deliverers and program participants. This will allow for continuous improvement for all parties involved in the program.

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