Understanding the Usage & Perceptions of Genetics & Genomics in the Australian Beef & Sheep Sectors

JONATHAN DODD
Research Director

DANIEL PEETERS
Researcher

NICHOLL OBLITAS-COSTA
Researcher

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GAME CHANGERS

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BACKGROUND

MLA is a key investor in a variety of services and tools designed to improve the genetic quality of Australia's red meat and wool industries. Three key investments are BREEDPLAN, MERINOSELECT and LAMBPLAN; usage of which can be regarded as a bellwether of MLA's performance in extending skills throughout the industry.

However, there is a significant under-utilisation of these genetic technologies designed to assist livestock Producers in Australia to be more productive and profitable.

Therefore MLA has invested in this market research in order to inform and guide related initiatives planned to improve uptake. Overall, this research involves exploring, identifying and measuring barriers and drivers to the adoption of genetic tools and technologies to drive best-practice adoption in Australian beef and sheep meat industries.

Specific objectives are to:

- Explore and identify decision-making tools Producers use when making genetic selections in their herd and / or flock and how they are using them;

- Establish what motivates Producers to use genetic tools;

- Establish the barriers to using genetic tools;

- Explore what would encourage / make Non-Users adopt great usage of genetic technologies in their business;

- Measure the incidence of cited motivators and barriers.

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Important note

For concise reporting we have generally referred to the collective of genetic evaluation activities (BREEDPLAN – ABRI; LAMBPLAN, MERINOSELECT – MLA; and researchers AGBU, Sheep CRC) as "MLA".

In the qualitative interviews this was not highlighted to respondents from the start as it was important to learn who the farmers believed was behind these activities, but they were always told the 'correct' answer by the end of their interviews.

In the quantitative survey the same applied – while they were told the research was for MLA at the outset, their perceptions as to the organisations running the activities was a key question, and again they were told the 'correct' answer by the end of their interviews.

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STAGE ONE: QUALITATIVE EXPLORATION

Methodology

n=25 interviews with farmers

Conducted via telephone and in-person; 90-20min durations

Sample Structure

NSW (6), VIC (4), QLD (5), SA (3), WA (4), NT (2), TAS (1)

A wide range of genetics knowledge and usage

Mixed sheep and cattle (6), sheep only (8), cattle only (11)

Use Genetics & Genomics tools **and use** BREEDPLAN / LAMBPLAN (8)

Use Genetics & Genomics tools **don't use** BREEDPLAN / LAMBPLAN (12)

Don't use Genetics & Genomics tools, **don't use** BREEDPLAN / LAMBPLAN (5)

Reporting

Full qualitative report delivered to MLA in September 2015

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STAGE TWO: QUANTITATIVE SURVEY

Fieldwork Dates & Method
09/11/2015 – 15/11/2015
Telephone interview

Sample Provider
Sample provided by MLA and
Breed Societies

Sample Size
Total number of Producers (n=2,001)

Response rates by state (successful / ref+success)
- NSW 79%
- QLD 86%
- SA 67%
- TAS 67%
- VIC 82%
- WA 75%

Respondent Profile
Cattle and sheep Producers responsible for making key breeding decisions across Australia.

Quotas used to ensure breeds were covered in proportion of stock numbers (not farm numbers).

Measures
Interview duration: 21.6mins
Margin of error (total sample): 2.19%

Sample (as categorized post-interviewing; see overleaf)
1,031 Cattle Producers (572 Studs; 459 Commercial; 759 BREEDPLAN Users and 272 Non-Users)

794 Sheep Producers (211 Studs; 364 Commercial; 169 LAMBPLAN Users, 119 MERINOSELECT Users)

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STAGE TWO: NOTES ON THE QUANTITATIVE SURVEY SAMPLE (1)

Most of this report focuses on the differences between Users and Non-Users.

For the purposes of efficient interviewing, respondents self-identified:

- **The main purpose of their operations (e.g. stud / seedstock or commercial; sheep or cattle);**

- **Whether they used BREEDPLAN (for cattle producers), LAMBPLAN or MERINOSELECT (for sheep).**
Usage not restricted to formally-signed-up PLAN members but also Commercial producers who informally used PLAN measures when making breeding or purchasing decisions.

However, in 'real life', Producers often have multiple farming interests, can use multiple PLANs, or have used PLANs in the past.

This means that 'non-users' can sometimes say they have used user-only tools, or use tools that would be expected of different Producer types.

This simply reflects the widely varied nature of farming in the 'real world' and does not indicate inaccuracies in the research results.

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STAGE TWO: NOTES ON THE QUANTITATIVE SURVEY SAMPLE (2)

The variables discussed on the previous page also meant that the databases used for sampling were not always good indicators of respondents' 'main operations', as indicated by the red numbers in the table below.

Therefore Ipsos and MLA collaborated to re-allocate respondents to their correct categories, with a particular focus on correctly categorizing sheep producers using neither LAMBPLAN nor MERINOSELECT into their correct status as non-users of either LAMBPLAN or MERINOSELECT (but not both). This was done by examining their main breed and their ratio of income from meat vs wool.

This means that there were some respondents whose responses were removed for some questions (because said questions were not suited to their re-allocated category) and/or not represented within the sub-sample for a given question as they may not have been asked it in the original interview due to their original category.

RE-ALLOCATED USER SEGMENTS ↓	DATABASE CATEGORIES				
	Total	Sheep Database MS user	Sheep Database LP user	BREEDPLAN Member Listing	MLA Members
MS-Seedstock User	81	81	0	2	21
MS-Seedstock Non-User	13	0	0	0	13
MS-Commercial User	38	0	0	0	38
MS-Commercial Non-User	230	0	0	1	230
LP-Seedstock User	95	0	95	3	18
LP-Seedstock Non-User	22	4	0	2	17
LP-Commercial User	74	1	0	1	74
LP-Commercial Non-User	241	0	0	1	241
BP-Seedstock User	544	1	4	544	80
BP-Seedstock Non-User	28	0	0	15	15
BP-Commercial User	215	0	1	23	215
BP-Commercial Non-User	244	0	0	2	244

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RECAP:
QUALITATIVE SUMMARY & CONCLUSIONS

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PSYCHOGRAPHICS
Stud & Commercial farmers have different mindsets

Devil's in the Detail	Rewrite the Rules	In Control	Getting the Goods	All Business	Animal Focused

Don't Sweat the Small Stuff	Play by the Rules	At the Mercy of Others	Escaping the Hard Times	Lifestyle	Farm Focused

DETAIL	RULES	CONTROL	GOALS	WORK-LIFE	FOCUS

Legend:
- Cattle: Stud
- Cattle: Commercial
- Sheep: Stud
- Sheep: Commercial

Stud / Seedstock farmers are detail-focused, control-oriented & businesslike & will rewrite the rules to suit their entrepreneurial business growth targets.

Therefore, ceding control, knowledge or decision-making to another party (e.g. MLA) is resisted.

Resistance increases if that other party is not seen as credible & is difficult to engage with (as MLA is seen).

The result is that relationships with MLA can be tense & MLA communications rejected.

Commercial farmers are big-picture, farm-focused & conservative, trying to enjoy the lifestyle despite having profits squeezed & being at the mercy of the market & the climate.

Therefore, factors that can be seen & controlled dominate their attention & the perceived value of small incremental changes such as genetic gains is reduced.

In contrast, visually obvious traits such as *foot quality, polling, colour & structure* are valued & breeders' guidance in such issues is the most trusted source.

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BREEDING PRACTICES & GENETICS
Commercial & Stud farmers have different priorities

The Stud Farmer

OTHER BIZ

GENES
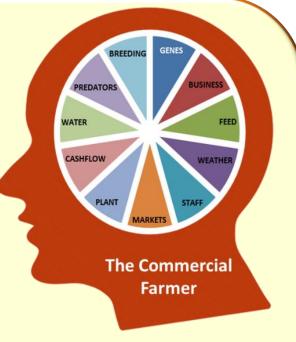
Breeders' success is strongly financially-dictated, and so they are very focused on doing what is required to achieve their aims.

They set their own breeding goals (which often reflect personal preferences rather than explicit market demands), and as a result will often reject the attempts of others (i.e. MLA) to direct their breeding decisions too much, especially directions that conflict with their own goals.

**Anything that MLA promotes will have to fit in with farmers' objectives and plans.
They will not change to suit MLA; MLA has to change to suit them.**

The Commercial Farmer

BREEDING / GENES / BUSINESS / FEED / WEATHER / STAFF / MARKETS / PLANT / CASHFLOW / WATER / PREDATORS

Commercial farmers have many more things than Breeders to consider when evaluating farm performance and profitability.

The issue of genetics has a lot of competition for Commercial farmers' attention, and so MLA has to increase message cut-through in terms of both execution and compelling content.

With a lot of 'noise' competing for farmers' attention, and their analytical, details-focused nature, getting enough mindshare for breeding and genetics decisions will be challenging.
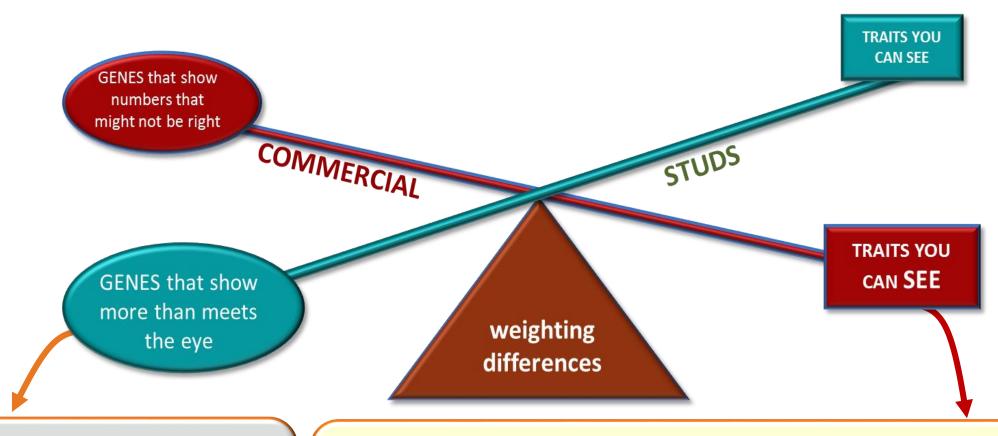
Commercial farmers are more cautious and have many more factors to consider – therefore they will 'take more convincing' that any change is worth the time, effort and cost.

GAME CHANGERS
Ipsos
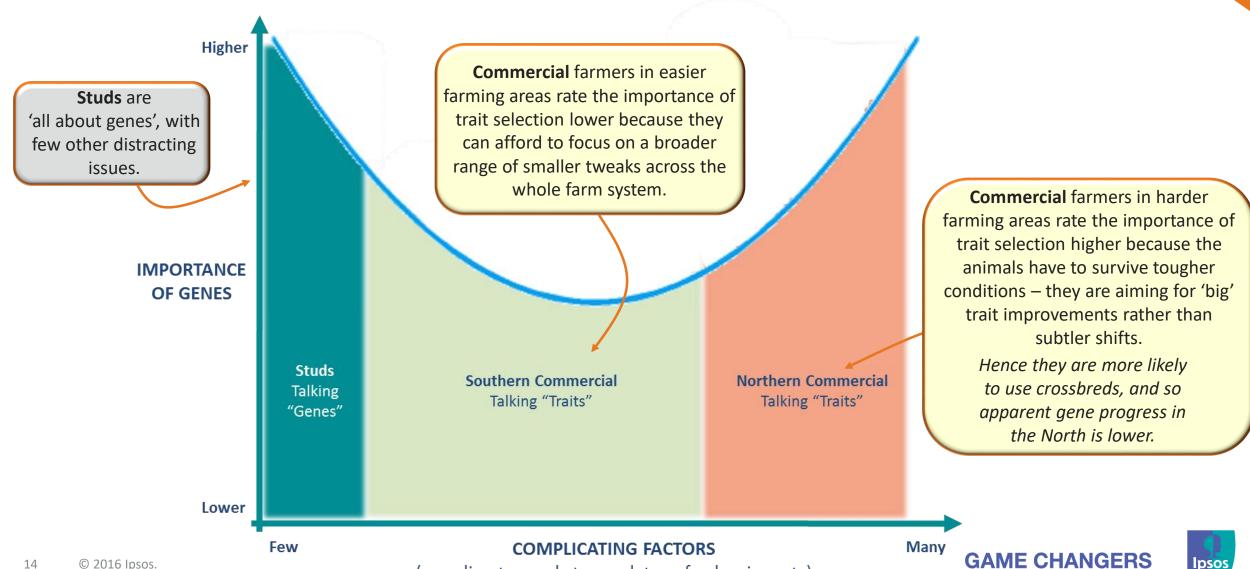
BREEDING PRACTICES & GENETICS
Stud & Commercial farmers approach genes differently

GENES that show numbers that might not be right

COMMERCIAL

STUDS

TRAITS YOU CAN SEE

TRAITS YOU CAN **SEE**

GENES that show more than meets the eye

weighting differences

Stud / Seedstock farmers are 'into the **science**' and they talk genes and genomics comfortably. They base most decisions on genetic factors, but ultimately know that the 'proof is in the pudding' – i.e. it's the final physical specimen that is the key deliverable.

For **Commercial** farmers, **visual traits** are of most importance – they talk 'traits' not 'genes'. If used, EBVs / ASBVs are employed either to shortlist possible purchases or as a final check that a preferred animal has nothing 'hidden' of concern. Educating Commercials about 'what the numbers mean and how they can help farming be more profitable' is recommended (DPI has succeeded with this). Note that the promotion of genetics has to be carefully managed so that it is seen just for assessing the 'hidden' factors – and not as a replacement for visual checks or breeders' information.

BREEDING PRACTICES & GENETICS
The importance of genes varies by complicating factors

Studs are 'all about genes', with few other distracting issues.

Commercial farmers in easier farming areas rate the importance of trait selection lower because they can afford to focus on a broader range of smaller tweaks across the whole farm system.

Commercial farmers in harder farming areas rate the importance of trait selection higher because the animals have to survive tougher conditions – they are aiming for 'big' trait improvements rather than subtler shifts.

Hence they are more likely to use crossbreds, and so apparent gene progress in the North is lower.

Higher

IMPORTANCE OF GENES

Lower

Studs
Talking "Genes"

Southern Commercial
Talking "Traits"

Northern Commercial
Talking "Traits"

Few

Many

COMPLICATING FACTORS
(e.g. climate, markets, predators, feed, prices etc)

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BREEDPLAN & LAMBPLAN
As farmers learn about genetic management, they go through a honeymoon phase & appear to become less favourable towards BREEDPLAN / LAMBPLAN & MLA

Once **Commercial** farmers start to learn about the value of genetic-based selection they appreciate it more, especially those in harsher climates.

But there seems to come a point when so much is learnt that the limitations and problems of BREEDPLAN / LAMBPLAN and MLA reduce faith in the systems. These are usually **Studs**.

High

TRUST & FAITH IN EBVS / ASBVS / BREEDPLAN / LAMBPLAN & MLA

North

Mainly
Commercial

'Honeymoon phase'

Mainly Studs

South

Variations depending on Studs' knowledge and expectations

Low   High

KNOWLEDGE ABOUT EBVS / ASBVS / BREEDPLAN / LAMBPLAN / MLA

Low

BREEDPLAN & LAMBPLAN – Big Picture (i)

These farmers have their own genetic-tracking and trait-management systems and those of MLA are seen as less applicable, too blunt and suffering from a questionable quality of inputted data.
The opaque 'black-box' nature of the back-end exacerbates distrust.

Being challenging, critical people, any messages to them from MLA will undergo a lot of scrutiny and, in some cases, cynical scepticism.

There is little perceived need to learn more about how genes-based breeding 'works' – what they focus on is getting new bloodlines and the stud / ram / dam / ewe combinations.

OTHER BIZ
GENES
The Stud Farmer

Breed societies can be a good gateway into BREEDPLAN / LAMBPLAN or a political hornets nest.

DESIRE FOR SOMETHING THAT WORKS WELL COMPOUNDS FEELINGS

QUESTIONABLE DATA INPUTS

CONTROL-ORIENTED DETAILS-FOCUSED PEOPLE

QUESTIONS ABOUT 'HOW AND WHY' THE NUMBERS ARE DERIVED

A MYSTERIOUS 'BLACK BOX' THAT IS HARD TO FATHOM AND HARDER TO GET CLEAR ANSWERS ABOUT

CUMBERSOME INTERFACE; REFLECTS POORLY, INHIBITS USAGE AND TRUST

FRUSTRATION AND REJECTION

IMPACTS ON PROFITS – NOT JUST THEORY BUT REAL-LIFE IMPACTS

LIMITED TRAITS & BREEDS (esp COMPOSITES)

The trend towards 'versatile' animals and cross-breeds reduces the usefulness of BREEDPLAN / LAMBPLAN, which are seen by some as indicative of MLA being behind the times.

When EBV / ASBV changes are made to fine-tune the system, the result is distrust.
Therefore, such changes need considerable amounts of communication / consultation, focusing on how such changes are part of ongoing incremental improvements and fine-tuning – 'making something good even better', rather than 'fixing something that's broken'.

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BREEDPLAN & LAMBPLAN – Big Picture (ii)

BEEF STUD / SEED SHEEP STUD

The interface, processes and systems behind BREEDPLAN / LAMBPLAN need to be significantly improved and made more transparent.

More evidence is needed so that the industry trusts that the data are accurate and genuine.

More work needs to be done to find ways of entering data more easily and more accurately.

At best, MLA can be regarded as good people who suffer from being too academic and out of touch.
At worst, MLA can be regarded as overly politicised and self-serving.
Although most know that MLA has a wide range of sometimes valued functions, BREEDPLAN / LAMBPLAN have such a high profile and questionable value that they taint most perceptions of MLA.

QUESTIONABLE DATA INPUTS

DESIRE FOR SOMETHING THAT WORKS WELL COMPOUNDS FEELINGS

The Stud Farmer
OTHER BIZ
GENES

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FRUSTRATION AND REJECTION

These farmers will not be drawn away from their in-house systems, so MLA has to be sure to promote BREEDPLAN / LAMBPLAN as systems which will enhance and add to their own – not as replacements.

Due to a low profile and a poor image, MLA is not the natural go-to source for information, and should consider 'inviting' farmers to participate, rather than expecting them to 'if they knew what was good for them'.

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BEEF COMMERCIAL | SHEEP COMMERCIAL

BREEDPLAN & LAMBPLAN – Big Picture (i)

Any new farming practice that is presented to them will be heavily scrutinised, and alternative viewpoints checked, before any action occurs. Any possible change has to clearly be able to work within a wide range of possible situations.

Commercial farmers are always looking for ways to squeeze out extra margin, yet do not usually consider MLA as an information source. More extension work needs to be done.

MLA should explore partnering with more rural networking / training organisations in order to expand the reach and frequency of its extension programmes.

BREEDPLAN / LAMBPLAN may be seen as focusing on overly-narrowly-focused animals (exemplified through prize-winning animals), so guidance needs to be provided on how the systems can work to promote versatility.

The Commercial Farmer

OPEN-MINDED, PRAGMATIC TINKERERS

EDUCATE THRU SELF, BREEDERS & EVENTS; ALWAYS LOOKING FOR OPPORTUNITIES TO IMPROVE THE ODDS

HIGHLY SUBJECT TO EXTERNAL FORCES

SOME USEFUL EXTENSION WORK, LESS SO FROM MLA

THE NUMBERS SOME STUDS PROVIDE AT SALE – OPAQUE YET POSSIBLY USEFUL

REDUCED USEFULNESS

A TREND TOWARDS COMPOSITES

LOW PROFILE 'INSURANCE CHECK'

LOW MLA KNOWLEDGE

QUESTIONABLE REPUTATION AND RUMOURS

MLA is mainly viewed positively, through its self-managed public face. However, some either do not consider MLA as an education source or think that MLA does not have the credibility or mandate to fulfil a farmer training role.

Winning over the negative farmers will be very difficult as long as their stud / seedstock suppliers continue to undermine BREEDPLAN and LAMBPLAN.

Many focus on crossbreds and / or 'versatile' animals, therefore promoting purebreds may run counter to their priorities.

Good long-term relationships with seedstock / stud suppliers obviate any recognised need for more involved genetic discussions with anyone else.

BREEDPLAN & LAMBPLAN – Big Picture (ii)

Farmers do not perceive value in education about EBVs or ASBVs, however, they could be subject to 'not knowing what they do not know' (even supporters do not fully understand what BREEDPLAN / LAMBPLAN can achieve). But given the right information, and proof that the numbers work, they would use the information more.

Acceptance and usage of the EBVs / ASBVs will follow if these farmers can see them to be an easily-understood way of making better selection decisions.

The key is to manage expectations and positioning of the systems, because too many seem to think that BREEDPLAN / LAMBPLAN are intended to be the 'only solution' for trait management, rather than just a unified foundation for individuals to build upon.

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Commercial farmers are essentially 'looking away' from MLA, so MLA has to 'gatecrash the conversation' to be noticed and to get farmers considering, understanding and using EBV and ASBV data. The independence of MLA data will help cut-through.

The lack of knowledge and breeders' support, combined with the need to consider many other operational factors, means that BREEDPLAN / LAMBPLAN are at best a low-profile 'security check' when buying.

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CONCLUSIONS & RECOMMENDATIONS
Reviewing the Promised Insights

First, we will profile the Farmers, through understanding them and their context.

Farmers' Psychographics
- Personal & Business Objectives
- Motivations & Barriers
- Personal Farming Philosophies & Styles (segmentation psychographics)
- Practical Capabilities & Resources
- Mental Capabilities & Resources
- Wider Operating Context

Then we will discuss how Farmers relate to the Genetics & Genomics messenger (i.e. the MLA)

MLA's Relevance to Farming:
- Awareness & Familiarity
- Past Experiences / Word of Mouth
- Trust, Engagement & Respect
- Knowledge of Tools & Services
- Perceived Value / ROI of Offer
- Relevance to Farming today

Then we will explain how Farmers relate to G&G at a Conceptual Level

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Then we will identify and explain what needs to change to drive increased usage of Genetics & Genomics

Messages
- Most Compelling Messages to use
  - Motivators to promote
  - Barriers to downplay
- Myths, fallacies to counteract
- Language / tone

Logistical Factors
- Accessibility
- Cost
- Tech' know-how
- Legacy contracts
- Labour
- etc

Channels / Delivery
- Media mix
- Delivery options (apps, websites, helpdesks etc)
- Partnerships, e.g. with Rural Professionals, Retailers, Societies.

Products / Tools
- Decision-making tools
- Calculators / guides / stepwise wizards
- Unmet needs to fulfil
- Product variations / tools / resources

Studs / Seedstock:
- Astute, financially-oriented self-managing confident entrepreneurs.
- Genes-savvy, detail-focused & questioning.
- Animal- & sales-focused.
- Capable, self-driven, challenging.

Commercial farmers:
- Pragmatic, reactive, big-picture oriented.
- Careful, conservative, thoughtful.
- Detail-focused, working on the whole farm system not just smaller elements.
- Capable when required.
- Hungry for knowledge that is locally & operationally relevant.

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Studs / Seedstock:
- High awareness of MLA & usage of BREEDPLAN & LAMBPLAN.
- Very low trust due to questionable data inputs, calculations & black-box nature of the systems.
- Perceived value & relevance of BREEDPLAN, LAMBPLAN & MLA is low due to trust issues & limited usefulness due to focus on purebreds & limited trait coverage.
- Best work of MLA is seen as market development.

Commercial farmers:
- Low awareness & knowledge of MLA & its tools.
- Those with MLA experience are generally positive, but negativity expressed by Studs taints this.
- MLA not the obvious choice for training or information.
- Those knowledgeable of BREEDPLAN / LAMBPLAN are generally positive & use the information as a minor but respected additional information source when buying.

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Studs / Seedstock:
- Highly knowledgeable of genetic-based breeding, but this means that satisfaction, trust & perceived value of BREEDPLAN / LAMBPLAN are low / very low.
- Mistrust is exacerbated by these farmers' 'take-control' mentality & strong business focus.
- Hence while they are completely at ease with & value genetics-based breeding, this does not translate to automatic appreciation & usage of BREEDPLAN / LAMBPLAN; because of these systems' problems, they become *less* likely to endorse them.

Commercial farmers:
- Trait-based breeding decisions are very important but ultimately just one part of the bigger farming operation. Nutrition & climate are seen as equally or more influential on profits.
- Most have only basic awareness & knowledge of BREEDPLAN / LAMBPLAN, usage usually limited (at best) to being able to use EBV / ASBV numbers when buying breeding stock.
- Studs / seedstock suppliers are the main source of knowledge & so suppliers' denigration of BREEDPLAN / LAMBPLAN undermines the trust of

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Channels / Delivery
- Media mix
- Delivery options (apps, websites, helpdesks etc)
- Partnerships, e.g. with Rural Professionals, Retailers, Societies.

Products / Tools
- Decision-making tools
- Calculators / guides / stepwise wizards
- Unmet needs to fulfil
- Product variations / tools / resources

Studs / Seedstock:
- BREEDPLAN / LAMBPLAN are felt to suffer from a cumbersome & dated interface & system, giving an impression of being outmoded & unprofessional.
- The complex procedural requirements are seen to potentially undermine data quality as well as hindering usage.
- The data input processes & data accuracy are also questioned, with much anecdotal evidence undermining the faith in inputted information.

Commercial farmers:
- Few need to use BREEDPLAN / LAMBPLAN, but do hear from their suppliers enough to question the systems.
- The provision of multiple trait-measure systems in sales catalogues, compounded by the caveats regarding accuracy, further undermines use & faith in EBV & ASBV numbers.
- Breeders' own trait-tracking systems have the greatest usage & trust.
- The increasing use of composite breeds undermines the value of BREEDPLAN / LAMBPLAN.

CONCLUSIONS & RECOMMENDATIONS
Reviewing the Promised Insights

First, we will profile the Farmers, through understanding them and their context.

Farmers' Psychographics
- Personal & Business Objectives
- Motivations & Barriers
- Personal Farming Philosophies & Styles (segmentation psychographics)
- Practical Capabilities & Resources
- Mental Capabilities & Resources
- Wider Operating Context

Then we will discuss how Farmers relate to the Genetics & Genomics messenger (i.e. the MLA)

MLA's Relevance to Farming:
- Awareness & Familiarity
- Past Experiences / Word of Mouth
- Trust, Engagement & Respect
- Knowledge of Tools & Services
- Perceived Value / ROI of Offer
- Relevance to Farming today

Then we will explain how Farmers relate to G&G at a Conceptual Level

Genetics & Genomics
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Then we will identify and explain what needs to change to drive increased usage of Genetics & Genomics

Messages
- Most Compelling Messages to use
  - Motivators to promote
  - Barriers to downplay
- Myths, fallacies to counteract
- Language / tone

Logistical Factors
- Accessibility
- Cost
- Tech' know-how
- Legacy contracts
- Labour
- etc

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Products / Tools
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Studs / Seedstock:
- These farmers usually develop their own trait-tracking systems, which cover more traits than BREEDPLAN / LAMBPLAN.
- Add-on systems like MateSel are sometimes used & the existence of these supplementary systems can be seen as proof of the limitations & inadequacy of the BREEDPLAN / LAMBPLAN interface.
- Use of specialist business software & apps is prevalent & the advances in these areas make BREEDPLAN / LAMBPLAN look increasingly outmoded.

Commercial farmers:
- With most relying on their core group of suppliers, there is little usage or perceived need for data-based modelling.
- Use of specialist business software & apps is prevalent & the advances in these areas make BREEDPLAN / LAMBPLAN look increasingly outmoded to those who have investigated the systems.

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GAME CHANGERS

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Studs / Seedstock:
- These farmers have strong networks, often extending overseas.
- They do a lot online & will happily travel.
- Local informal breeders' groups are common.
- Breeding societies are a blessing & a curse – they can offer a lot but can be politically-driven.

Commercial farmers:
- As with most farmers, the emphasis is on information that is locally & operationally relevant, backed up with hard data as to profitability, etc. – they reject overly academic or theory-based information.
- Self-directed online research is common.
- MLA extension work is not well-known, with the best education coming from organisations such as RIST, DPI, local vets or stock agents, all via in-person sessions.

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Studs / Seedstock:
- These farmers will reject any over-statement of the value of BREEDPLAN / LAMBPLAN plus any indication that MLA 'knows what's best for them'.
- The best message is that BREEDPLAN / LAMBPLAN provide a proven measure of some key traits which breeders can use as a foundation on which to build their own systems – a complement to them, not a replacement.
- However, messaging will not be enough – work needs to be done to improve the product itself as well as transparency into its inner-working.
- Periodic EBV / ASBV adjustments need to be carefully presented as part of the ongoing refinement process rather than 'fixing problems', which is how they are being interpreted.
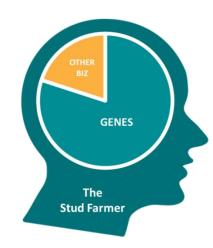
Commercial farmers:
- The best uptake of EBV- / ASBV-based decision-making comes from farmers who have had the numbers & how they are calculated explained to them in a simple way so that they feel empowered to make better purchase decisions.
- The numbers need to be presented as a simple way of reducing the chances of getting unwanted traits – 'improving the odds'.

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Summary of Key Points: QUALITATIVE INTERVIEWS

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Stud & Commercial farmers have different mindsets & priorities; Studs value genes a lot; Commercial see genes as just one part of a complex mix

Studs / Seedstock:

- Astute, financially-oriented self-managing entrepreneurs.

- Genes-savvy, detail-focused and questioning.

- Animal- and sales-focused.

- Capable, self-driven, challenging.

- Appreciate genetic measures as a supplementary tool and insurance.

Anything that MLA promotes will have to fit in with farmers' objectives and plans. They will not change to suit MLA; MLA has to change to suit them.

Commercial farmers:

- Pragmatic, reactive, big-picture oriented.

- Careful, conservative, thoughtful.

- Detail-focused, working on the whole farm system not just smaller elements.

- Hungry for relevant knowledge.

- Focus on traits they can see.

Commercial farmers are more cautious and have many more factors to consider – therefore they will 'take more convincing' that any change is worth the time, effort and cost.

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The importance of genes varies by complicating factors, esp. climate; the more breed-customisation conducted, the less relevant the purebred-oriented PLANs are

- **Producers in easier (Southern) farming areas rate the importance of trait selection lower** because they can afford to focus on a broader range of smaller tweaks across the whole farm system.

- **Producers in harder farming areas, typically the North, rate the importance of trait selection higher** because the animals have to survive tougher conditions – they are aiming for 'big' trait improvements rather than subtler shifts.

  – However, this does not translate into increased usage of BREEDPLAN (in the North) because they are more likely to use crossbreds, which are not as well supported in BREEDPLAN.

The tougher the climate, the more trait-customisation required and the lower the relevance of BREEDPLAN.

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Genetics management is a very personal thing – most Producers are using their own systems & measures, fitting the PLANs in as best they can

- Commercial and Stud Producers alike **have their own preferences** in regard to traits and genetics.

- These can be:
  - **Subjective** (aesthetics);
  - **Commercially-based** (Studs seeking differentiation);
  - Or a simple matter of **good management**, without having specific financials tagged to said actions (e.g. avoiding the purchase of animals with unwanted recessive genes).

- This means that the PLANs are often **seen to be lacking** the inclusion / exclusion of desired traits or measures.
  - DIY genetics-based tracking systems are very commonly used (some citing their own Excel databases; some creating their own and promoting it to their clients; one simply saying "it's all in my head").
  - Additional trait measures are often used and the desire to track these was often cited as a reason for using a personalized system.

- This means that EBV or ASBV values are sometimes seen to be '**missing the full picture**' and of **reduced value / accuracy / increased distrust** as a result.
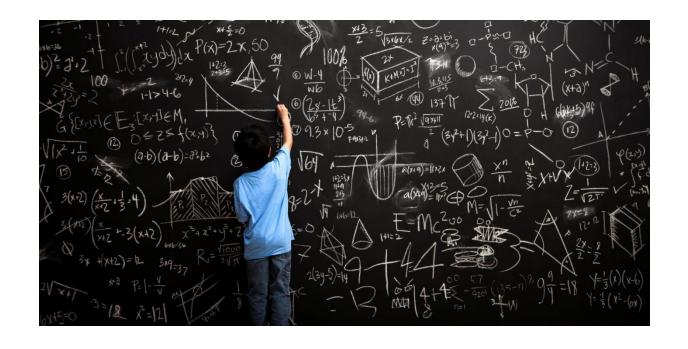
The perception of the PLANs' value is also reduced by perceived time & effort costs & suspected inaccuracies

- Capturing and entering data for the PLANs is seen to be an **arduous, complex and time-consuming process**, which therefore lends itself to **shortcuts and mistakes**.

- This further **reduces the perceived accuracy and value** of the measures.

- The perception of the PLANs being 'black boxes run by academics' further undermines the perceived value of the PLANs.

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The PLANs are definitely approved & understood in principle but underperform in 'the real world'

Producers have their own personal trait preferences & recording systems.

Producers are very busy & have a lot of time-consuming & complex factors contributing to their business performance.

BREEDPLAN, MERINOSELECT & LAMBPLAN are all understood & approved in principle; seen as useful additional tools.

But actual usefulness & usage are reduced by:

Producers' perception that genetics gains come too slow & may not be worth the time & effort required compared to other more tangible & immediate on-farms gains that can be made instead.

Pre-existing DIY tracking & measurement systems.

Producers' desire to breed for traits not covered by the PLANs.

Producers' perception that exclusion of valued traits undervalues their stock & reduces effectiveness of PLANs for breeding decisions.

Producers' perception that PLAN data-capture system lends itself to inaccuracies.

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QUANTITATIVE SURVEY RESULTS

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STAGE TWO: QUANTITATIVE SURVEY

Fieldwork Dates & Method
09/11/2015 – 15/11/2015
Telephone interview

Sample Provider
Sample provided by MLA and Breed Societies

Sample Size
Total number of Producers (n=2,001)

Response rates by state (successful / ref+success)

- NSW 79%
- QLD 86%
- SA 67%
- TAS 67%
- VIC 82%
- WA 75%

Respondent Profile
Cattle and sheep Producers responsible for making key breeding decisions across Australia.

Quotas used to ensure breeds were covered in proportion of stock numbers (not farm numbers).

Measures
Interview duration: 21.6mins
Margin of error (total sample): 2.19%

Sample (as categorized post-interviewing)
1,031 Cattle Producers (572 Studs; 459 Commercial; 759 BREEDPLAN Users and 272 Non-Users)

794 Sheep Producers (211 Studs; 364 Commercial; 169 LAMBPLAN Users, 119 MERINOSELECT Users)
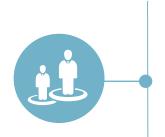
Most Producers farm more than one breed and many run both Stud / Seedstock and Commercial operations. Therefore, because this research had to focus only on their 'main' operations, respondents' cited usage and experience may appear at odds with their category.

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STAGE TWO: NOTES ON THE QUANTITATIVE SURVEY SAMPLE (1)

Most of this report focuses on the differences between Users and Non-Users.

For the purposes of efficient interviewing, respondents self-identified:

- The main purpose of their operations (e.g. stud / seedstock or commercial; sheep or cattle);

- Whether they used BREEDPLAN (for cattle producers), LAMBPLAN or MERINOSELECT (for sheep).
  Usage not restricted to formally-signed-up PLAN members but also Commercial producers who informally used PLAN measures when making breeding or purchasing decisions.

However, in 'real life', Producers often have multiple farming interests, can use multiple PLANs, or have used PLANs in the past.

This means that 'non-users' can sometimes say they have used user-only tools, or use tools that would be expected of different Producer types.

This simply reflects the widely varied nature of farming in the 'real world' and does not indicate inaccuracies in the research results.

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STAGE TWO: NOTES ON THE QUANTITATIVE SURVEY SAMPLE (2)

The variables discussed on the previous page also meant that the databases used for sampling were not always good indicators of respondents' 'main operations', as indicated by the red numbers in the table below.

Therefore Ipsos and MLA collaborated to re-allocate respondents to their correct categories, with a particular focus on correctly categorizing sheep producers using neither LAMBPLAN nor MERINOSELECT into their correct status as non-users of either LAMBPLAN or MERINOSELECT (but not both). This was done by examining their main breed and their ratio of income from meat vs wool.

This means that there were some respondents whose responses were removed for some questions (because said questions were not suited to their re-allocated category) and/or not represented within the sub-sample for a given question as they may not have been asked it in the original interview due to their original category.

RE-ALLOCATED USER SEGMENTS ↓	DATABASE CATEGORIES				
	Total	Sheep Database MS user	Sheep Database LP user	BREEDPLAN Member Listing	MLA Members
MS-Seedstock User	81	81	0	2	21
MS-Seedstock Non-User	13	0	0	0	13
MS-Commercial User	38	0	0	0	38
MS-Commercial Non-User	230	0	0	1	230
LP-Seedstock User	95	0	95	3	18
LP-Seedstock Non-User	22	4	0	2	17
LP-Commercial User	74	1	0	1	74
LP-Commercial Non-User	241	0	0	1	241
BP-Seedstock User	544	1	4	544	80
BP-Seedstock Non-User	28	0	0	15	15
BP-Commercial User	215	0	1	23	215
BP-Commercial Non-User	244	0	0	2	244

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Business Profile & Genetic Progress:

What we can learn by comparing those using the systems and those who are not

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Business Profile

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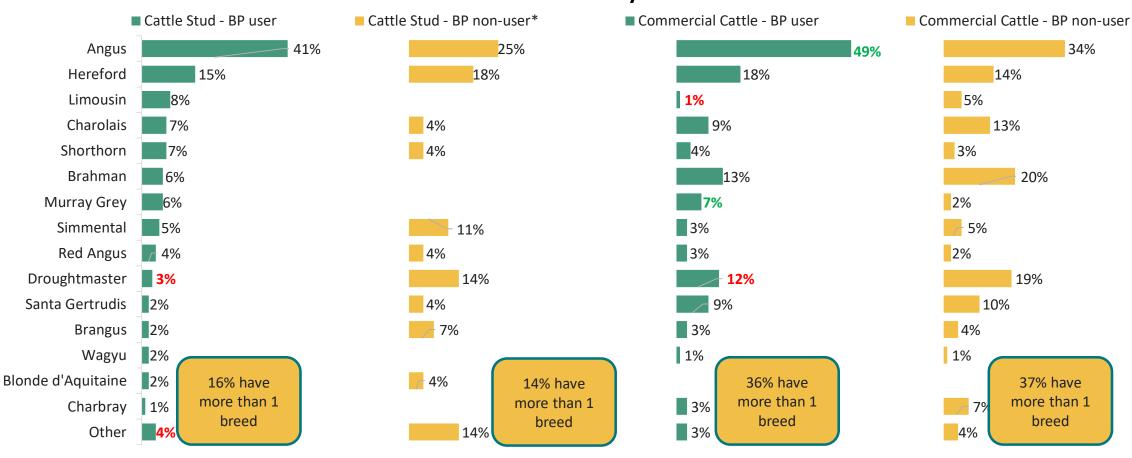
Differences in BP usage show the clear skew towards Angus & multiple-breed management amongst Commercial Producers

The Breeds They Have

■ Cattle Stud - BP user   ■ Cattle Stud - BP non-user*   ■ Commercial Cattle - BP user   ■ Commercial Cattle - BP non-user

Breed	Cattle Stud - BP user	Cattle Stud - BP non-user*	Commercial Cattle - BP user	Commercial Cattle - BP non-user
Angus	41%	25%	49%	34%
Hereford	15%	18%	18%	14%
Limousin	8%		1%	5%
Charolais	7%	4%	9%	13%
Shorthorn	7%	4%	4%	3%
Brahman	6%		13%	20%
Murray Grey	6%		7%	2%
Simmental	5%	11%	3%	5%
Red Angus	4%	4%	3%	2%
Droughtmaster	3%	14%	12%	19%
Santa Gertrudis	2%	4%	9%	10%
Brangus	2%	7%	3%	4%
Wagyu	2%		1%	1%
Blonde d'Aquitaine	2%	4%		
Charbray	1%		3%	7%
Other	4%	14%	3%	4%

16% have more than 1 breed

14% have more than 1 breed

36% have more than 1 breed

37% have more than 1 breed

Q1. Which of the following best describes the main business purpose of your farm? / Q3a. What are the main cattle breeds, the ones that are dominant in your herd?
Base: *Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244).* ***Note:*** *Small base size.*

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Significantly higher than BP non-user – Significantly lower than BP non-user

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Differences in LP usage show a clear skew towards White Suffolk amongst Studs, Merino amongst Commercial
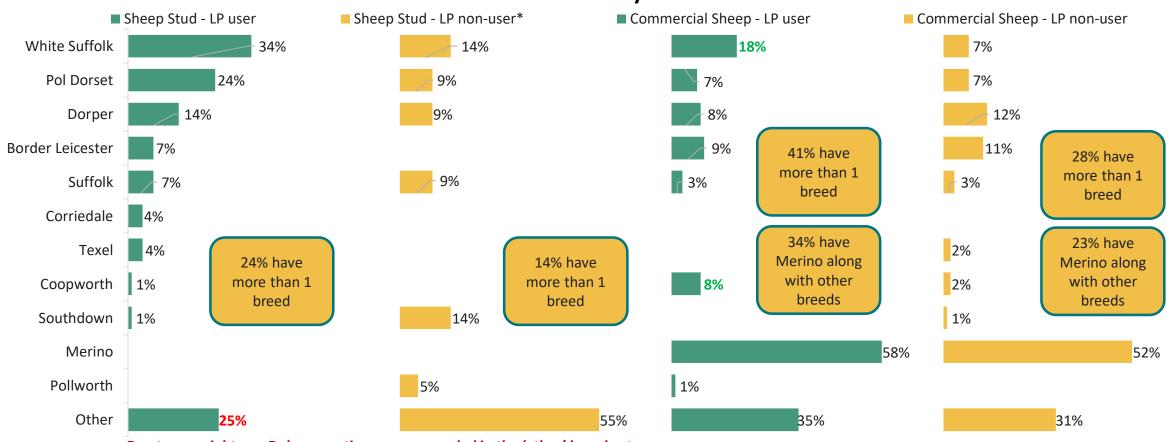
Commercial Producers are more likely to cross-breed.

As expected, Commercial Producers who cross-breed are significantly less likely to be a part of Sheep Genetics National Evaluation Service (although they can still be 'Users' of the data when making breeding and purchasing decisions).

The Breeds They Have

- Sheep Stud - LP user
- Sheep Stud - LP non-user*
- Commercial Sheep - LP user
- Commercial Sheep - LP non-user

Breed	Sheep Stud - LP user	Sheep Stud - LP non-user*	Commercial Sheep - LP user	Commercial Sheep - LP non-user
White Suffolk	34%	14%	**18%**	7%
Pol Dorset	24%	9%	7%	7%
Dorper	14%	9%	8%	12%
Border Leicester	7%		9%	11%
Suffolk	7%	9%	3%	3%
Corriedale	4%			
Texel	4%			2%
Coopworth	1%		**8%**	2%
Southdown	1%	14%		1%
Merino			58%	52%
Pollworth		5%	1%	
Other	**25%**	55%	35%	31%

24% have more than 1 breed

14% have more than 1 breed

41% have more than 1 breed

34% have Merino along with other breeds

28% have more than 1 breed

23% have Merino along with other breeds

Due to oversight any Dohne mentions were recorded in the 'other' breed category.

Q1. Which of the following best describes the main business purpose of your farm? / Q3a. What are the main breeds, the ones that are dominant in your flock?
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

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Significantly higher than LP non-user – **Significantly lower** than LP non-user

GAME CHANGERS
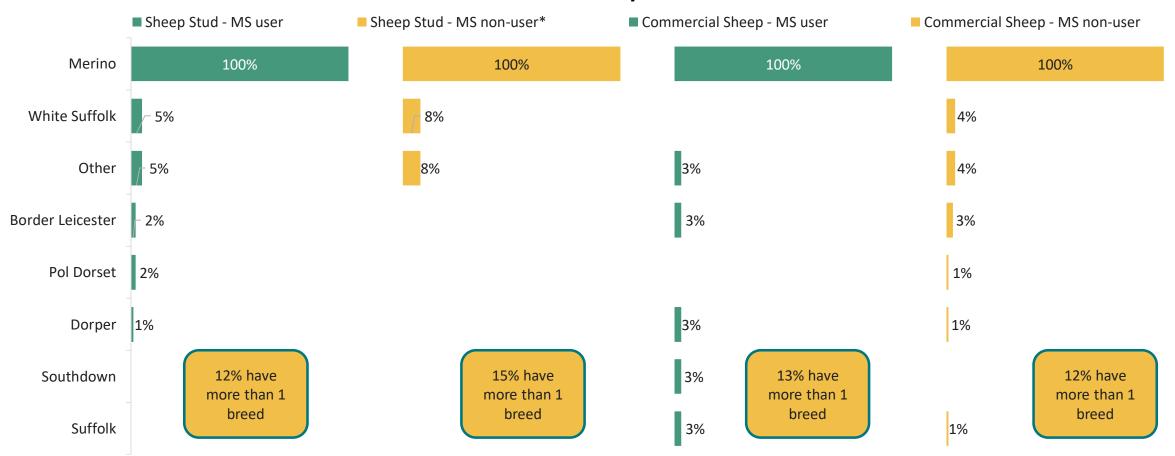
The majority of MS Users have only one breed

Due to oversight any Dohne mentions were recorded in the 'other' breed category.

The Breeds They Have

■ Sheep Stud - MS user ■ Sheep Stud - MS non-user* ■ Commercial Sheep - MS user ■ Commercial Sheep - MS non-user

Breed	Sheep Stud - MS user	Sheep Stud - MS non-user*	Commercial Sheep - MS user	Commercial Sheep - MS non-user
Merino	100%	100%	100%	100%
White Suffolk	5%	8%		4%
Other	5%	8%	3%	4%
Border Leicester	2%		3%	3%
Pol Dorset	2%			1%
Dorper	1%		3%	1%
Southdown			3%	
Suffolk			3%	1%

12% have more than 1 breed

15% have more than 1 breed

13% have more than 1 breed

12% have more than 1 breed

Q1. Which of the following best describes the main business purpose of your farm? / Q4a. What are the main sheep breeds, the ones that are dominant in your flock?
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230). *Note: Small base size.*

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Significantly higher **than MS non-user –** *Significantly lower* **than MS non-user**

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MS- or LP-using sheep Studs tend to have fewer sires; yet Commercial Users have more animals

Note that as not all Producers' animals will necessarily be recorded in a breeding programme, animal numbers shown here may differ from those recorded by MERINOSELECT, LAMBPLAN, etc.

	Cattle Stud "How many Stud animals do you usually have?"		Commercial Cattle "How many cows, calves and dry cattle do you usually have?"	
	BREEDPLAN user	BREEDPLAN non-user*	BREEDPLAN user	BREEDPLAN non-user
Average	217	89	1,203	893

	Sheep Stud "How many sires do you usually have?"		Commercial Sheep "How many sheep, lambs and dry ewes do you usually have?"	
	LAMBPLAN user	LAMBPLAN non-user*	LAMBPLAN user	LAMBPLAN non-user
Average	24	88	**3,284**	1,945

	Sheep Stud "How many sires do you usually have?"		Commercial Sheep "How many sheep, lambs and dry ewes do you usually have?"	
	MERINOSELECT user	MERINOSELECT non-user*	MERINOSELECT user	MERINOSELECT non-user
Average	56.4	104.2	5,055	3,657

Q2a. How many Stud animals do you usually have? / *Q2b.* How many cows, calves and dry cattle do you usually have? / *Q2c.* How many sires do you usually have? / *Q2d.* How many sheep, lambs and dry ewes do you usually have?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)
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GAME CHANGERS

There is a huge variation in animal management software being used; many still use informal DIY options, some use multiple systems

Software	Cattle Stud		Commercial Cattle	
	BP user	*BP non-user	BP user	BP non-user
Excel / Microsoft	17%	21%	**17%**	10%
Herd-master	13%	7%	2%	0%
Stockbook	11%	11%	3%	1%
Kool software	1%	0%	0%	0%
Other	51%	54%	67%	75%
Unsure	11%	11%	13%	16%

Software	Sheep Stud		Commercial Sheep	
	LP user	*LP non-user	LP user	LP non-user
Pedigree Wizard / Master	**48%**	0%	1%	0%
Stockbook	9%	5%	1%	0%
Excel / Microsoft	8%	18%	16%	8%
Kool software	3%	0%	3%	0%
Other	**31%**	73%	**69%**	84%
Unsure	5%	5%	11%	10%

Software	Sheep Stud		Commercial Sheep	
	MS user	*MS non-user	MS user	MS non-user
Stockbook	22%	0%	5%	0%
Pedigree Wizard / Master	19%	0%	0%	0%
Excel / Microsoft	14%	31%	13%	9%
Kool software	10%	0%	3%	0%
BreedElite	6%	0%	0%	0%
Other	33%	46%	68%	80%
Unsure	4%	23%	13%	13%

*Note that this question was not asked in reference to specific animals, so a sheep and cattle Producer who uses more than one software system could have cited more than one (hence a small number of sheep Producers citing BreedElite).

*Note that 'usage' could also refer to the source of data used. E.g. a Commercial Sheep Producer could feel they use Pedigree Master if their Stud / Seedstock supplier uses it to help with breeding decisions.

Q1. Which of the following best describes the main business purpose of your farm? / *Q11.* Which, if any, data management software do you use for your animal management?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)
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*Note: Small base size. *Significantly higher* than non-user – *Significantly lower* than non-user

PLAN Users are more likely to be breed society / SG members, but it is not a guaranteed link; breed society members will therefore be joining for reasons other than access to BP

	Cattle Stud		Commercial Cattle	
	BP user	BP non-user*	BP user	BP non-user
Member	98%	79%	**37%**	10%
Non-Member / Unsure	2%	21%	**63%**	90%

	Sheep Stud		Commercial Sheep	
	LP user	LP non-user*	LP user	LP non-user
Member	**90%**	18%	**16%**	1%
Non-Member / Unsure	**10%**	82%	**84%**	99%

	Sheep Stud		Commercial Sheep	
	MS user	MS non-user*	MS user	MS non-user
Member	**96%**	0%	**32%**	3%
Non-Member / Unsure	**4%**	100%	**68%**	96%

Note that sheep Producers were asked if they were a member or a *user* of the Sheep Genetics service, hence some Commercial Producers will have answered 'yes'. Some Commercial users may also have sideline Stud businesses.

Q8. Are you a member or user of a breed society / Sheep Genetics National Breeding Evaluation Service?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)*
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241)*
Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230)*

© 2016 Ipsos.   *Note: Small base size.   **Significantly higher** than non-user – **Significantly lower** than non-user*

GAME CHANGERS
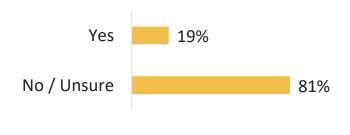
A small minority are ex-BP Users; Commercial Producers' adoption has outpaced Studs in recent years; no relationship between time in breeding & usage

Has Your Operation Used BP Information In The Past? (Non-Users)

Yes — 19%

No / Unsure — 81%

Cattle Stud or Seedstock | Commercial cattle farm
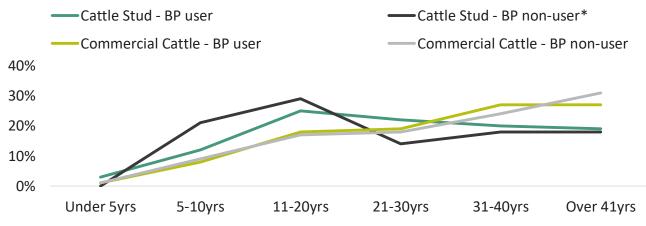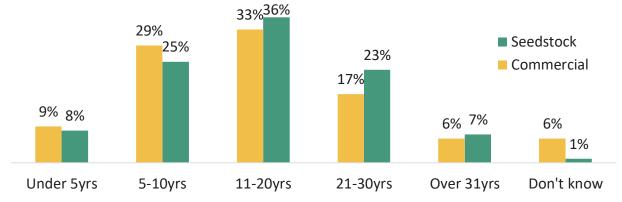
	Cattle Stud or Seedstock	Commercial cattle farm
Past user	**32%**	**18%**
Never used	**68%**	**82%**

Length Of Time Making Breeding Decisions – By Use

- Cattle Stud - BP user
- Cattle Stud - BP non-user*
- Commercial Cattle - BP user
- Commercial Cattle - BP non-user

X-axis: Under 5yrs, 5-10yrs, 11-20yrs, 21-30yrs, 31-40yrs, Over 41yrs

Length Using BREEDPLAN On Operations

Legend: Seedstock, Commercial

	Under 5yrs	5-10yrs	11-20yrs	21-30yrs	Over 31yrs	Don't know
Commercial	9%	29%	33%	17%	6%	6%
Seedstock	8%	25%	36%	23%	7%	1%

Q10c. Has your operation used BREEDPLAN information in the past? / Q10a. For how long has your operation used BREEDPLAN? / Q8. Are you a member of a breed society? / Q7. Taking into account all the farms you have owned or worked on, how long in total have you been involved in making key breeding decisions?

Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244). *Note: Small base size.*

GAME CHANGERS
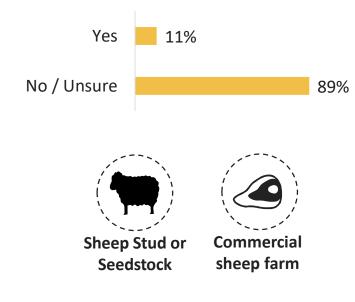
A small minority are ex-LP Users; Commercial Producers' adoption has outpaced Studs in recent years; no relationship between time in breeding & usage
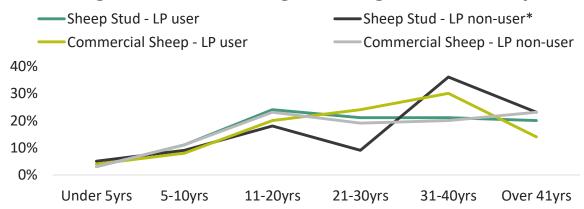
Has Your Operation Used LP Information In The Past? (Non-Users)

Yes — 11%

No / Unsure — 89%
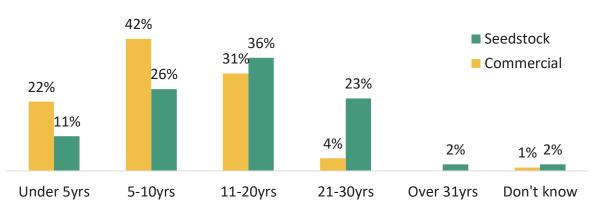
Sheep Stud or Seedstock	Commercial sheep farm
Past user **18%**	**16%**
Never used **82%**	**84%**

Length Of Time Making Breeding Decisions – By Use

— Sheep Stud - LP user   — Sheep Stud - LP non-user*
— Commercial Sheep - LP user   — Commercial Sheep - LP non-user

X-axis: Under 5yrs, 5-10yrs, 11-20yrs, 21-30yrs, 31-40yrs, Over 41yrs
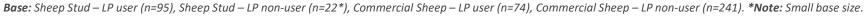
Length Using LAMBPLAN On Operations

■ Seedstock   ■ Commercial

	Under 5yrs	5-10yrs	11-20yrs	21-30yrs	Over 31yrs	Don't know
Commercial	22%	42%	31%	4%		1%
Seedstock	11%	26%	36%	23%	2%	2%

Q10c. Has your operation used LAMBPLAN information in the past? / Q10a. For how long has your operation used LAMBPLAN? / Q8. Are you a member or user of the Sheep Genetics National Breeding Evaluation Service? / Q7. Taking into account all the farms you have owned or worked on, how long in total have you been involved in making key breeding decisions?
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

GAME CHANGERS
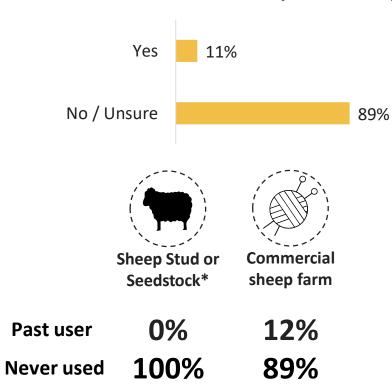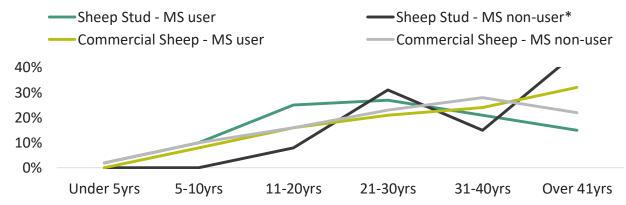
MS adoption rates appear very similar between Stud & Commercial Producers; no relationship with time in breeding
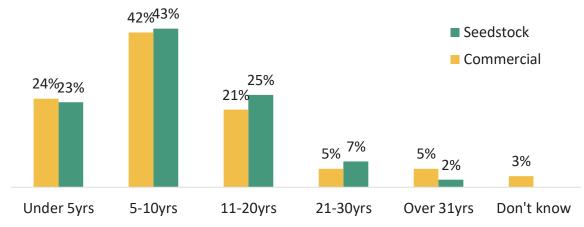
Has Your Operation Used MS Information In The Past? (Non-Users)

Yes — 11%

No / Unsure — 89%

Sheep Stud or Seedstock*

Commercial sheep farm

	Sheep Stud or Seedstock*	Commercial sheep farm
Past user	0%	12%
Never used	100%	89%

Length Of Time Making Breeding Decisions – By Use

- Sheep Stud - MS user
- Sheep Stud - MS non-user*
- Commercial Sheep - MS user
- Commercial Sheep - MS non-user
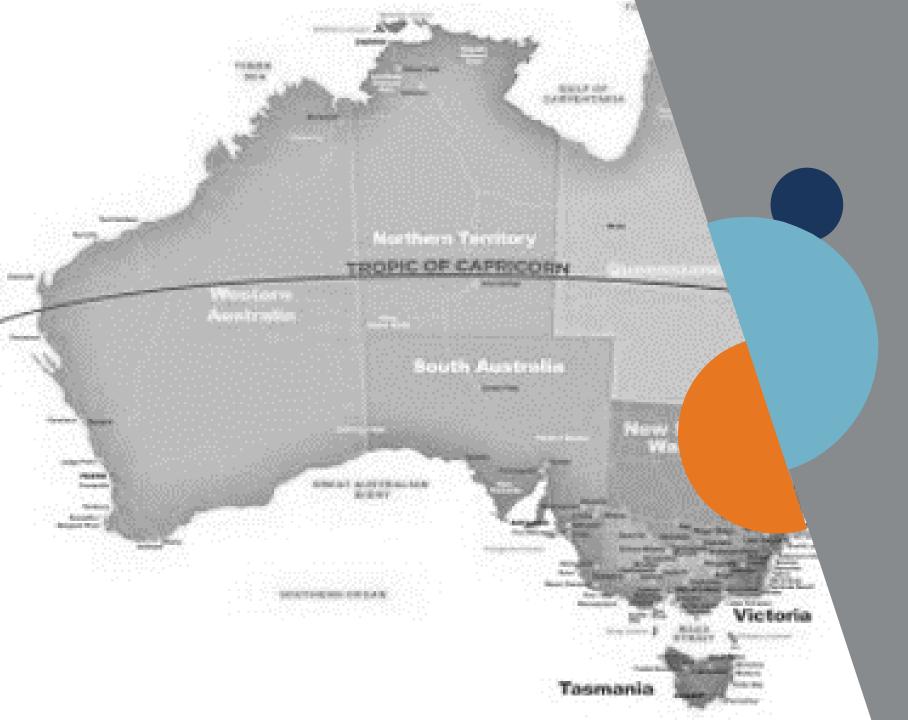
Length Using MERINOSELECT On Operations

- Seedstock
- Commercial

	Under 5yrs	5-10yrs	11-20yrs	21-30yrs	Over 31yrs	Don't know
Commercial	24%	42%	21%	5%	5%	3%
Seedstock	23%	43%	25%	7%	2%	

GAME CHANGERS

Regional Differences

GAME CHANGERS

Studs & Commercial Producers value different traits in different locations

Note the distribution of Users and Non-Users is not 'natural', but was quota'd to skew towards Studs and BP Users as these are smaller in number yet greater in importance from a 'learning' perspective.

Above The Tropical Line

STUD:
Important Traits

- 47% Temperament
- 38% Body shape / structure
- 25% Scrotal size
- 6% 400 day growth rate
- 6% Birth weight
- 6% Fat depth

COMMERCIAL:
Important Traits

- 42% Temperament
- 22% Pregnancy test result
- 18% Scrotal size
- 7% Days to calving
- 5% 600 day growth rate
- 5% Calving ease
- 4% 400 day growth rate
- 3% 200 day growth rate

Below The Tropical Line

STUD:
Important Traits

- 35% Birth weight
- 29% Fat depth
- 28% Temperament
- 26% 400 day growth rate
- 18% Body shape / structure
- 11% Scrotal size

COMMERCIAL:
Important Traits

- 30% Temperament
- 15% 400 day growth rate
- 14% 600 day growth rate
- 13% 200 day growth rate
- 13% Calving ease
- 12% Pregnancy test result
- 10% Scrotal size
- 8% Milk production
- 2% Days to calving

 Significantly higher than Producers in the other region – *Significantly lower* than Producers in the other region

GAME CHANGERS

There are clear North / South differences in Studs' breeding methods / traits

Above The Tropical Line

Main Breeds

56% Brahman
16% Droughtmaster
3% Angus

Important Traits

47% Temperament
38% Body shape / structure
25% Scrotal size
6% 400 day growth rate
6% Birth weight
6% Fat depth

Most Common Breeding Method

84% Putting a bull into the herd
9% AI

Note the distribution of Users and Non-Users is not 'natural', but was quota'd to skew towards Studs and BP Users as these are smaller in number yet greater in importance from a 'learning' perspective.

Below The Tropical Line

Main Breeds

42% Angus
3% Droughtmaster
3% Brahman

Important Traits

35% Birth weight
29% Fat depth
28% Temperament
26% 400 day growth rate
18% Body shape / structure
11% Scrotal size

Most Common Breeding Method

61% Putting a bull into the herd
36% AI

Q3a. What are your main cattle breeds, the ones that are dominant in your herd? / Q22. What are the most important cattle traits that you consider when selecting your breeding bulls? /
Q12. What is your most commonly used form of breeding?
Base: Cattle Stud Producers above the line (n=32), Cattle Stud Producers below the line (n=540)

© 2016 Ipsos. *Significantly higher* than Producers in the other region – *Significantly lower* than Producers in the other region

GAME CHANGERS

There are clear differences in the traits tracked between the North & South Studs

BP Usage

Above the line: 94%

Below the line: 95%

Note the distribution of Users and Non-Users is not 'natural', but was quota'd to skew towards Studs and BP Users as these are smaller in number yet greater in importance from a 'learning' perspective.

Traits You Would Like To See Added To BP

Significant Differences	Above The Line	Below The Line
Temperament	12%	0%

Performance Data Recorded From Cattle

Significant Differences	Above The Line	Below The Line
Birth weight	19%	57%
Pregnancy test result	25%	6%
Eye muscle area	6%	28%
Fat depth	6%	30%

Measurements Used To Keep Track Of Genetic Gains

Significant Differences	Above The Line	Below The Line
Birth weight	9%	27%
Nett physical factors	62%	43%
Scrotal size	38%	9%
Nett Gestation / weaning / fertility factors	47%	23%
Feedback from buyers	12%	3%

Performance Data Reported Back To BP

Significant Differences	Above The Line	Below The Line
Birth weight	21%	54%
Eye muscle area	3%	27%
Fat depth	3%	28%
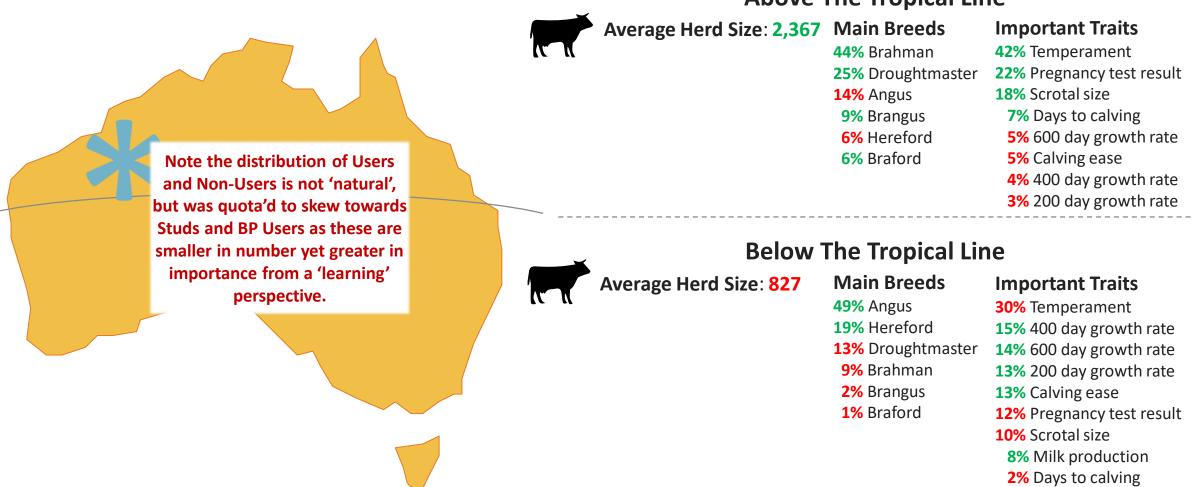
Q14. What types of measurements do you use to keep track of your genetics gains or progress towards your breeding objectives? / Q23. What, if any, traits would you like to see added to BREEDPLAN? /
Q24. What performance data do you regularly record from your cattle? / Q25. And which of that data do you routinely report back to BREEDPLAN?
Base: Cattle Stud Producers above the line (n=32), Cattle Stud Producers below the line (n=540)

© 2016 Ipsos. *Significantly higher* than Producers in the other region – *Significantly lower* than Producers in the other region

GAME CHANGERS

Different Commercial breeds & traits are desired in the two different regions

Above The Tropical Line

Average Herd Size: 2,367

Main Breeds	Important Traits
44% Brahman	42% Temperament
25% Droughtmaster	22% Pregnancy test result
14% Angus	18% Scrotal size
9% Brangus	7% Days to calving
6% Hereford	5% 600 day growth rate
6% Braford	5% Calving ease
	4% 400 day growth rate
	3% 200 day growth rate

Note the distribution of Users and Non-Users is not 'natural', but was quota'd to skew towards Studs and BP Users as these are smaller in number yet greater in importance from a 'learning' perspective.

Below The Tropical Line

Average Herd Size: 827

Main Breeds	Important Traits
49% Angus	30% Temperament
19% Hereford	15% 400 day growth rate
13% Droughtmaster	14% 600 day growth rate
9% Brahman	13% 200 day growth rate
2% Brangus	13% Calving ease
1% Braford	12% Pregnancy test result
	10% Scrotal size
	8% Milk production
	2% Days to calving

Q2b. How many cows, calves and dry cattle do you usually have? / Q9. Does your operation use BREEDPLAN or make a point of buying breeding stock with BREEDPLAN data? / Q3a. What are your main cattle breeds, the ones that are dominant in your herd? / Q22. What are the most important cattle traits that you consider when selecting your breeding bulls? / Q12. What is your most commonly used form of breeding?
Base: Commercial Cattle Producers above the line (n=355), Commercial Cattle Producers below the line (n=482)

Significantly higher **than Producers in the other region** – *Significantly lower* **than Producers in the other region**

GAME CHANGERS

Commercial cattle Producers' trust in BP is higher in the South, while training is more common in the North

BP Usage

Above the line: 43%

Below the line: 48%

Trust In BREEDPLAN

■ Trust the system ■ Feel neutral ■ Distrust the system ■ Don't know

Region	Trust	Neutral	Distrust	Don't know
Above the line	44%	30%	10%	16%
Below the line	56%	25%	4%	15%

Note the distribution of Users and Non-Users is not 'natural', but was quota'd to skew towards Studs and BP Users as these are smaller in number yet greater in importance from a 'learning' perspective.

Have You Had BP Training?

Above the line: **32%**

Below the line: **21%**

Who Provided The Training?

Top-3 Providers For Cattle Stud	Above The Line (n=31)	Below The Line (n=71)
MLA	**29%**	**13%**
Breed society	6%	21%
DPI	16%	11%

Who Do You Expect [...] Training?

Sample sizes?

Top-3 Expected Providers For Cattle Stud	Above The Line	Below The Line
MLA	41%	41%
Breed society	10%	14%
DPI	**15%**	**7%**

Q30d. Still thinking about the overall BREEDPLAN system, taking into account all of the things which you think are important, how much do you trust or distrust it? / Q32. Have you ever had proper training or guidance in how to use BREEDPLAN information such as EBVs to make your breeding or purchase decisions? / Q33. Who provided that training or guidance? / Q35. If you wanted to get more training or guidance, who would you expect to provide it?
Base: Commercial Cattle Producers above the line (n=97 - 104), Commercial Cattle Producers below the line (n=333 - 355) – note reduced bases for Q32, Q33 and Q35.

© 2016 Ipsos. *Significantly higher than Producers in the other region – Significantly lower than Producers in the other region*

GAME CHANGERS

Key Learnings: Business Profile

1. Clear and expected **variation in breeds** by PLAN usage and location.

2. Many Producers farm more than one breed and many run both Stud / Seedstock and Commercial operations. Therefore, because this research had to focus only on their 'aim' operations, respondents' cited usage and experience may appear at odds with their category.

3. Predictable **regional differences** exist; Northern Producers use and trust BP less, have more composite breeds, and focus on different traits than those in the South.

4. A lot of software variance; many **informal DIY tracking options** used.

5. No relationship between Producers' duration in breeding, operation size and system usage.

6. Breed society membership naturally higher amongst PLAN Users, but **many Non-Users are also breed society** members.

7. Around 11-19% are ex-Users.

GAME CHANGERS

Genetic Progress

GAME CHANGERS

PLAN Users are more likely to have clearly-set breeding objectives, but most Non-Users have clear objectives too; the promotion of 'clear breeding objectives' will not always lead to immediate uptake of PLANs

Biggest usage gap

Clear set breeding objectives	Cattle Stud		Commercial Cattle	
	BP user	BP non-user*	BP user	BP non-user
Yes	**96%**	GAP: 10% → 86%	**88%**	GAP: 23% → 65%
No / Unsure	4%	14%	**12%**	35%

Clear set breeding objectives	Sheep Stud		Commercial Sheep	
	LP user	LP non-user*	LP user	LP non-user
Yes	97%	GAP: 6% → 91%	83%	GAP: 6% → 77%
No / Unsure	3%	9%	17%	23%

Clear set breeding objectives	Sheep Stud		Commercial Sheep	
	MS User	MS non-user*	MS user	MS non-user
Yes	100%	GAP: 15% → 85%	100%	GAP: 13% → 87%
No / Unsure	0%	15%	**0%**	13%

Q13. *Do you have a clear set of breeding objectives for your animals?*
Base: *Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)*
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241)*
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230)*
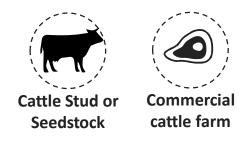
56   © 2016 Ipsos.   *Note: Small base size.*   *Significantly higher than non-user – Significantly lower than non-user*

GAME CHANGERS

The main form of breeding is putting a sire into the flock or herd; BP & MS Studs are more likely to use a form of AI

Breeding Methods used	Cattle Stud		Commercial Cattle	
	BP user	BP non-user*	BP user	BP non-user
AI	36%	18%	1%	1%
Embryo transfer	3%	7%	1%	0%
Putting a bull into the herd	61%	71%	**96%**	90%
No breeding done	0%	4%	**1%**	9%

Breeding Methods used	Sheep Stud		Commercial Sheep	
	LP user	LP non-user*	LP user	LP non-user
AI	9%	9%	1%	0%
Embryo transfer	1%	5%	0%	0%
Putting a ram into the herd	89%	86%	99%	95%
No breeding done	0%	0%	0%	4%

Breeding Methods used	Sheep Stud		Commercial Sheep	
	MS user	MS non-user*	MS user	MS non-user
AI	14%	0%	0%	0%
Embryo transfer	0%	0%	0%	0%
Putting a ram into the herd	86%	100%	100%	100%
No breeding done	0%	0%	0%	0%

Q12. What is your most commonly used form of breeding? Is it…?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)*
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241)*
Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230)*

Note: Small base size. **Significantly higher** *than non-user –* **Significantly lower** *than non-user*

GAME CHANGERS

Weight-gain is the main measure of breeding progress across Commercial & Stud farms; BP Users employ a wider range of measures; Non-Users are more likely to use less specific *visual & weight-gain assessments*

Measurements Used To Keep Track Of Progress Towards Objectives

	Cattle Stud - BP user	Cattle Stud - BP non-user*	Commercial Cattle - BP user	Commercial Cattle - BP non-user
*WEIGHT / GROWTH / AGE	69%	43%	60%	23%
Birth weight	27%	4%	7%	1%
200 - 250 day growth / weight	21%	4%	5%	
400 to 450 day growth / weight	21%	4%	6%	
Weight gain / growth rates	19%	25%	24%	13%
600 day growth / weight	15%	4%	5%	
Weight - body weight	15%	7%	14%	5%
*PHYSIQUE / TEMPERAMENT	45%	29%	27%	16%
Eye muscle area	15%	4%	3%	
Temperament / docility / flight time	13%	11%	7%	6%
Intramuscular fat - IMF	12%		2%	
Body shape / structure	11%	18%	9%	6%
Scrotal size / circumference	11%		2%	
Fat	9%	4%	3%	2%
Milk supply / udder development	7%		5%	
*GESTATION / WEANING / FERTILITY	24%	21%	31%	17%
Fertility	11%	21%	16%	8%
*BREED / GENETICS / EBV	39%	29%	19%	13%
BREEDPLAN	20%	4%	2%	
*OTHER	38%	61%	33%	37%
Scanning / ultrasound	17%	7%	1%	
Visual assessment	11%	32%	17%	23%
*NONE / DK / NR	2%	4%	7%	28%

Q14. *What types of measurement do you use to keep track of your genetics gains or progress towards your breeding objectives?*
Base: *Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244). *Note: Small base size.*
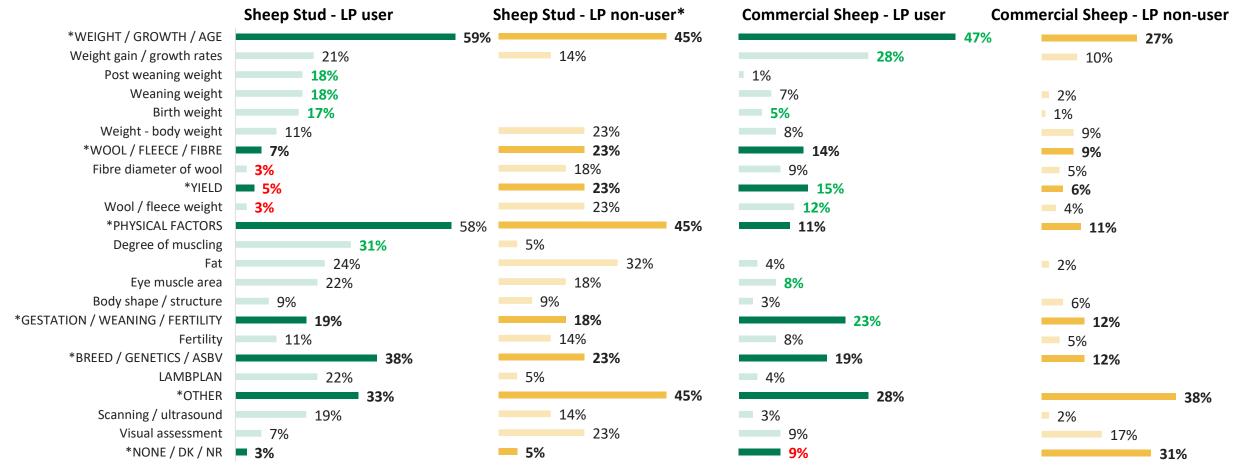
Significantly higher than BP non-user – *Significantly lower* than BP non-user

GAME CHANGERS

Weight-gain is the main measure of breeding progress across Commercial & Stud farms; LP Users have a wider range of measures; Non-Users are more likely to use *visual assessments*

Measurements Used To Keep Track Of Progress Towards Objectives

	Sheep Stud - LP user	Sheep Stud - LP non-user*	Commercial Sheep - LP user	Commercial Sheep - LP non-user
*WEIGHT / GROWTH / AGE	59%	45%	47%	27%
Weight gain / growth rates	21%	14%	28%	10%
Post weaning weight	18%		1%	
Weaning weight	18%		7%	2%
Birth weight	17%		5%	1%
Weight - body weight	11%	23%	8%	9%
*WOOL / FLEECE / FIBRE	7%	23%	14%	9%
Fibre diameter of wool	3%	18%	9%	5%
*YIELD	5%	23%	15%	6%
Wool / fleece weight	3%	23%	12%	4%
*PHYSICAL FACTORS	58%	45%	11%	11%
Degree of muscling	31%	5%		
Fat	24%	32%	4%	2%
Eye muscle area	22%	18%	8%	
Body shape / structure	9%	9%	3%	6%
*GESTATION / WEANING / FERTILITY	19%	18%	23%	12%
Fertility	11%	14%	8%	5%
*BREED / GENETICS / ASBV	38%	23%	19%	12%
LAMBPLAN	22%	5%	4%	
*OTHER	33%	45%	28%	38%
Scanning / ultrasound	19%	14%	3%	2%
Visual assessment	7%	23%	9%	17%
*NONE / DK / NR	3%	5%	9%	31%

Q14. What types of measurement do you use to keep track of your genetics gains or progress towards your breeding objectives?
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

Significantly higher than LP non-user – *Significantly lower* than LP non-user

GAME CHANGERS

Wool & fleece indicators are the main measure of breeding progress across Merino Commercial & Stud farms; MS Users employ a wider range of measures & place greater importance on *yield*

Measurements Used To Keep Track Of Progress Towards Objectives

	Sheep Stud - MS user	Sheep Stud - MS non-user*	Commercial Sheep - MS user	Commercial Sheep - MS non-user
*WEIGHT / GROWTH / AGE	62%	23%	32%	18%
Weight - body weight	42%	15%	16%	13%
Weight gain / growth rates	10%		13%	2%
*WOOL / FLEECE / FIBRE	57%	54%	71%	54%
Fibre diameter of wool	38%	54%	45%	33%
Wool / fibre / fleece measurements	16%	15%	21%	21%
Staple - strength / length	10%		11%	5%
*YIELD	53%	23%	53%	25%
Wool / fleece weight	52%	15%	42%	21%
*PHYSICAL FACTORS	52%	15%	18%	17%
Fat	32%		5%	1%
Eye muscle area	28%	8%	8%	
Degree of muscling	16%		3%	
Worms / WEC	12%		11%	1%
Body shape / structure	1%		3%	10%
*GESTATION / WEANING / FERTILITY	11%		24%	11%
Fertility	4%		11%	4%
*BREED / GENETICS / ASBV	31%	15%	11%	7%
MERINOSELECT / DPP index	11%			
Ram data	4%	15%	8%	4%
*OTHER	27%	38%	24%	33%
Scanning / ultrasound	10%		5%	
Visual assessment	6%	23%	11%	17%
Cull - to meat works if not up to standard		15%		2%
*NONE / DK / NR		15%	0%	14%

*Q14. What types of measurement do you use to keep track of your genetics gains or progress towards your breeding objectives?*
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230). **Note:** Small base size.*

GAME CHANGERS

Significantly higher than MS non-user – *Significantly lower* than MS non-user

BREEDING MEASURES – GENETIC GAINS
Except for MS Studs, there is little difference in genetic gains satisfaction between PLAN Users & Non-Users

Non-Users may have lower expectations, knowledge of unmet potential, or both.

Legend: Very satisfied (1) | Fairly satisfied | Neither | Fairly dissatisfied | Very dissatisfied (5) | Unsure / don't know

Mean

Significantly lower than non-user
Significantly higher than non-user

Category	Very satisfied	Fairly satisfied	Neither	Fairly dissatisfied	Very dissatisfied	Unsure/don't know	Mean
Cattle Stud - BP user	67%	29%	2%	1%			1.4
Cattle Stud - BP non-user*	71%	18%	4%			7%	1.3
Commercial Cattle - BP user	40%	51%	4%	2%	3%		1.7
Commercial Cattle - BP non-user	49%	36%	5%	2%		8%	1.6
Sheep Stud - LP user	56%	35%	3%	4%			1.6
Sheep Stud - LP non-user*	49%	41%	5%	5%			1.6
Commercial Sheep - LP user	56%	36%	4%			4%	1.5
Commercial Sheep - LP non-user	50%	36%	4%	2%		7%	1.6
Sheep Stud - MS user	71%	27%	2%				1.3
Sheep Stud - MS non-user*	53%	31%	8%			8%	1.5
Commercial Sheep - MS user	52%	42%	3%				1.6
Commercial Sheep - MS non-user	49%	42%	5%			3%	1.6

Q17. All things considered, how satisfied are you with the genetic gains you have achieved in your animals over the last 10 or so years?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241)
Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230)

GAME CHANGERS

*Note: Small base size.

Ipsos
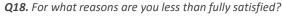
Rate of change, system inaccuracies & costs are the most commonly cited specific reasons for cattle Producers' genetic gains dissatisfaction

Reasons Less Than Fully Satisfied With Genetic Gains

	Cattle Stud - BP user	Com. Cattle - BP user	Com. Cattle - BP non-user
Slow rate of change	20%	19%	13%
System not accurate / reliable	11%	6%	1%
Always room for improvement	11%	18%	12%
High financial cost	9%	7%	10%
Low returns / not profitable enough	8%	5%	10%
High time / effort cost	7%	8%	5%
Issues with breeding stock	6%	6%	8%
EBV issues	5%	2%	1%
Climate / seasons / environment factors	3%	**11%**	4%
Not the outcome I expect / want	3%	11%	11%
Issues with genetics, genetic pool, genetic defects	3%	2%	2%
Other	20%	7%	8%
Unsure	5%	9%	12%

* Note that this question was asked only of those professing satisfaction levels below 'very'.
Therefore these reasons are cited by smaller %s than those shown here when based on the total sample.

Note: Cattle Stud – BP non-user not shown due to small base (n=6)

Q18. For what reasons are you less than fully satisfied?
Base: Producers not 'Very satisfied' from Q17: Cattle Stud – BP user (n=175), Commercial Cattle – BP user (n=123), Commercial Cattle – BP non-user (n=105)

Significantly higher than BP non-user – Significantly lower than BP non-user

GAME CHANGERS

Sheep Producers who were not fully satisfied with their genetic gains generally felt that there is *always room for improvement*, esp. in regard to *speed of change* & the complications of *environmental factors*

Reasons Less Than Fully Satisfied With Genetic Gains	Sheep Stud - LP user	Sheep Stud - LP non-user*	Com. Sheep - LP user	Com. Sheep - LP non-user
Always room for improvement	17%		30%	18%
Hard to meet goal posts / indexes used, keep changing / not realistic	10%			
Low returns / not profitable enough	7%		3%	5%
Issues with breeding stock	7%	9%	7%	7%
Lack of understanding how to interpret	7%		3%	1%
No benchmark, lack of historical / technical data, not full data set	5%	9%	3%	1%
Slow rate of change	2%	18%	13%	3%
High financial cost	2%	9%	7%	10%
Climate / seasons / environment factors	2%	9%	13%	7%
Not the outcome I expect / want	2%		10%	11%
Not our main focus, not interested, not doing genetics	2%		13%	8%
Other	7%	27%	7%	10%
Unsure	10%	27%		15%

Note that this question was asked only of those professing satisfaction levels below 'very'. Therefore these reasons are cited by smaller %s than those shown here when based on the total sample.

Q18. For what reasons are you less than fully satisfied?

Base: Producers not 'Very satisfied' from Q17: Sheep Stud – LP user (n=41), Sheep Stud – LP non-user (n=11), Commercial Sheep – LP user (n=30), Commercial Sheep – LP non-user (n=104). *Note: Small base size.*
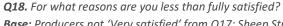
Dissatisfied sheep Producers mainly cited a *slow rate of change* & *unwanted outcomes*

Reasons Less Than Fully Satisfied With Genetic Gains

	Sheep Stud - MS non-user*	Com. Sheep - MS user*	Com. Sheep - MS non-user
Slow rate of change	17%	33%	23%
Not the outcome I expect / want	8%	22%	9%
Always room for improvement	8%	28%	17%
Lack of understanding how to interpret, still a lot to learn	8%		1%
Low returns / not profitable enough	4%	6%	11%
Hard to meet goal posts / indexes used, keep changing / not realistic		11%	1%
Other	25%	6%	5%
Unsure	4%		10%

Note that this question was asked only of those professing satisfaction levels below 'very'. Therefore these reasons are cited by smaller %s than those shown here when based on the total sample.

Note: Sheep Stud – MS user not shown due to small base (n=5)

Q18. For what reasons are you less than fully satisfied?

Base: Producers not 'Very satisfied' from Q17: Sheep Stud – MS non-user (n=24), Commercial Sheep – MS user (n=18*), Commercial Sheep – MS non-user (n=111). *Note: Small base size.*

GAME CHANGERS
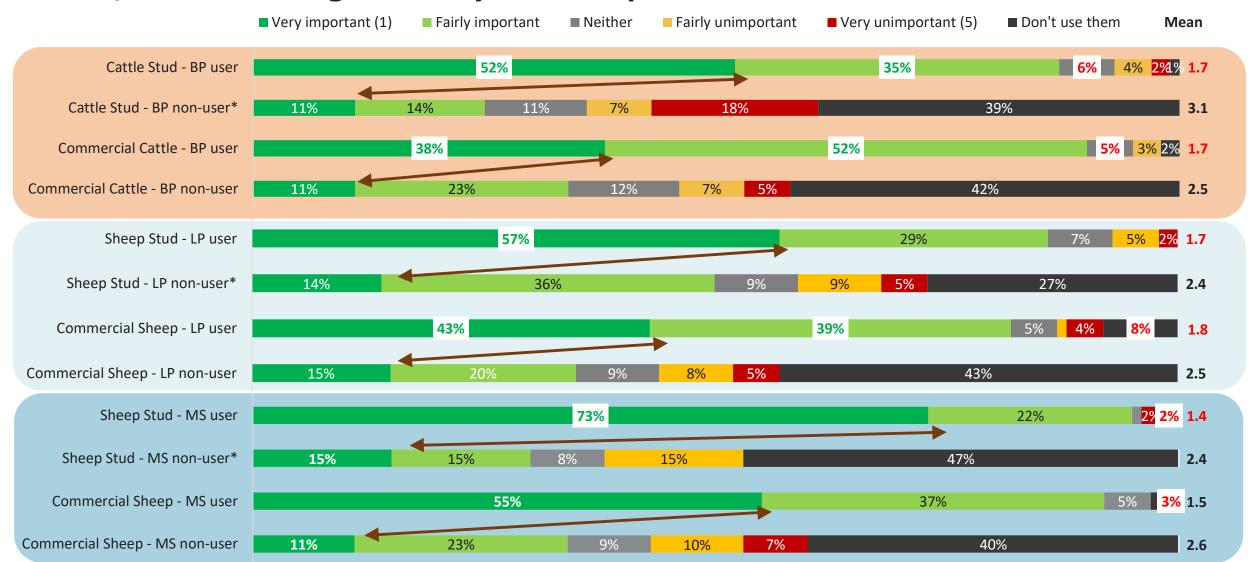
EBVs / ASBVs are significantly more important to PLAN Users

Legend: Very important (1) | Fairly important | Neither | Fairly unimportant | Very unimportant (5) | Don't use them | **Mean**

Category	Very important (1)	Fairly important	Neither	Fairly unimportant	Very unimportant (5)	Don't use them	Mean
Cattle Stud - BP user	52%	35%	6%	4%	2%	1%	1.7
Cattle Stud - BP non-user*	11%	14%	11%	7%	18%	39%	3.1
Commercial Cattle - BP user	38%	52%	5%	3%	2%		1.7
Commercial Cattle - BP non-user	11%	23%	12%	7%	5%	42%	2.5
Sheep Stud - LP user	57%	29%	7%	5%	2%		1.7
Sheep Stud - LP non-user*	14%	36%	9%	9%	5%	27%	2.4
Commercial Sheep - LP user	43%	39%	5%		4%	8%	1.8
Commercial Sheep - LP non-user	15%	20%	9%	8%	5%	43%	2.5
Sheep Stud - MS user	73%	22%			2%	2%	1.4
Sheep Stud - MS non-user*	15%	15%	8%	15%		47%	2.4
Commercial Sheep - MS user	55%	37%	5%		3%		1.5
Commercial Sheep - MS non-user	11%	23%	9%	10%	7%	40%	2.6

Significantly higher than non-user – Significantly lower than non-user

Q15. How important are EBVs for selecting your breeding bulls? How important are ASBVs for selecting your breeding rams?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)*
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241)*
Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230)*

GAME CHANGERS

*Note: Small base size.

BREEDING MEASURES – DOLLAR INDEXES
Dollar Indexes are clearly more important to PLAN Users

Legend: Very important (1) | Fairly important | Neither | Fairly unimportant | Very unimportant (5) | Don't use them | **Mean**

	Very important (1)	Fairly important	Neither	Fairly unimportant	Very unimportant (5)	Don't use them	Mean
Cattle Stud - BP user	22%	36%	10%	11%	9%	12%	2.4
Cattle Stud - BP non-user*	7%	14%	4%	14%	18%	43%	3.4
Commercial Cattle - BP user	14%	40%	9%	6%	3%	28%	2.2
Commercial Cattle - BP non-user	6%	15%	8%	7%	7%	57%	2.8
Sheep Stud - LP user	22%	35%	12%	13%	5%	13%	2.3
Sheep Stud - LP non-user*	9%	18%	18%	18%		37%	2.7
Commercial Sheep - LP user	15%	43%	14%	5%	3%	20%	2.2
Commercial Sheep - LP non-user	11%	17%	9%	9%	5%	49%	2.6
Sheep Stud - MS user	32%	32%	6%	5%	5%	20%	2.0
Sheep Stud - MS non-user*	15%	8%	15%	15%		47%	2.6
Commercial Sheep - MS user	42%	34%	8%		5%	11%	1.8
Commercial Sheep - MS non-user	8%	18%	9%	10%	8%	47%	2.8

Significantly higher than non-user – Significantly lower than non-user

Q16. *How important are Dollar Indexes, also called Selection Indexes, for selecting your breeding animals?*
Base: *Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244)*
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241)*
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230)*
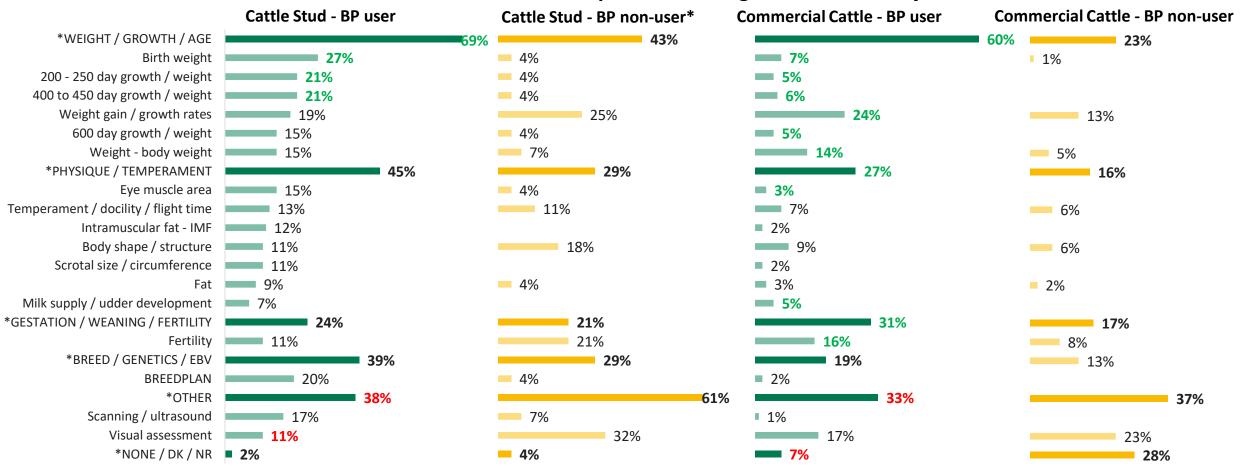
*Note: Small base size.

GAME CHANGERS

Key Learnings: Genetic Progress

1. PLAN Users are predictably more likely to have set breeding objectives but not exclusively so **– the presence of set breeding objectives is not a predictor of PLAN usage**, nor is the absence an indicator of dissatisfactory genetic gains progress.

2. **Those using PLANs use a wider range of metrics** and are also more likely to track 'hidden' traits; Non-Users are more likely to rely on fewer, more basic assessments such as visuals and weight gain.

3. With the exception of MERINOSELECT Studs, **satisfaction with genetic gains is not related to PLAN usage** (remembering that satisfaction is related to investment as well as outcome). This means that dissatisfaction with genetics gains will have limited influence in promoting better genetics-based breeding.

4. **PLAN Users value metrics** like EBVs, ASBVs and Dollar Indexes much more than Non-Users. This indicates that Non-Users are not as desirous of these measures as current Users.

GAME CHANGERS

Perceptions of MERINOSELECT LAMBPLAN BREEDPLAN

GAME CHANGERS

Ipsos

Measuring TRUST

GAME CHANGERS

Ipsos

Understanding types of Trust

Because the qualitative research uncovered an apparently large degree of distrust in the PLANs and MLA, the nature of the trust felt towards the PLANs was explored within the quantitative survey using the Ipsos model shown below:

Solid Trust:

Advocacy

Trust

Favorability

Familiarity

Unfounded Trust:

Advocacy

Trust

Favorability

Familiarity

Under-performing Trust:

Advocacy

Trust

Favorability

Familiarity

Blind Trust:

Advocacy

Trust

Favorability

Familiarity

Note that Advocacy is not contingent on Usage, Trust, Favorability or Familiarity (people may see themselves as recommending something in certain circumstances); but when these factors are absent, the conviction and likelihood of such Advocacy are reduced.

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GAME CHANGERS

Both Commercial & Stud Users have a high level of trust in BP; however, Commercial Users are less familiar with the system & so their 'Blind Trust' will be more vulnerable to misinformation from other sources

	Cattle Stud (BP user)	Cattle Stud (BP non-user)*	Commercial Cattle (BP user)	Commercial Cattle (BP non-user)
Advocacy	59%	12%	55%	20%
Trust	74%	23%	73%	34%
Favorability	78%	19%	73%	33%
Familiarity	84%	46%	45%	13%
BP users who correctly stated that DPI, ABRI, AGBU, MLA, UNE, Breeding Society and Armidale are involved in BP	62%	50%	50%	25%

*Q30b. How much do you feel you know about the overall BREEDPLAN system as whole, taking into account all the ways you have learned about or had contact with it? Would you say that you know the BREEDPLAN system…? / **Q30c.** Still thinking about the overall BREEDPLAN system, taking into account all of the things which you think are important, how favourable or unfavourable is your overall opinion or impression of it? / **Q30d.** Still thinking about the overall BREEDPLAN system, taking into account all of the things which you think are important, how much do you trust or distrust it? / **Q30e.** Which one of the following statements best reflects your overall opinion and perceptions of the BREEDPLAN system?*

Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=26 - 28*), Commercial Cattle – BP user (n=210 - 215), Commercial Cattle – BP non-user (n=220 - 244) – note reduced bases for favorability, Trust and Advocacy.*
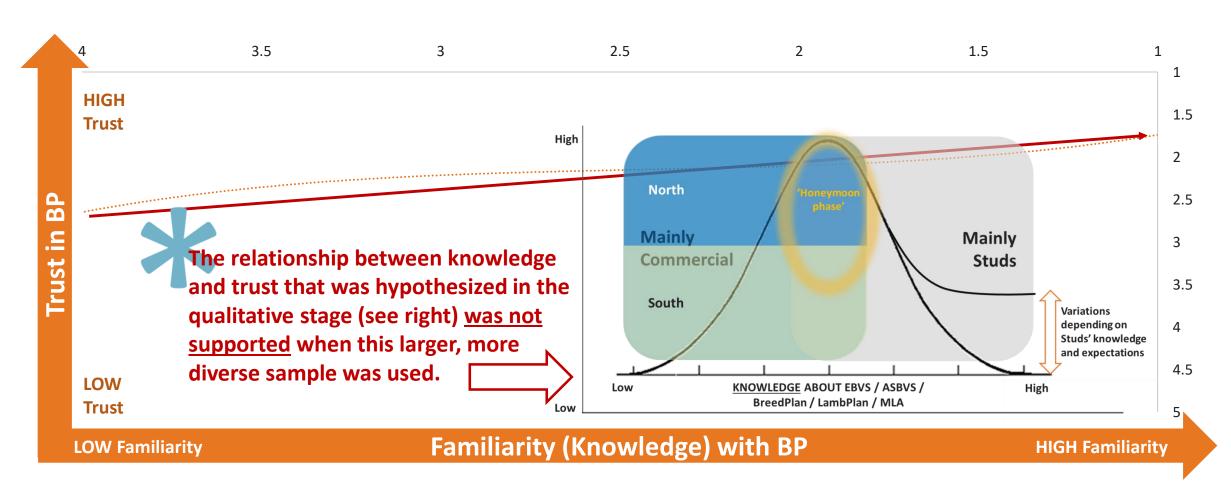
Significantly higher than BP non-user – **Significantly lower** than BP non-user   *Note: Small base size.*

GAME CHANGERS

There is a small but positive relationship between BREEDPLAN Trust & Knowledge

Trust in BP

HIGH Trust

LOW Trust

4   3.5   3   2.5   2   1.5   1

1   1.5   2   2.5   3   3.5   4   4.5   5

The relationship between knowledge and trust that was hypothesized in the qualitative stage (see right) was not supported when this larger, more diverse sample was used.

High

North

Mainly Commercial

South

'Honeymoon phase'

Mainly Studs

Variations depending on Studs' knowledge and expectations

Low

Low   KNOWLEDGE ABOUT EBVS / ASBVS / BreedPlan / LambPlan / MLA   High

LOW Familiarity   **Familiarity (Knowledge) with BP**   **HIGH Familiarity**

GAME CHANGERS

Both Commercial & Stud Users have high levels of trust in LAMBPLAN; however, Commercial Users are less familiar with the system & so their 'Blind Trust' will be more vulnerable to misinformation from other sources

	Sheep Stud (LP user)	Sheep Stud (LP non-user)*	Commercial Sheep (LP user)	Commercial Sheep (LP non-user)
Advocacy	64%	24%	65%	17%
Trust	81%	38%	80%	35%
favorability	83%	43%	81%	38%
Familiarity	80%	32%	51%	12%
LP users who correctly stated that AWI, MLA, Sheep Genetics and UNE are involved in LP	75%	32%	51%	37%

Q30b. How much do you feel you know about the overall LAMBPLAN system as whole, taking into account all the ways you have learned about or had contact with it? Would you say that you know the LAMBPLAN system… ? / Q30c. Still thinking about the overall LAMBPLAN system, taking into account all of the things which you think are important, how favourable or unfavourable is your overall opinion or impression of it? / Q30d. Still thinking about the overall LAMBPLAN system, taking into account all of the things which you think are important, how much do you trust or distrust it? / Q30e. Which one of the following statements best reflects your overall opinion and perceptions of the LAMBPLAN system?

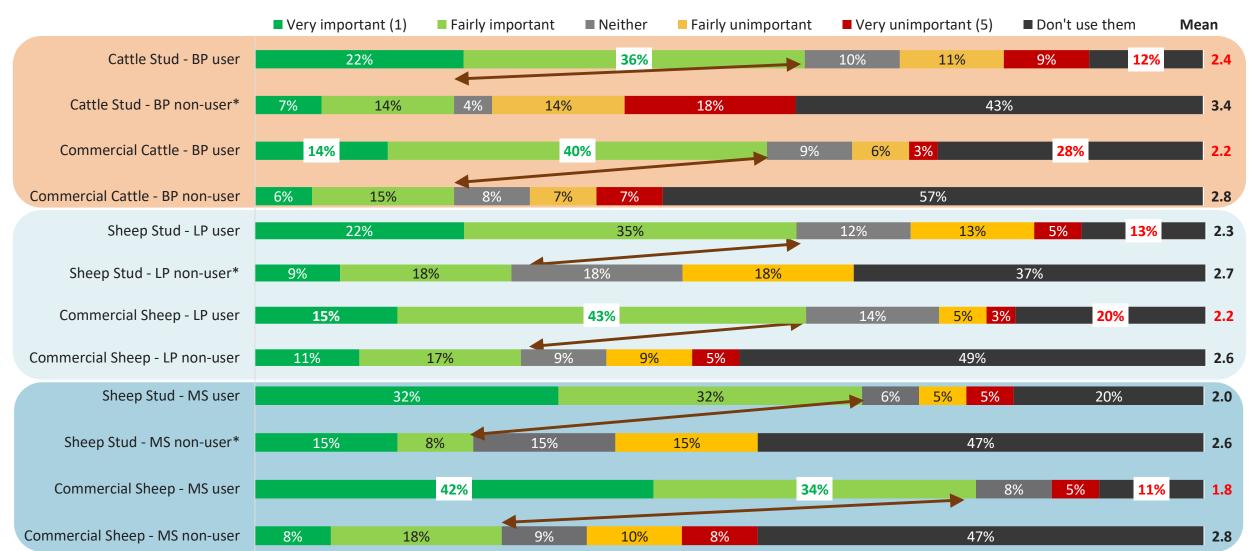*Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=21* - 22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241 - 244) – note reduced bases for favorability, Trust and Advocacy.*
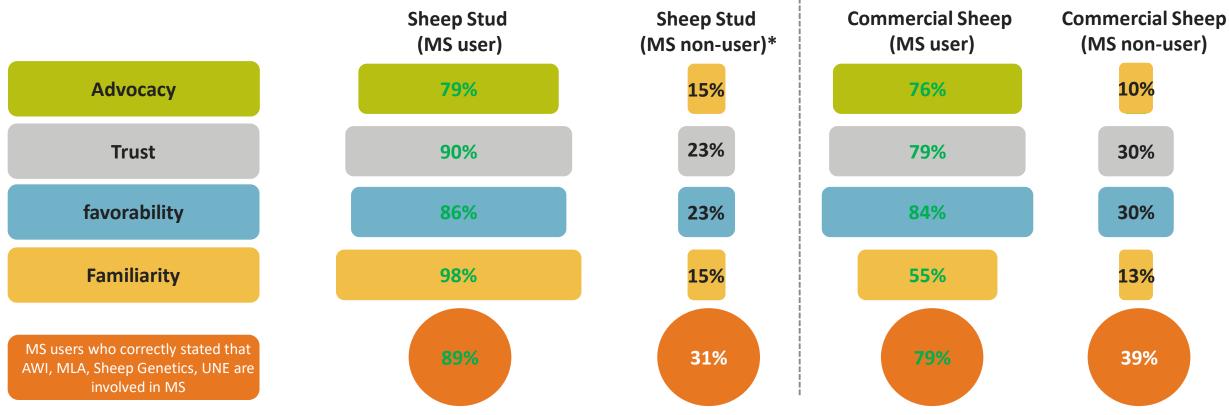
73   © 2016 Ipsos.

Significantly higher than LP non-user – **Significantly lower** than LP non-user   *Note: Small base size.*

GAME CHANGERS

Both Commercial & Stud MS Users have high levels of trust in MERINOSELECT; however, Commercial Users are less familiar with the system & so their 'Blind Trust' will be more vulnerable to misinformation from other sources

	Sheep Stud (MS user)	Sheep Stud (MS non-user)*	Commercial Sheep (MS user)	Commercial Sheep (MS non-user)
Advocacy	79%	15%	76%	10%
Trust	90%	23%	79%	30%
favorability	86%	23%	84%	30%
Familiarity	98%	15%	55%	13%
MS users who correctly stated that AWI, MLA, Sheep Genetics, UNE are involved in MS	89%	31%	79%	39%

Q30b. How much do you feel you know about the overall MERINOSELECT system as whole, taking into account all the ways you have learned about or had contact with it? Would you say that you know the MERINOSELECT system…? / Q30c. Still thinking about the overall MERINOSELECT system, taking into account all of the things which you think are important, how favourable or unfavourable is your overall opinion or impression of it? / Q30d. Still thinking about the overall MERINOSELECT system, taking into account all of the things which you think are important, how much do you trust or distrust it? / Q30e. Which one of the following statements best reflects your overall opinion and perceptions of the MERINOSELECT system?
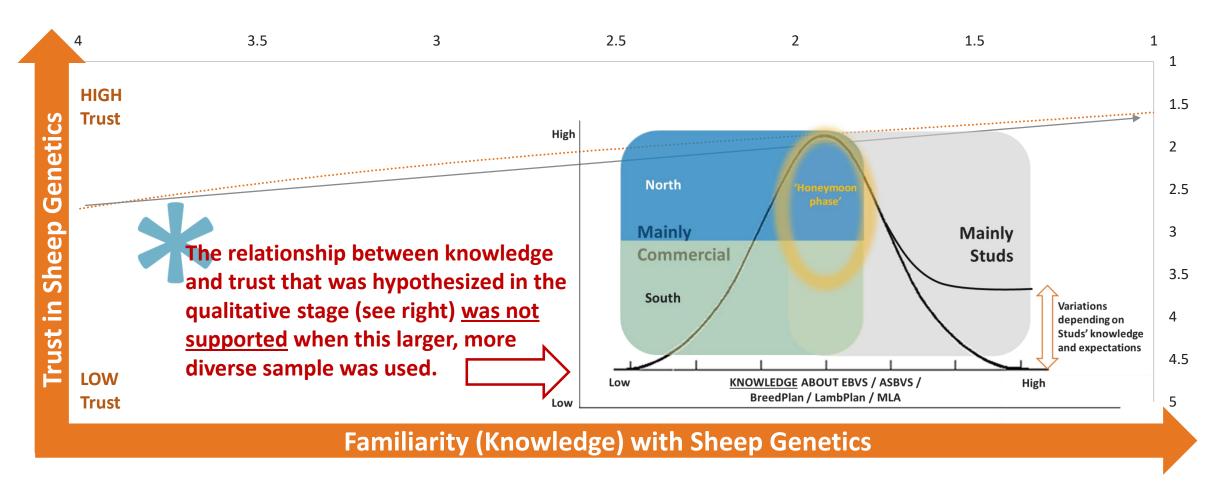
Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=210 - 230) – note reduced bases for favorability, Trust and Advocacy.*

Significantly higher than MS non-user – *Significantly lower* than MS non-user   *Note: Small base size.*

GAME CHANGERS

There is a small but positive relationship between Knowledge & Trust in the Sheep Genetics systems

Trust in Sheep Genetics

4   3.5   3   2.5   2   1.5   1

HIGH Trust

LOW Trust

The relationship between knowledge and trust that was hypothesized in the qualitative stage (see right) <u>was not supported</u> when this larger, more diverse sample was used.

High

North

Mainly Commercial

South

'Honeymoon phase'

Mainly Studs

Variations depending on Studs' knowledge and expectations

Low

Low   KNOWLEDGE ABOUT EBVS / ASBVS / BreedPlan / LambPlan / MLA   High

Familiarity (Knowledge) with Sheep Genetics

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GAME CHANGERS

Perceptions of BREEDPLAN

GAME CHANGERS

Ipsos

Studs mainly see BP as a *database* for helping decisions, whereas Commercial Producers also highlight specific measures for *weight gain & EBVs*

What Can You Tell Me About BP?

Cattle Stud

	BP user (n=544)	BP non-user (n=28*)
*DATABASE	89%	54%
Database to be used as a tool / guide	22%	11%
Data to assist decision-making	17%	4%
Data regarding growth / weight gain of animal	12%	11%
EBV in general	13%	7%
Data regarding genetics / parentage / pedigree	11%	
Positive comments	13%	4%
Data regarding bulls / EBV of bull / bull semen	7%	
Data regarding birth weight	7%	
Benchmark for herd / breed	8%	4%
Use data as a predictor	7%	4%
Data to support visual assessment	6%	
Data regarding performance / production	7%	
*OTHER	27%	54%
Negative comments	10%	14%
We do not use BREEDPLAN	1%	11%
No knowledge of BREEDPLAN	1%	14%

Commercial Cattle

	BP user (n=215)	BP non-user (n=244)
*DATABASE	77%	27%
Database to be used as a tool / guide	13%	2%
Data to assist decision-making	20%	4%
Data regarding growth / weight gain of animal	19%	7%
EBV in general	7%	2%
Data regarding genetics / parentage / pedigree	8%	4%
Positive comments	5%	2%
Data regarding bulls / EBV of bull / bull semen	18%	4%
Data regarding birth weight	10%	3%
Benchmark for herd / breed	7%	2%
Use data as a predictor	5%	1%
Data to support visual assessment	7%	2%
Data regarding performance / production	5%	1%
*OTHER	29%	75%
Negative comments	4%	3%
We do not use BREEDPLAN	7%	23%
No knowledge of BREEDPLAN	9%	37%

Q20a. So before we go any further, what can you tell me about BREEDPLAN?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244). *Note: Small base size.*

Significantly higher than BP non-user – **Significantly lower** than BP non-user

GAME CHANGERS

The majority of Producers view BP positively, with some reservations

What Can You Tell Me About BP?

Cattle Stud – BP user	Cattle Stud – BP non-user*	Commercial Cattle – BP user	Commercial Cattle – BP non-user

Cattle Stud – BP user

> BREEDPLAN gives a better idea of where you are going and where you want to go. As far as selling something it serves a purpose. So there is guidance there.

> It's an important tool that we contribute data to and we get estimated breeding values that help us and our customers…

Cattle Stud – BP non-user*

> BREEDPLAN is a calculation of the relative Commercial benefit of animal with high EBV figures.

> Is not a major tool in my operation; I don't feel it is a massive tool in the industry; there is a big change to get away from it. Is there to keep data records; you can manipulate these numbers; it's not what people should buy cattle from. They market cattle on these figures.

Commercial Cattle – BP user

> It's just a matter of collecting data from birth weight calving scanning eye muscle fat and performance.

> We would use semen as we use AI sometime; then we would look at the EBVs because we are small operation; temperament is important to us.

> It's an objective tool for improving genetic gain.

Commercial Cattle – BP non-user

> Measure the animals' weight at birth and compare with animals in the herd, think it's quite a good idea.

> It can be considered when you are purchasing bulls and females for crossbreeding or breeding of any sort.

> It's about trying to prove the genetics and the weight gain.

> It's a rough guide / size on the cows.

GAME CHANGERS
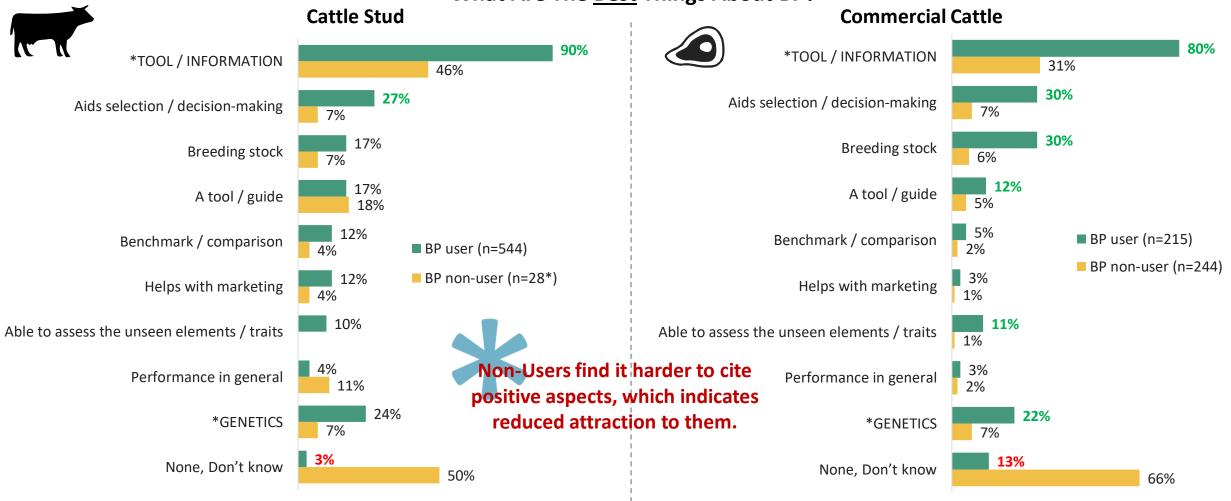
The most commonly-cited benefits of BP are its *decision-helping capabilities*

What Are The <u>Best</u> Things About BP?

Cattle Stud

Category	BP user (n=544)	BP non-user (n=28*)
*TOOL / INFORMATION	90%	46%
Aids selection / decision-making	27%	7%
Breeding stock	17%	7%
A tool / guide	17%	18%
Benchmark / comparison	12%	4%
Helps with marketing	12%	4%
Able to assess the unseen elements / traits	10%	
Performance in general	4%	11%
*GENETICS	24%	7%
None, Don't know	3%	50%

Commercial Cattle

Category	BP user (n=215)	BP non-user (n=244)
*TOOL / INFORMATION	80%	31%
Aids selection / decision-making	30%	7%
Breeding stock	30%	6%
A tool / guide	12%	5%
Benchmark / comparison	5%	2%
Helps with marketing	3%	1%
Able to assess the unseen elements / traits	11%	1%
Performance in general	3%	2%
*GENETICS	22%	7%
None, Don't know	13%	66%

Non-Users find it harder to cite positive aspects, which indicates reduced attraction to them.

Q20b. What are the <u>best</u> things about BREEDPLAN for people running businesses like yours?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244). *Note: Small base size.*

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Significantly higher than BP non-user – *Significantly lower* than BP non-user

GAME CHANGERS

The majority of comments relate to how BP can be *a useful tool*

What Are The Best Things About BP?

Cattle Stud – BP user	Cattle Stud – BP non-user*	Commercial Cattle – BP user	Commercial Cattle – BP non-user

Cattle Stud – BP user

It provides a quantifiable and measurable product. It's a useful indicator and provides productive indictor for your seed stock.

Good, quick, easy guide to sell animals, it is also a useful tool.

Benchmarking, using BREEDPLAN to select good bulls. I suppose the hard thing is if you put more into it, you get more out of it.

Cattle Stud – BP non-user*

It's a tool for people who don't know how to look at cattle and how to see; it's a tool on how to assess them.

Showing you the animals and comparisons, size of calves, etc., allows you to look at genetics all over the world and gives the advantage to source from overseas.

Management tool for assisting selection.

Commercial Cattle – BP user

It makes it easier to check whether genetics would suit what you are aiming for. It makes it easier to match the genetics to your objectives.

Gives you another option to look at when buying stock. Before it was just done on visual with no actual history. Now there is.

A good tool to work with.

Commercial Cattle – BP non-user

Gives you some idea on how to make decisions on what you are buying when it comes to bulls.
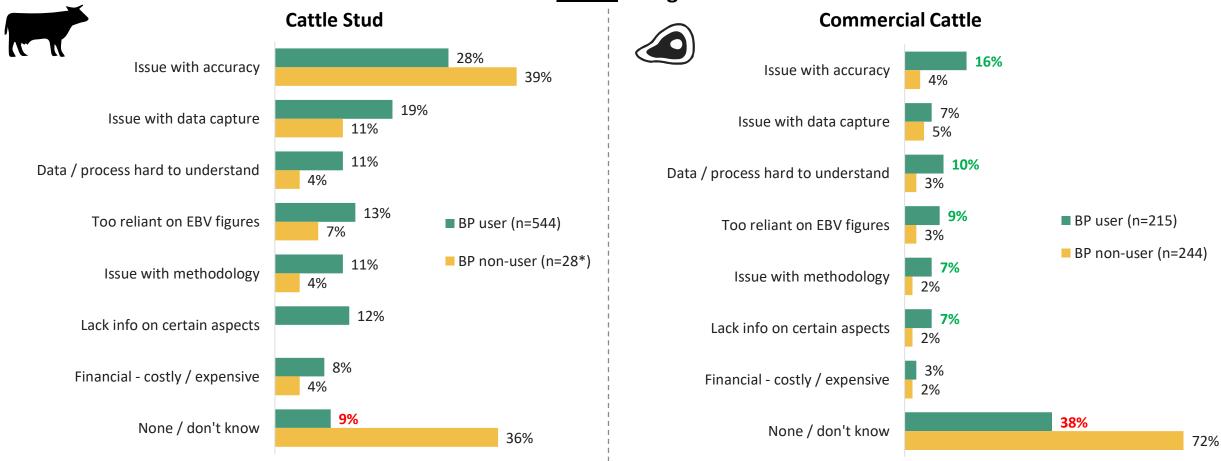
It gives you what the breeding value of the animal is based on genetics rather than just environment.

You can track your herd's growth to make sure it is going in the direction you want it to go in, i.e. financial and physical beef growth.

Q20b. What are the best things about BREEDPLAN for people running businesses like yours?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244). *Note: Small base size.*

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GAME CHANGERS

The most commonly-cited problems of BP concern *accuracy*, *complexity* & the *time involved*; however, most Non-Users cannot cite any problems at all

What Are The <u>Worst</u> Things About BP?

Cattle Stud

Category	BP user (n=544)	BP non-user (n=28*)
Issue with accuracy	28%	39%
Issue with data capture	19%	11%
Data / process hard to understand	11%	4%
Too reliant on EBV figures	13%	7%
Issue with methodology	11%	4%
Lack info on certain aspects	12%	
Financial - costly / expensive	8%	4%
None / don't know	9%	36%

Commercial Cattle

Category	BP user (n=215)	BP non-user (n=244)
Issue with accuracy	16%	4%
Issue with data capture	7%	5%
Data / process hard to understand	10%	3%
Too reliant on EBV figures	9%	3%
Issue with methodology	7%	2%
Lack info on certain aspects	7%	2%
Financial - costly / expensive	3%	2%
None / don't know	38%	72%

Q20c. What are the <u>worst</u> things about BREEDPLAN for people running businesses like yours?
Base: Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244). *Note: Small base size.*

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Significantly higher than BP non-user – Significantly lower than BP non-user

GAME CHANGERS

Accuracy & the *time involved* are key themes

What Are The <u>Worst</u> Things About BP?

Cattle Stud – BP user

> The downside of it it's another job and it's another cost.

> All animals that somebody records a trait for get issued with a series of BP figures, which are very inaccurate and low. Buyers tend to rely on that and don't understand the accuracy.

> If you relied on it totally it is not a fail safe or a guaranteed measure of genetic traits. EBVs are all probability…

Cattle Stud – BP non-user*

> The EBVs don't necessarily reflect what you're looking for - in particular temperament.

> The figures don't relate to the performances of the animals. The birth weights and milk and a whole lot of the EBVs just don't relate to the animals.

> A lot of paperwork and I don't want to do that, I just want to produce good cattle.

Commercial Cattle – BP user

> You don't know the temperament of animal and confirmation of animal, so those things have to go into your assessment of the animal.

> I've always questioned the truthfulness or accuracy of them.

> Some people are obsessed with following just the figures and it's not always right. The theories are wonderful, but you need to put it into practice.

Commercial Cattle – BP non-user

> Don't know if there is a worst thing; you still need a viable animal, can have all the breeding traits you want, but since there's no visual assessment, it's tough.

> Our own hands-on experience and management is the best things for your enterprise; far better than getting too involved in the figures and getting outside people making decisions for you.
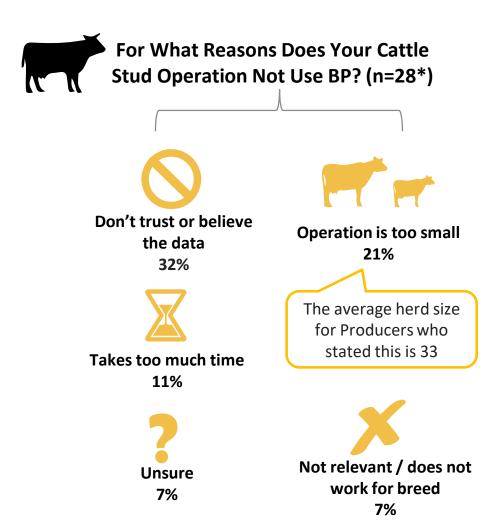
> I don't have an opinion, as no experience with it.
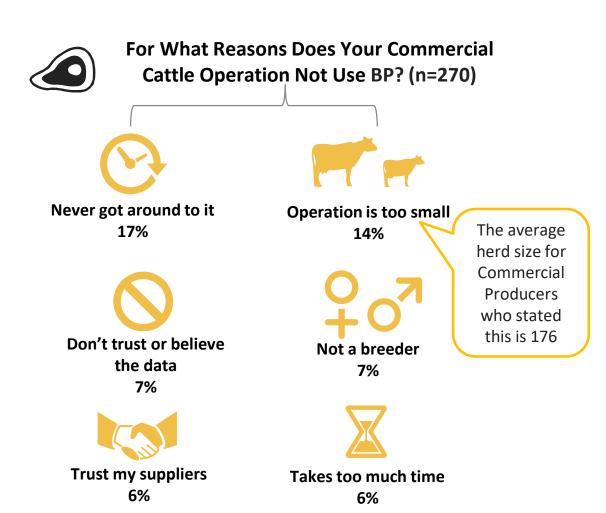
Q20c. What are the <u>worst</u> things about BREEDPLAN for people running businesses like yours?

Base: *Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP user (n=215), Commercial Cattle – BP non-user (n=244).* ***Note:** *Small base size.*

GAME CHANGERS

PERCEPTIONS OF BREEDPLAN
Mistrust, operation size & the *time involved* are key reasons for not using BP

For What Reasons Does Your Cattle Stud Operation Not Use BP? (n=28*)

Don't trust or believe the data
32%

Takes too much time
11%

Unsure
7%

Operation is too small
21%

The average herd size for Producers who stated this is 33

Not relevant / does not work for breed
7%

For What Reasons Does Your Commercial Cattle Operation Not Use BP? (n=270)

Never got around to it
17%

Don't trust or believe the data
7%

Trust my suppliers
6%

Operation is too small
14%

The average herd size for Commercial Producers who stated this is 176

Not a breeder
7%

Takes too much time
6%

Q10b. For what reasons does your operation not use BREEDPLAN information?
***Base:** Cattle Stud – BP non-user (n=28*), Commercial Cattle – BP non-user (n=270). *****Note:** Small base size.*

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GAME CHANGERS

Perceptions of LAMBPLAN

GAME CHANGERS

PERCEPTIONS OF LAMBPLAN
Commercial sheep Producers tend to cite a wider range of LP features

What Can You Tell Me About LP?

Sheep Stud

Feature	LP user (n=95)	LP non-user (n=22*)
*DATABASE	83%	27%
Data to assist decision-making	15%	
Data regarding rams	11%	5%
Data regarding genetics / parentage / pedigree	20%	9%
Database to be used as a tool	20%	
Positive comments	15%	5%
Data regarding growth / weight gain	4%	5%
*OTHER LAMBPLAN	13%	5%
LAMBPLAN	11%	5%
*OTHER	29%	77%
Negative comments	13%	14%
None / nothing / DK / do not use nfi		27%
No comment		9%

Commercial Sheep

Feature	LP user (n=74)	LP non-user (n=241)
*DATABASE	86%	26%
Data to assist decision-making	41%	2%
Data regarding rams	42%	4%
Data regarding genetics / parentage / pedigree	19%	2%
Database to be used as a tool	12%	3%
Positive comments	7%	4%
Data regarding growth / weight gain	11%	4%
*OTHER LAMBPLAN	20%	8%
LAMBPLAN	19%	7%
*OTHER	26%	77%
Negative comments	1%	2%
None / nothing / DK / do not use nfi	7%	51%
No comment		9%

Not coded / shown here as too few said enough on a consistent theme.to warrant charting.

Significantly higher than LP non-user – **Significantly lower** than LP non-user

GAME CHANGERS

The majority of Producers view LP as a *database* (what it *is* not what it *offers*)

What Can You Tell Me About LP?

Sheep Stud – LP user

The integrity of the data is questionable. However, that is the reason we use the Dohne database due to it having full traceability of pedigrees and integrity of the information.

I have used LAMBPLAN to make genetic gains since 1991. I'm happy with the system, but I wish the stock agent and buyer of sheep knew more about it.

Sheep Stud – LP non-user*

Basically it's an estimated numeric value of genetic potential.

Because we have our own separate system for our own breed, we use our own EBVs for our own breed system, so don't know a lot.

We don't use them.

Commercial Sheep – LP user

Keeping the digital stats on their birth weight, weighing weights.

I use those figures as guides and analyse the various figures and use after a visual assessment to make a final decision on which ram to buy. Is a secondary tool.

It's a data recording follow-up to get good use of the EBVs stock particularly the rams I am buying.

Commercial Sheep – LP non-user

It is a tool that is very good for Studs to improve their genetics.
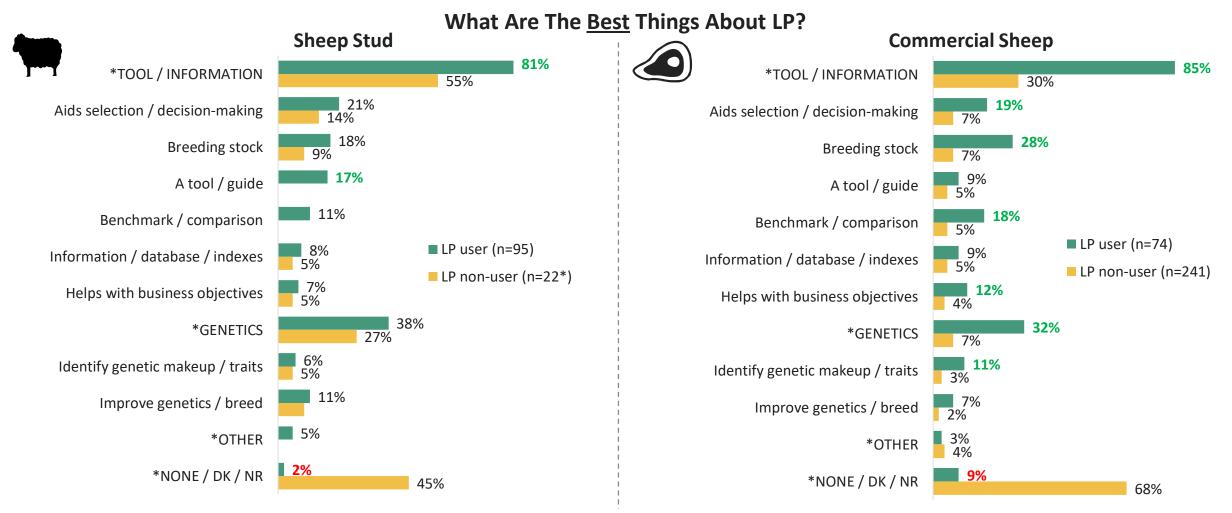
Not really, I don't go into that too much. I think the Studs that you buy off they're the people who are doing that work.

They provide data on type of parameters of performance and potential performances on breeding values.

Q21a. So before we go any further, what can you tell me about LAMBPLAN?
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241).* **Note:** *Small base size.*

GAME CHANGERS

The majority of LP Non-Users don't know what the best things about LP are, which reduces the attractiveness of adopting it

What Are The Best Things About LP?

Sheep Stud

	LP user (n=95)	LP non-user (n=22*)
*TOOL / INFORMATION	**81%**	55%
Aids selection / decision-making	21%	14%
Breeding stock	18%	9%
A tool / guide	**17%**	
Benchmark / comparison	11%	
Information / database / indexes	8%	5%
Helps with business objectives	7%	5%
*GENETICS	38%	27%
Identify genetic makeup / traits	6%	5%
Improve genetics / breed	11%	
*OTHER	5%	
*NONE / DK / NR	**2%**	45%

Commercial Sheep

	LP user (n=74)	LP non-user (n=241)
*TOOL / INFORMATION	**85%**	30%
Aids selection / decision-making	**19%**	7%
Breeding stock	**28%**	7%
A tool / guide	9%	5%
Benchmark / comparison	**18%**	5%
Information / database / indexes	9%	5%
Helps with business objectives	**12%**	4%
*GENETICS	**32%**	7%
Identify genetic makeup / traits	**11%**	3%
Improve genetics / breed	7%	2%
*OTHER	3%	4%
*NONE / DK / NR	**9%**	68%

Q21b. What are the best things about LAMBPLAN for people running businesses like yours?
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

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Significantly higher than LP non-user – *Significantly lower* than LP non-user

GAME CHANGERS

The majority of comments relate to how LP can be a *useful tool*

What Are The <u>Best</u> Things About LP?

Sheep Stud – LP user	Sheep Stud – LP non-user*	Commercial Sheep – LP user	Commercial Sheep – LP non-user

Sheep Stud – LP user

> From a Seedstock Producer's point of view it gives buyers information on your animals through the different traits that they need.

> You're able to asses the value of a sheep you have information about which is not visual.

> Giving us information we can compare with other Studs. And also gives us information to improve our productivity.

Sheep Stud – LP non-user*

> They give you an idea of the animals you are buying and what they are predicted to do.

> It allows you to improve your breeding and hopefully increases the money you make.

> They can go towards getting the best out of your lambs / can pick the best traits, i.e. grow more wool or produce more meat.

Commercial Sheep – LP user

> It's an objective tool for ram selection and adds weight to confidence in ram selection.

> It gives us good guidelines on how the Studs are improving.

> It takes the emphasis away from feeding rams up for sale and more emphasis on genetics merits of the ram. Allows you to put together a team of rams with similar figures but not visually the same.

Commercial Sheep – LP non-user

> It's a guide in your selection process.

> The in-depth information of all the different traits of the animals, the EBVs can push you in a direction of the market you want to target.
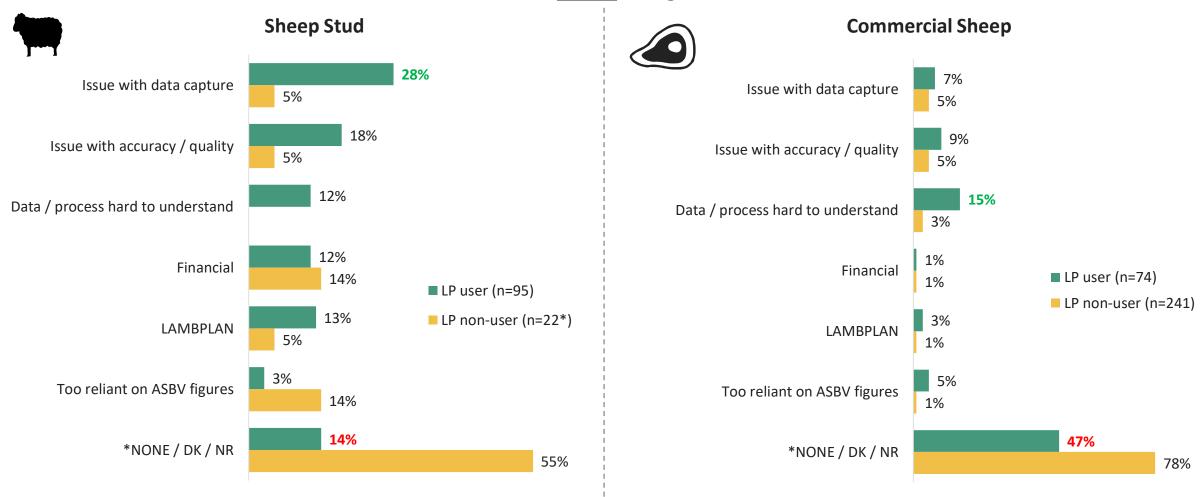
> Supposed to give you the values to compare animals across a flock.

Q21b. What are the <u>best</u> things about LAMBPLAN for people running businesses like yours?
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

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GAME CHANGERS

The common LP problems relate to issues with *accuracy* & *data capture*

What Are The <u>Worst</u> Things About LP?

Sheep Stud

Category	LP user (n=95)	LP non-user (n=22*)
Issue with data capture	**28%**	5%
Issue with accuracy / quality	18%	5%
Data / process hard to understand	12%	
Financial	12%	14%
LAMBPLAN	13%	5%
Too reliant on ASBV figures	3%	14%
*NONE / DK / NR	**14%**	55%

Commercial Sheep

Category	LP user (n=74)	LP non-user (n=241)
Issue with data capture	7%	5%
Issue with accuracy / quality	9%	5%
Data / process hard to understand	**15%**	3%
Financial	1%	1%
LAMBPLAN	3%	1%
Too reliant on ASBV figures	5%	1%
*NONE / DK / NR	**47%**	78%

- LP user (n=95)
- LP non-user (n=22*)
- LP user (n=74)
- LP non-user (n=241)

Q21c. What are the <u>worst</u> things about LAMBPLAN for people running businesses like yours?
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

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Significantly higher than LP non-user – *Significantly lower* than LP non-user

GAME CHANGERS

Data capture, accuracy & understanding are key themes

What Are The <u>Worst</u> Things About LP?

Sheep Stud – LP user	Sheep Stud – LP non-user*	Commercial Sheep – LP user	Commercial Sheep – LP non-user
A bit costly, the whole process is costly, if you're in the system it isolates your genetic selection to only people within the system.	Not relevant to me as I'm not using it, but I think that other people rely on it too much.	If you have no visual appraisal of the lambs, LAMBPLAN does not work.	Trying to take it all in to get what you want out of it the best part out of it.
Not convinced with comparing against Studs.	The figures don't always show up in the sheep, sheep may have real high figures and when you look at him in the paddock he does not look like a sheep.	Sometimes you can find the numbers confusing, as it is a moving scale. May be difficult for some people to follow.	The accuracy of the data collected by individual Studs and the associated ambiguity around that.
The amount of data that you have to put in, the weight scanning is a lot of work involved and you have to pay to get it done.	Sometimes you can get blinded by figures and still need to look at the animal itself.	There's that many figures involved, they can get a bit baffled with that.	I think added workload in the office and increased time to deal with it.

Q21c. What are the <u>worst</u> things about LAMBPLAN for people running businesses like yours?
Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=22*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241). *Note: Small base size.*

GAME CHANGERS

Never getting around to it is a key reason for LP non-use among both types of operations – this indicates that the benefit proposition is not known or too weak, especially when other systems are used

For What Reasons Does Your Sheep Stud Operation Not Use LP? (n=22*)

Use different records system
23%

Never got around to it
14%

Takes too much time
9%

Don't trust or believe the data
9%

Don't know what it is
9%

Not relevant
9%

Other
14%

For What Reasons Does Your Commercial Sheep Operation Not Use LP? (n=241)

Never got around to it
26%

Operation is too small
11%

Not relevant
9%

Use different records system
7%

Trust my suppliers / my customers trust me
7%

Not needed
7%

Not a breeder
6%

Use own judgment
6%

Unsure
6%

GAME CHANGERS

Perceptions of MERINOSELECT

GAME CHANGERS

Half of MS Non-Users struggle to recall anything about MS

What Can You Tell Me About MS?

Sheep Stud

*DATABASE	**94%** / 8%
Data regarding rams	21%
Data to assist decision-making	20%
Data regarding genetics / parentage / pedigree	20%
Data pertains to the wider range of animals in Australia	19%
Provides ASBV / EBV	17%
Database to be used as a tool / guide	17%
Positive comments	16%
Data regarding wool / fleece	6%
*OTHER MERINOSELECT	9%
*OTHER	**15%** / 92%
Don't know	54%
No comment	23%

■ MS user (n=81)
■ MS non-user (n=13*)

Commercial Sheep

*DATABASE	**89%** / 28%
Data regarding rams	**45%** / 3%
Data to assist decision-making	**26%** / 4%
Data regarding genetics / parentage / pedigree	8% / 5%
Data pertains to the wider range of animals in Australia	5% / 2%
Provides ASBV / EBV	**16%** / 1%
Database to be used as a tool / guide	5% / 1%
Positive comments	**5%** / 1%
Data regarding wool / fleece	8%
*OTHER MERINOSELECT	13% / 9%
*OTHER	**18%** / 78%
Don't know	**3%** / 50%
No comment	3% / 8%

■ MS user (n=38)
■ MS non-user (n=230)

Not coded / shown here as too few said enough on a consistent theme.to warrant charting.

Q21a. *So before we go any further, what can you tell me about MERINOSELECT?*
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230).* ***Note:*** *Small base size.*

Significantly higher than MS non-user – **Significantly lower** than MS non-user

GAME CHANGERS

MS is generally viewed as a *helpful database tool*

What Can You Tell Me About MS?

Sheep Stud – MS user	Sheep Stud – MS non-user*	Commercial Sheep – MS user	Commercial Sheep – MS non-user

Sheep Stud – MS user

We use it as a bit of a sales tool for selling rams.

It collects data from all over Australia. It allows us measure our animals to compare with others.

It's a tool, it's not a 'be all or end all'. We have to use visuals as well. ASBV figures are very handy.

Sheep Stud – MS non-user*

All traits and the two that are number of lambs / fertility / traits for Caracas / fat depth / muscle depth / yearly weight / worm egg count / wool.

Don't know much about it don't have much to do with that sort of thing.

Know a little bit / do look at figures.

Commercial Sheep – MS user

It is a way of comparing rams from different breeders across the country to remove environmental effects.

They are informative, don't take everything on board, pick and choose what suits me. Info there if and when I require it.

I use ASBV to select my rams and don't buy rams without ASBV.

Commercial Sheep – MS non-user

MERINOSELECT has a pool of animals with genetic characteristics.

Compares sheep from other flock, tries to standardise. Don't worry much about it.
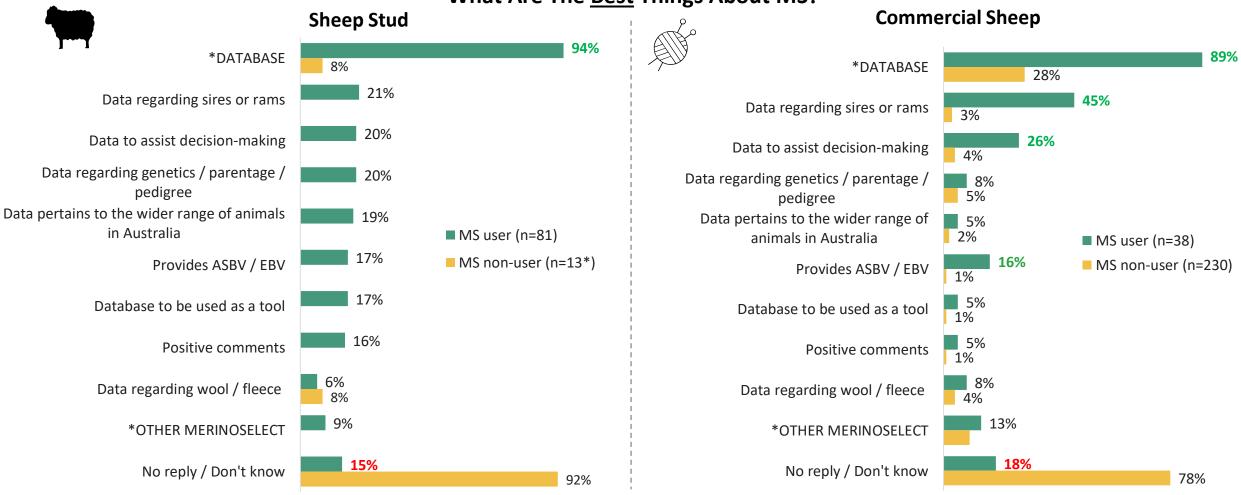
MERINOSELECT has influence in comparing merino genetics on national basis.

Q21a. So before we go any further, what can you tell me about MERINOSELECT?
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230).* ***Note:*** *Small base size.*

GAME CHANGERS

The most commonly-cited benefits of MS are *data regarding rams* & *aiding decision-making*; however, around 16% of users could not cite 'the best thing' about MS

What Are The <u>Best</u> Things About MS?

Sheep Stud

Category	MS user (n=81)	MS non-user (n=13*)
*DATABASE	**94%**	8%
Data regarding sires or rams	21%	
Data to assist decision-making	20%	
Data regarding genetics / parentage / pedigree	20%	
Data pertains to the wider range of animals in Australia	19%	
Provides ASBV / EBV	17%	
Database to be used as a tool	17%	
Positive comments	16%	
Data regarding wool / fleece	6%	8%
*OTHER MERINOSELECT	9%	
No reply / Don't know	**15%**	92%

Commercial Sheep

Category	MS user (n=38)	MS non-user (n=230)
*DATABASE	**89%**	28%
Data regarding sires or rams	**45%**	3%
Data to assist decision-making	**26%**	4%
Data regarding genetics / parentage / pedigree	8%	5%
Data pertains to the wider range of animals in Australia	5%	2%
Provides ASBV / EBV	**16%**	1%
Database to be used as a tool	5%	1%
Positive comments	5%	1%
Data regarding wool / fleece	8%	4%
*OTHER MERINOSELECT	13%	
No reply / Don't know	**18%**	78%

Q21b. What are the <u>best</u> things about MERINOSELECT for people running businesses like yours?
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230). *Note: Small base size.*

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***Significantly higher** than MS non-user – **Significantly lower** than MS non-user*

GAME CHANGERS   Ipsos

The majority of comments relate to how MS can be used for *ram selection & help with decision-making*

What Are The <u>Best</u> Things About MS?

Sheep Stud – MS user	Sheep Stud – MS non-user*	Commercial Sheep – MS user	Commercial Sheep – MS non-user

Sheep Stud – MS user

> The ability to benchmark year on year your improvement and your ability to benchmark against other flock by using the same system.

> It gives you a selection of Studs that may be suitable in your area - what size they are and the potential of what they may be able to do in your environment.

Sheep Stud – MS non-user*

> If there are lots of animals, it may be useful.

> If you go armed with this info you are able to eliminate half the catalogue. It narrows things down in terms of buying rams, etc.

> None – don't use it.

Commercial Sheep – MS user

> It's another tool to aid in the selection of sheep that we keep for breeding.

> Gives you a bit more information when selecting your ram; it gives you more information that you need when selecting.

> Your making decisions based on statistical evidence rather than just visual appearance.

Commercial Sheep – MS non-user

> Having access to the information is important. Gives a wider spectrum of choices and able to make better decisions.

> I'm not involved, so I don't know.

> If you buy, it's useful to compare different animals.
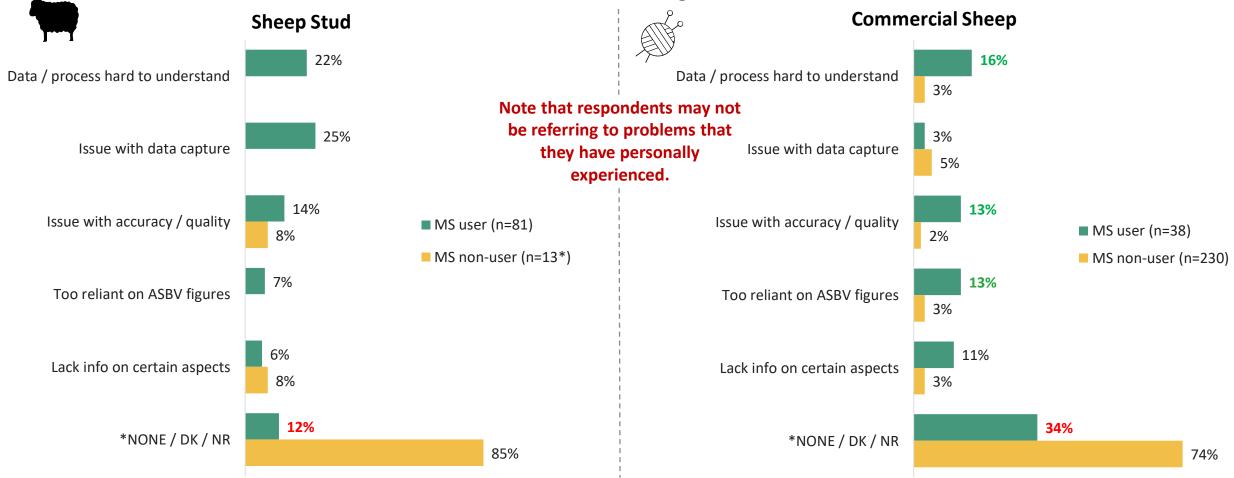
> To improve the genetics and get the flock growing, the correct path for wool buyers and meat buyers.

GAME CHANGERS

Understanding the process, *data capture difficulties* & *data accuracy* are the main issues of MS; most Non-Users could not cite anything, so barriers to adoption may be low

What Are The <u>Worst</u> Things About MS?

Sheep Stud

Category	MS user	MS non-user
Data / process hard to understand	22%	
Issue with data capture	25%	
Issue with accuracy / quality	14%	8%
Too reliant on ASBV figures	7%	
Lack info on certain aspects	6%	8%
*NONE / DK / NR	**12%**	85%

■ MS user (n=81)
■ MS non-user (n=13*)

Note that respondents may not be referring to problems that they have personally experienced.

Commercial Sheep

Category	MS user	MS non-user
Data / process hard to understand	**16%**	3%
Issue with data capture	3%	5%
Issue with accuracy / quality	**13%**	2%
Too reliant on ASBV figures	**13%**	3%
Lack info on certain aspects	11%	3%
*NONE / DK / NR	**34%**	74%

■ MS user (n=38)
■ MS non-user (n=230)

Q21c. What are the <u>worst</u> things about MERINOSELECT for people running businesses like yours?
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230). *Note: Small base size.*

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Significantly higher than MS non-user – *Significantly lower* than MS non-user

GAME CHANGERS

Data capture, accuracy & understanding are key problems

What Are The <u>Worst</u> Things About MS?

Sheep Stud – MS user	Sheep Stud – MS non-user*	Commercial Sheep – MS user	Commercial Sheep – MS non-user

Sheep Stud – MS user

The fact that you have to collect the data, need people switched on to do it. It's easy to make mistakes – you need good staff who know what they are doing.

It is very hard to find out what you need to do to get the accurate data back, understanding and asking questions. Hard to find out what needs to be done, need to use a service provider and even they struggle. The accuracy of the data is tied to the pedigrees.

Sheep Stud – MS non-user*

My past experience with using the figures is there's often things that come that aren't expected. They miss something and are not completely accurate.

One of the things is the only way [wool] length and density are the most important factors. Jim Watts physically counts the number of fibres in a wool / sheep's hide. If ASBVs could include density.

Commercial Sheep – MS user

Making sure the data is accurate and the use of the data is going to accurately give us a measured financial gain.

You can lose the sight of the figures and get carried away instead of looking at the characteristics.

It is very complicated to come to grips with. When I am talking to other people I feel I am an expert, but I know I only know a little. It is very off-putting.

Commercial Sheep – MS non-user

Don't get involved in the programmes.

I suppose the worst thing is more paperwork and more work involved.

Maybe there's too many numbers and are confusing, so people don't really understand them.

Some have bought rams online just using the figures and have had disasters.

Q21c. What are the <u>worst</u> things about MERINOSELECT for people running businesses like yours?
Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=230). *Note: Small base size.*

GAME CHANGERS

Never getting around to using MS is a main reason for non-use among both types of operations, indicating that the proposition is not compelling enough

For What Reasons Does Your Sheep Stud Operation Not Use MS? (n=13*)

Never got around to it
23%

Costs too much money
15%

For What Reasons Does Your Commercial Sheep Operation Not Use MS? (n=230)

Never got around to it
28%

Trust my suppliers / my customers trust me
17%

Use different records system
10%

Use own judgment
7%

Not relevant / does not work for breed
6%

Don't trust or believe the data
5%

Q10b. For what reasons does your operation not use MERINOSELECT information?
Base: Sheep Stud – MS non-user (n=13), Commercial Sheep – MS non-user (n=230). *Note: Small base size.*

GAME CHANGERS

Key Learnings: Trust & Perceptions of the PLANs

1. Users trust the PLANs, but Studs' **trust is under-performing a**nd Commercial Users' Trust is 'Blind'. Non-Users seldom know enough to even start trusting.

2. Users and Non-Users say similar things, just to different degrees:
   "A genetics database to aid decision-making."

3. Genetics management is mainly related to **trait selection** rather than *avoidance.*

4. Biggest complaints concern **data inaccuracy / non-transparency** and **the data capture / entry effort required**.

5. Main reasons for Non-Use concern **data distrust** and a **time-benefit imbalance** (esp. for smaller operations).

GAME CHANGERS

Training & Extension Resources

GAME CHANGERS

Ipsos
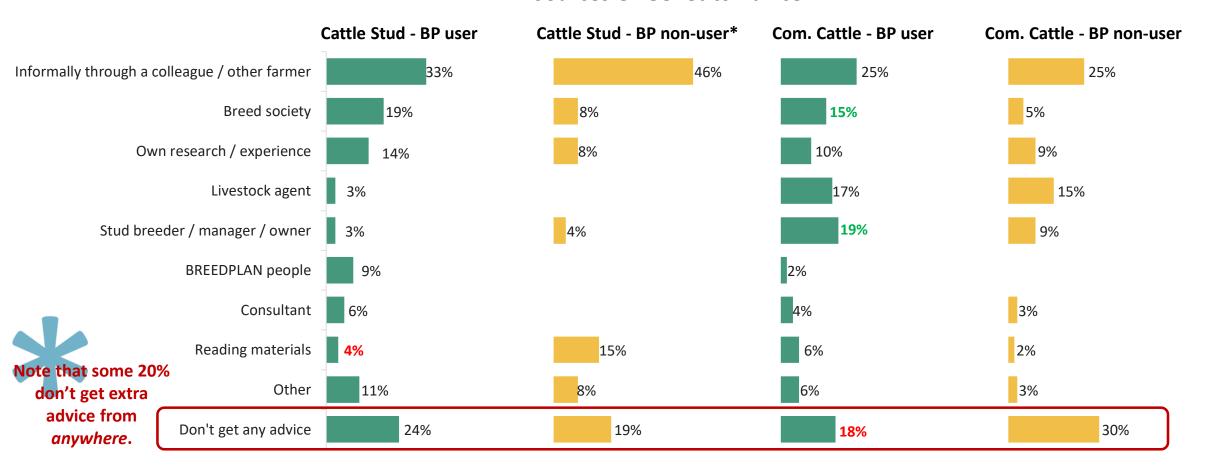
The most popular sources of genetics advice are *other producers, breed societies, livestock agents & breeders*

Sources Of Genetics Advice

	Cattle Stud - BP user	Cattle Stud - BP non-user*	Com. Cattle - BP user	Com. Cattle - BP non-user
Informally through a colleague / other farmer	33%	46%	25%	25%
Breed society	19%	8%	**15%**	5%
Own research / experience	14%	8%	10%	9%
Livestock agent	3%		17%	15%
Stud breeder / manager / owner	3%	4%	**19%**	9%
BREEDPLAN people	9%		2%	
Consultant	6%		4%	3%
Reading materials	**4%**	15%	6%	2%
Other	11%	8%	6%	3%
Don't get any advice	24%	19%	**18%**	30%

Note that some 20% don't get extra advice from *anywhere*.

Q31. Who do you usually get your genetics advice from?
Base: *Cattle Stud – BP user (n=544), Cattle Stud – BP non-user (n=26*), Commercial Cattle – BP user (n=210), Commercial Cattle – BP non-user (n=220) – note reduced bases.* ***Note:** Small base size.*

Significantly higher than BP non-user – Significantly lower than BP non-user

GAME CHANGERS
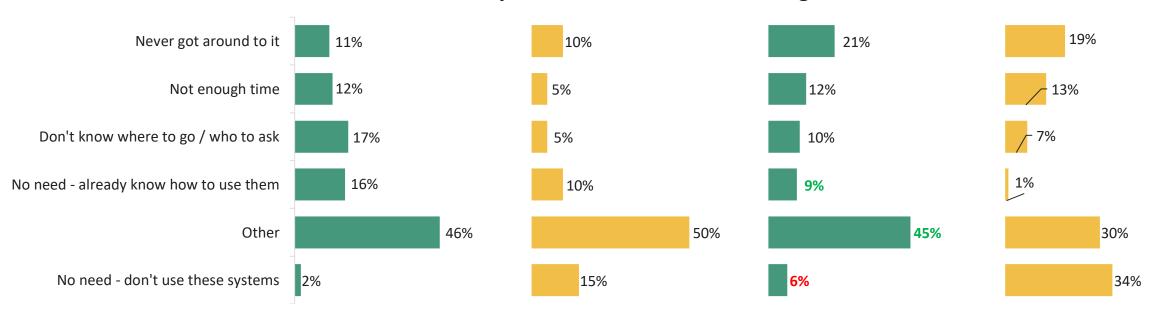
While the low levels of training amongst Non-Users is understandable, 39% of Stud Users have not had training, citing a *lack of need* or *info*

Have You Had Proper BP Training Or Guidance?

	Cattle Stud - BP user	Cattle Stud - BP non-user*	Com. Cattle - BP user	Com. Cattle - BP non-user
No training / Unsure ➡	**39%**	**77%**	**65%**	**87%**

Why Have You Not Had BP Training?

	Cattle Stud - BP user	Cattle Stud - BP non-user*	Com. Cattle - BP user	Com. Cattle - BP non-user
Never got around to it	11%	10%	21%	19%
Not enough time	12%	5%	12%	13%
Don't know where to go / who to ask	17%	5%	10%	7%
No need - already know how to use them	16%	10%	**9%**	1%
Other	46%	50%	**45%**	30%
No need - don't use these systems	2%	15%	**6%**	34%

Q32. Have you ever had proper training or guidance in how to use BREEDPLAN information such as EBVs to make your breeding or purchase decisions? / *Q34b.* For what reasons have you not had any proper training or guidance?
Base: Users who haven't had training from Q32: Cattle Stud – BP user (n=215), Cattle Stud – BP non-user (n=20*), Commercial Cattle – BP user (n=136), Commercial Cattle – BP non-user (n=192) – note reduced bases. *Note:* Small base size.

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Significantly higher than BP non-user – **Significantly lower** than BP non-user

GAME CHANGERS
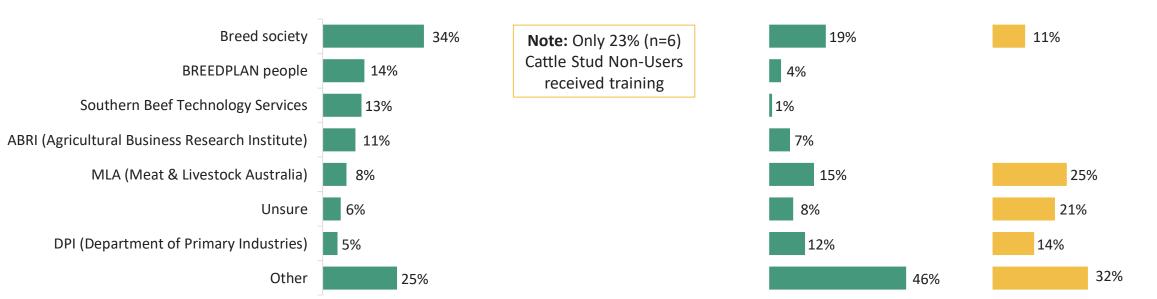
Breed societies were the most commonly used BP training sources

Have You Had Proper BP Training Or Guidance?

	Cattle Stud - BP user	Cattle Stud - BP non-user*	Com. Cattle - BP user	Com. Cattle - BP non-user
Yes ➜	**61%**	**23%**	**35%**	**13%**

Who Provided The Training?

	Cattle Stud - BP user		Com. Cattle - BP user	Com. Cattle - BP non-user
Breed society	34%		19%	11%
BREEDPLAN people	14%		4%	
Southern Beef Technology Services	13%		1%	
ABRI (Agricultural Business Research Institute)	11%		7%	
MLA (Meat & Livestock Australia)	8%		15%	25%
Unsure	6%		8%	21%
DPI (Department of Primary Industries)	5%		12%	14%
Other	25%		46%	32%

Note: Only 23% (n=6) Cattle Stud Non-Users received training

Q32. Have you ever had proper training or guidance in how to use BREEDPLAN information such as EBVs to make your breeding or purchase decisions? / Q33. Who provided that training or guidance?

Base: Those who have received training from Q32: Cattle Stud – BP user (n=329), Cattle Stud – BP non-user (n=6), Commercial Cattle – BP user (n=74), Commercial Cattle – BP non-user (n=28) – note reduced bases. *Note: Small base size.*
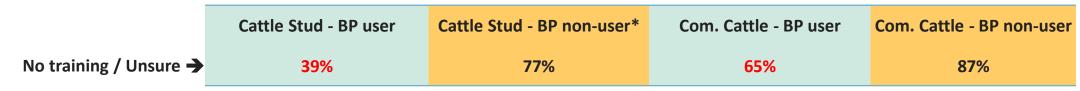
Significantly higher than BP non-user – *Significantly lower* than BP non-user

GAME CHANGERS
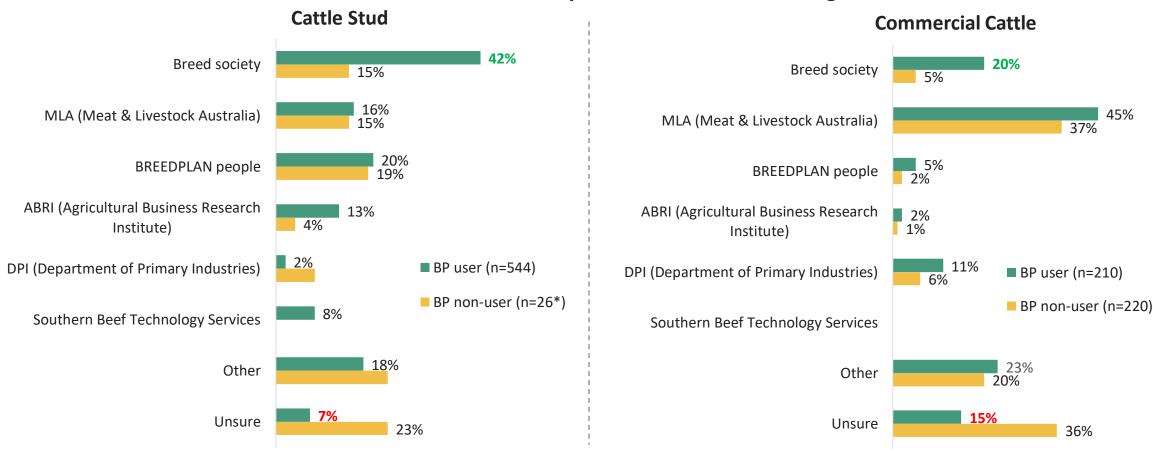
Breed societies are expected to provide training for BP-using Studs; others are just as likely to expect *MLA* to provide help

Who Do You Expect To Provide BP Training?

Cattle Stud

	BP user (n=544)	BP non-user (n=26*)
Breed society	**42%**	15%
MLA (Meat & Livestock Australia)	16%	15%
BREEDPLAN people	20%	19%
ABRI (Agricultural Business Research Institute)	13%	4%
DPI (Department of Primary Industries)	2%	
Southern Beef Technology Services	8%	
Other	18%	18%
Unsure	**7%**	23%

Commercial Cattle

	BP user (n=210)	BP non-user (n=220)
Breed society	**20%**	5%
MLA (Meat & Livestock Australia)	45%	37%
BREEDPLAN people	5%	2%
ABRI (Agricultural Business Research Institute)	2%	1%
DPI (Department of Primary Industries)	11%	6%
Southern Beef Technology Services		
Other	23%	20%
Unsure	**15%**	36%

© 2016 Ipsos.   *Significantly higher than BP non-user – Significantly lower than BP non-user*

GAME CHANGERS

The most popular way for sheep meat Producers to gain genetics advice is through informal methods such as *colleagues, agents & breeders*

Sources Of Genetics Advice

	Sheep Stud - LP user	Sheep Stud - LP non-user*	Com. Sheep - LP user	Com. Sheep - LP non-user
Informally through a colleague / other farmer	31%	48%	24%	18%
Livestock agent		19%	26%	22%
Stud breeder / manager / owner	3%	5%	30%	19%
Own research / experience	13%	14%	15%	8%
Sheep Genetics / LAMBPLAN people	20%	10%	1%	
Consultant	5%	5%	8%	3%
Other	4%	14%	**4%**	8%
Don't get any advice	29%	10%	**12%**	25%

Q31. *Who do you usually get your genetics advice from?*

Base: *Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=21*), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241) – note reduced bases.* ***Note:** *Small base size.*

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Significantly higher than LP non-user – *Significantly lower* than LP non-user

GAME CHANGERS

Those who have not had LP training say it's because they *never got around to it* or *don't have enough time* – such reasons generally reflect a lack of interest

Have You Had Proper LP Training Or Guidance?

	Sheep Stud - LP user*	Sheep Stud - LP non-user*	Com. Sheep - LP user	Com. Sheep - LP non-user
No training / Unsure ➜	**26%**	**71%**	**54%**	**85%**

Why Have You Not Had LP Training?

	Sheep Stud - LP user*	Sheep Stud - LP non-user*	Com. Sheep - LP user	Com. Sheep - LP non-user
Never got around to it	8%	20%	30%	17%
Not enough time	16%	7%	15%	8%
Don't know where to go / who to ask	12%		10%	6%
Training was at the wrong place / too far	16%	13%	10%	5%
Other	28%	47%	38%	47%
No need - don't use these systems		20%	8%	23%

Q32. Have you ever had proper training or guidance in how to use LAMBPLAN information such as ASBVs to make your breeding or purchase decisions? / Q34b. For what reasons have you not had any proper training or guidance?
Base: Users who haven't had training from Q32: Sheep Stud – LP user (n=24), Sheep Stud – LP non-user (n=15*), Commercial Sheep – LP user (n=40), Commercial Sheep – LP non-user (n=190) – note reduced bases. *Note: Small base size.*
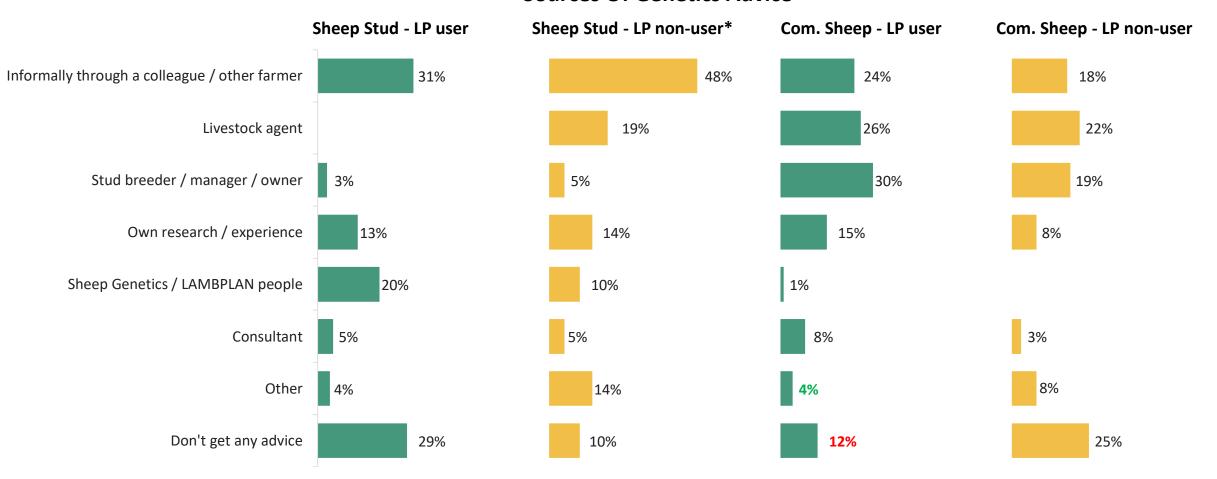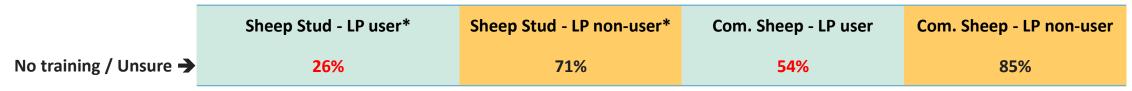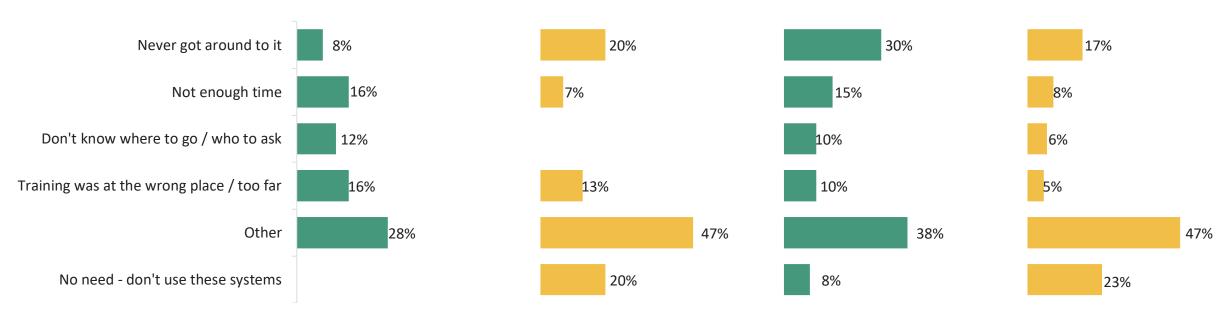
Significantly higher than LP non-user – Significantly lower than LP non-user

GAME CHANGERS
Ipsos
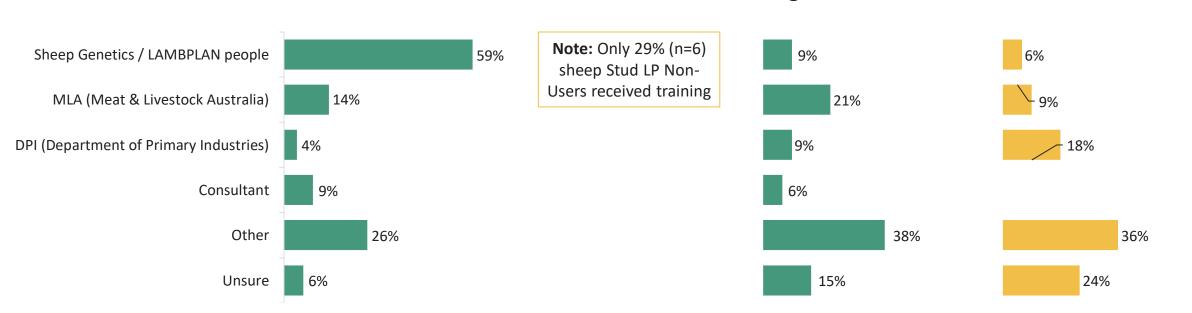
Sheep Genetics & LAMBPLAN staff are the most common LP trainers

Have You Had Proper LP Training Or Guidance?

	Sheep Stud - LP user	Sheep Stud - LP non-user*	Com. Sheep - LP user	Com. Sheep - LP non-user
Yes ➜	**61%**	**23%**	**35%**	**13%**

Who Provided The Training?

	Sheep Stud - LP user	Com. Sheep - LP user	Com. Sheep - LP non-user
Sheep Genetics / LAMBPLAN people	59%	9%	6%
MLA (Meat & Livestock Australia)	14%	21%	9%
DPI (Department of Primary Industries)	4%	9%	18%
Consultant	9%	6%	
Other	26%	38%	36%
Unsure	6%	15%	24%

Note: Only 29% (n=6) sheep Stud LP Non-Users received training

Q32. Have you ever had proper training or guidance in how to use LAMBPLAN information such as ASBVs to make your breeding or purchase decisions? / Q33. Who provided that training or guidance?

Base: *Those who have received training from Q32: Sheep Stud – LP user (n=70), Sheep Stud – LP non-user (n=6*), Commercial Sheep – LP user (n=34), Commercial Sheep – LP non-user (n=33) – note reduced bases. ***Note:** Small base size.*

Significantly higher than LP non-user – *Significantly lower* than LP non-user

GAME CHANGERS

Sheep Genetics are expected to provide training for Studs, while Commercial farmers expect to go to *MLA*

Who Do You Expect To Provide LP Training?

Sheep Stud

MLA (Meat & Livestock Australia)	LP user 14% / LP non-user 24%
Sheep Genetics / LAMBPLAN people	LP user **68%** / LP non-user 24%
DPI (Department of Primary Industries)	LP user 1% / LP non-user 5%
Agent / livestock agent	LP user 1% / LP non-user 5%
Consultant	LP user 4%
Other	LP user **13%** / LP non-user 43%
Unsure	LP user 7% / LP non-user 10%

■ LP user (n=95)
■ LP non-user (n=21*)

Commercial Sheep

MLA (Meat & Livestock Australia)	LP user **50%** / LP non-user 37%
Sheep Genetics / LAMBPLAN people	LP user 7% / LP non-user 5%
DPI (Department of Primary Industries)	LP user 9% / LP non-user 8%
Agent / livestock agent	LP user 5% / LP non-user 7%
Consultant	LP user **11%** / LP non-user 2%
Other	LP user 22% / LP non-user 23%
Unsure	LP user **16%** / LP non-user 32%

■ LP user (n=74)
■ LP non-user (n=241)

Q35. If you wanted to get more training or guidance, who would you expect to provide it?
Base: Sheep Stud – LP user (n=95), Sheep Stud – LP non-user (n=21), Commercial Sheep – LP user (n=74), Commercial Sheep – LP non-user (n=241) – note reduced bases. *Note: Small base size.*
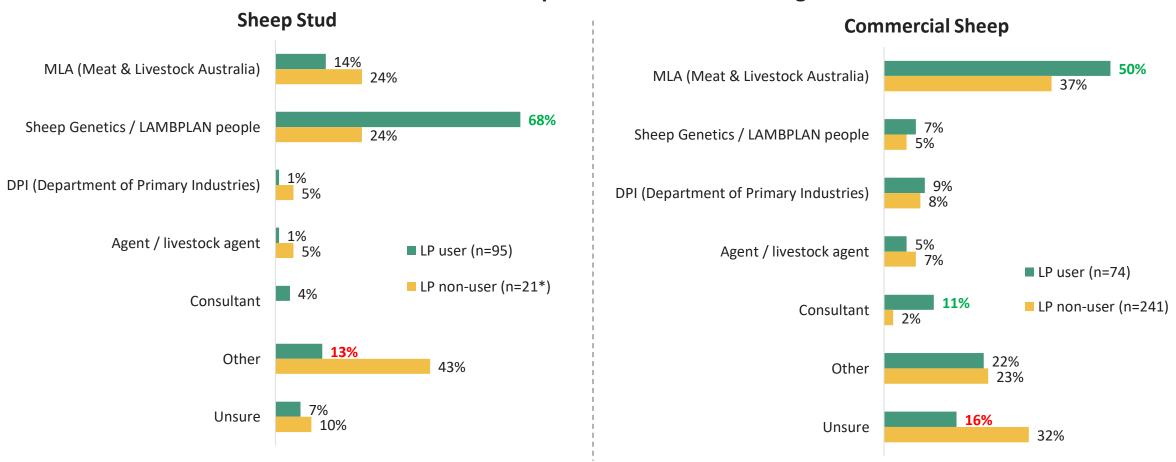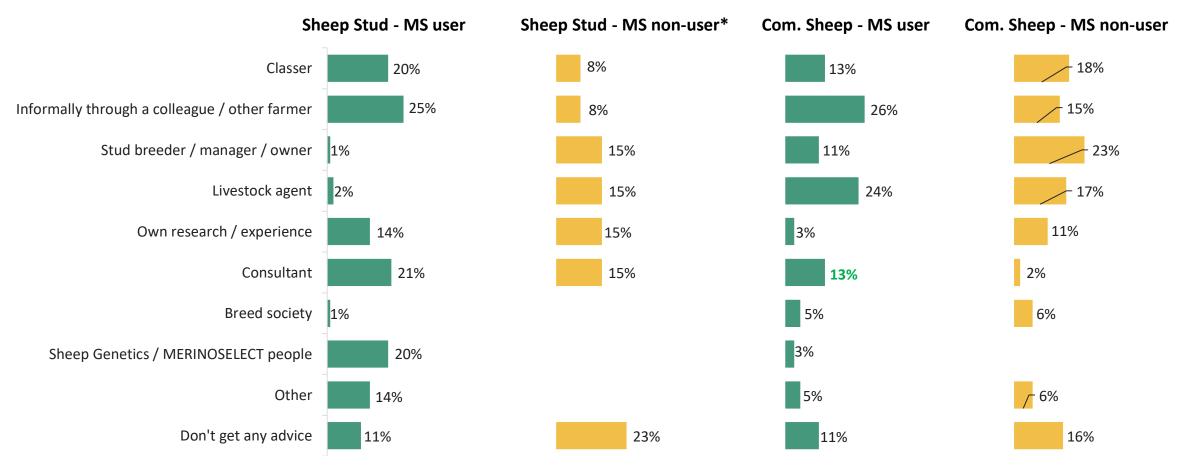
Significantly higher than LP non-user – *Significantly lower* than LP non-user

GAME CHANGERS

The most popular ways for merino Producers to get genetics advice are through *classers, breeders, agents* & *other informal methods*

Sources Of Genetics Advice

	Sheep Stud - MS user	Sheep Stud - MS non-user*	Com. Sheep - MS user	Com. Sheep - MS non-user
Classer	20%	8%	13%	18%
Informally through a colleague / other farmer	25%	8%	26%	15%
Stud breeder / manager / owner	1%	15%	11%	23%
Livestock agent	2%	15%	24%	17%
Own research / experience	14%	15%	3%	11%
Consultant	21%	15%	13%	2%
Breed society	1%		5%	6%
Sheep Genetics / MERINOSELECT people	20%		3%	
Other	14%		5%	6%
Don't get any advice	11%	23%	11%	16%

Q31. Who do you usually get your genetics advice from?
Base: *Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=210) – note reduced bases.* ***Note:** *Small base size.*
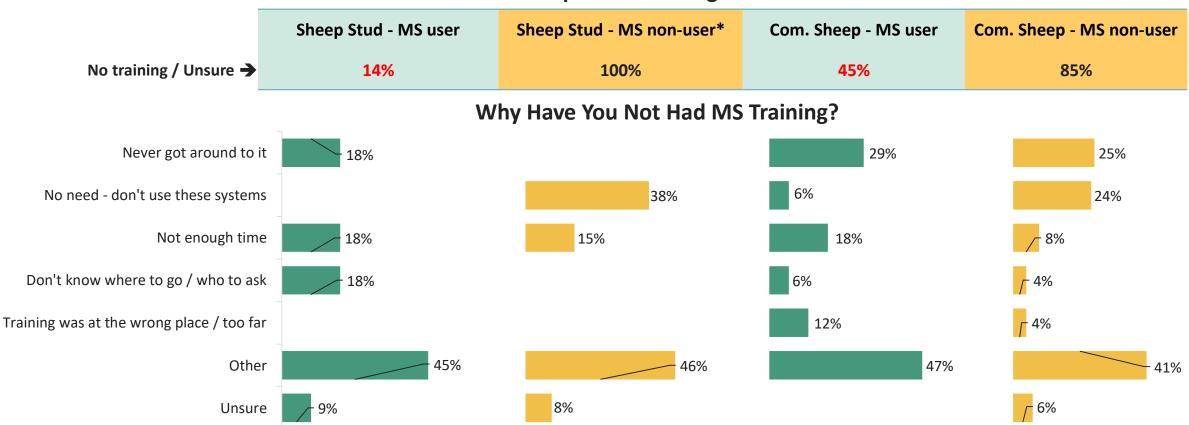
Significantly higher *than MS non-user –* **Significantly lower** *than MS non-user*

GAME CHANGERS

The majority of MS Users have received training, the most common reasons for a lack of training being *general disinterest / motivation*

Have You Had Proper MS Training Or Guidance?

	Sheep Stud - MS user	Sheep Stud - MS non-user*	Com. Sheep - MS user	Com. Sheep - MS non-user
No training / Unsure →	**14%**	**100%**	**45%**	**85%**

Why Have You Not Had MS Training?

	Sheep Stud - MS user	Sheep Stud - MS non-user*	Com. Sheep - MS user	Com. Sheep - MS non-user
Never got around to it	18%		29%	25%
No need - don't use these systems		38%	6%	24%
Not enough time	18%	15%	18%	8%
Don't know where to go / who to ask	18%		6%	4%
Training was at the wrong place / too far			12%	4%
Other	45%	46%	47%	41%
Unsure	9%	8%		6%

Q32. Have you ever had proper training or guidance in how to use MERINOSELECT information such as ASBVs to make your breeding or purchase decisions? / Q34b. For what reasons have you not had any proper training or guidance?

Base: Users who haven't had training from Q32: Sheep Stud – MS user (n=11*), Sheep Stud – MS non-user (n=13*), Commercial Sheep – MS user (n=17*), Commercial Sheep – MS non-user (n=180) – note reduced bases. *Note: Small base size.*

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Significantly higher than MS non-user – Significantly lower than MS non-user
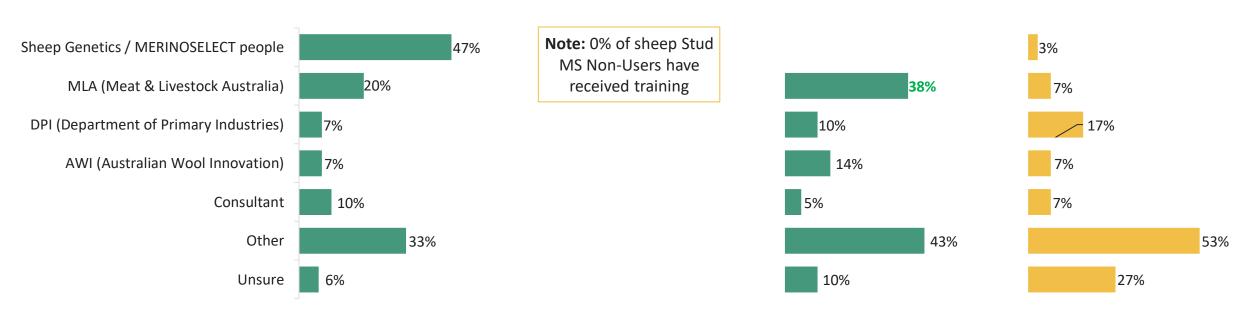
GAME CHANGERS

Sheep Genetics & MLA are the most common trainers, but there is a large number using alternative informal sources

Have You Had Proper MS Training Or Guidance?

	Sheep Stud - MS user	Sheep Stud - MS non-user*	Com. Sheep - MS user	Com. Sheep - MS non-user
Yes ➜	**86%**	**0%**	**55%**	**14%**

Who Provided The Training?

	Sheep Stud - MS user	Com. Sheep - MS user	Com. Sheep - MS non-user
Sheep Genetics / MERINOSELECT people	47%		3%
MLA (Meat & Livestock Australia)	20%	**38%**	7%
DPI (Department of Primary Industries)	7%	10%	17%
AWI (Australian Wool Innovation)	7%	14%	7%
Consultant	10%	5%	7%
Other	33%	43%	53%
Unsure	6%	10%	27%

Note: 0% of sheep Stud MS Non-Users have received training

Q32. Have you ever had proper training or guidance in how to use MERINOSELECT information such as ASBVs to make your breeding or purchase decisions? / Q33. Who provided that training or guidance?
Base: *Those who have received training from Q32: Sheep Stud – MS user (n=70), Commercial Sheep – MS user (n=21*), Commercial Sheep – MS non-user (n=30) – note reduced bases. *Note: Small base size.*
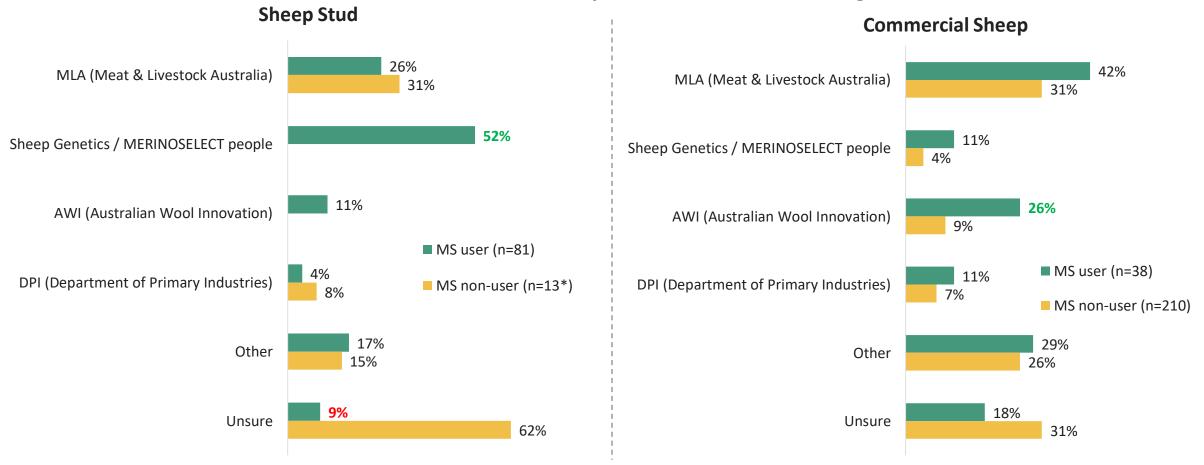
© 2016 Ipsos. Significantly **higher** than MS non-user – Significantly **lower** than MS non-user

GAME CHANGERS

Sheep Genetics & MLA are the most commonly-cited training sources, but large proportions could not name who they would seek MS training from

Who Do You Expect To Provide MS Training?

Sheep Stud

	MS user (n=81)	MS non-user (n=13*)
MLA (Meat & Livestock Australia)	26%	31%
Sheep Genetics / MERINOSELECT people	52%	—
AWI (Australian Wool Innovation)	11%	—
DPI (Department of Primary Industries)	4%	8%
Other	17%	15%
Unsure	9%	62%

Commercial Sheep

	MS user (n=38)	MS non-user (n=210)
MLA (Meat & Livestock Australia)	42%	31%
Sheep Genetics / MERINOSELECT people	11%	4%
AWI (Australian Wool Innovation)	26%	9%
DPI (Department of Primary Industries)	11%	7%
Other	29%	26%
Unsure	18%	31%

Q35. If you wanted to get more training or guidance, who would you expect to provide it?

Base: Sheep Stud – MS user (n=81), Sheep Stud – MS non-user (n=13), Commercial Sheep – MS user (n=38), Commercial Sheep – MS non-user (n=210) – note reduced bases. *Note: Small base size.*

Significantly higher than MS non-user – **Significantly lower** than MS non-user

GAME CHANGERS
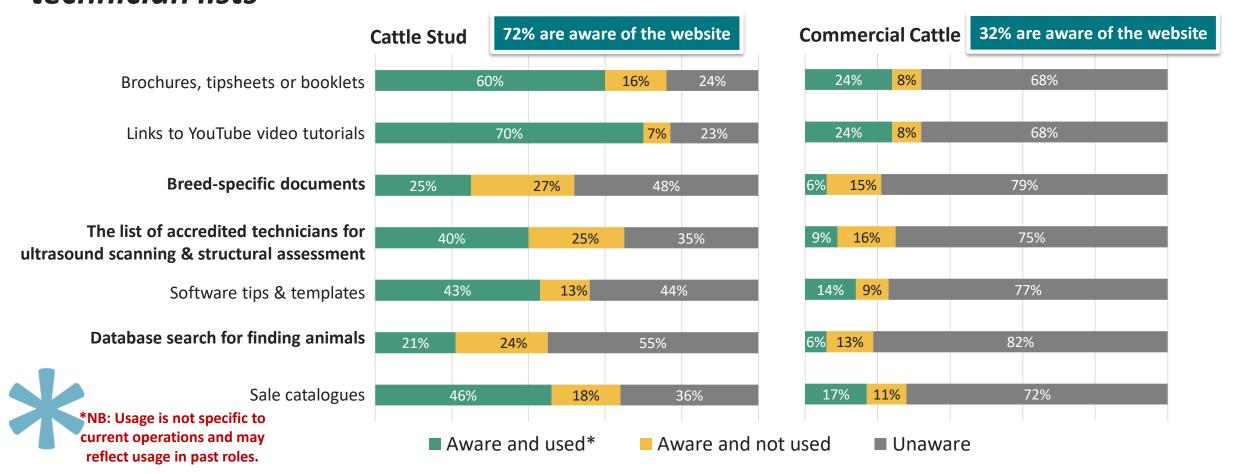
Website Usage

GAME CHANGERS
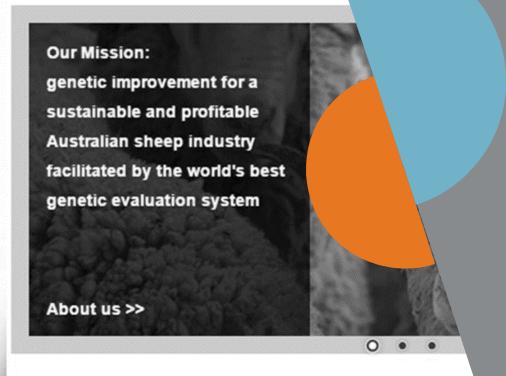
Commercial cattle Producers have a low awareness of the BP website & its components; most usage focuses on *tips*, *tutorials*, *sales catalogues & technician lists*

Cattle Stud | **72% are aware of the website** |

Commercial Cattle | **32% are aware of the website** |

Feature	Cattle Stud — Aware and used*	Aware and not used	Unaware	Commercial Cattle — Aware and used*	Aware and not used	Unaware
Brochures, tipsheets or booklets	60%	16%	24%	24%	8%	68%
Links to YouTube video tutorials	70%	7%	23%	24%	8%	68%
Breed-specific documents	25%	27%	48%	6%	15%	79%
The list of accredited technicians for ultrasound scanning & structural assessment	40%	25%	35%	9%	16%	75%
Software tips & templates	43%	13%	44%	14%	9%	77%
Database search for finding animals	21%	24%	55%	6%	13%	82%
Sale catalogues	46%	18%	36%	17%	11%	72%

■ Aware and used*   ■ Aware and not used   ■ Unaware

*NB: Usage is not specific to current operations and may reflect usage in past roles.

Q36. *Next I'm going to read out some features that you may or may not have used on the BREEDPLAN website, including the MateSel part of it. For each one, let me know if you were aware of it and if so, whether you have used it or not.*
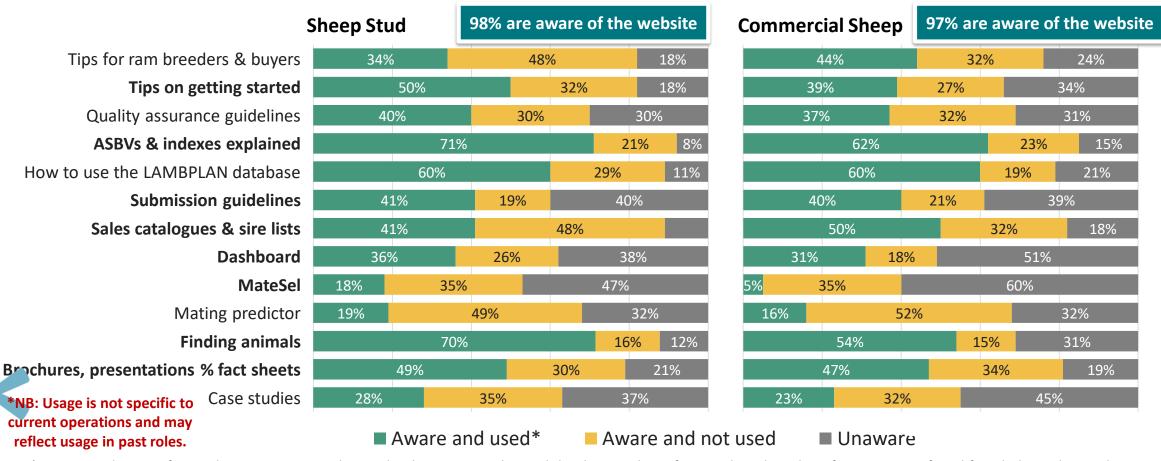
Base: *Those from the BREEDPLAN member listing database or the MLA members sample file: Cattle Stud (n=443), Commercial Cattle (n=600)*

GAME CHANGERS

Most sheep Producers are aware of the LP website whether they use it or not; usage focuses on *tips, help & factsheets*, indicating that users often need extra explanations & guidance on using the PLANs / websites

Sheep Stud

98% are aware of the website

Commercial Sheep

97% are aware of the website

Feature	Sheep Stud — Aware and used*	Aware and not used	Unaware	Commercial Sheep — Aware and used*	Aware and not used	Unaware
Tips for ram breeders & buyers	34%	48%	18%	44%	32%	24%
Tips on getting started	50%	32%	18%	39%	27%	34%
Quality assurance guidelines	40%	30%	30%	37%	32%	31%
ASBVs & indexes explained	71%	21%	8%	62%	23%	15%
How to use the LAMBPLAN database	60%	29%	11%	60%	19%	21%
Submission guidelines	41%	19%	40%	40%	21%	39%
Sales catalogues & sire lists	41%	48%		50%	32%	18%
Dashboard	36%	26%	38%	31%	18%	51%
MateSel	18%	35%	47%	5%	35%	60%
Mating predictor	19%	49%	32%	16%	52%	32%
Finding animals	70%	16%	12%	54%	15%	31%
Brochures, presentations % fact sheets	49%	30%	21%	47%	34%	19%
Case studies	28%	35%	37%	23%	32%	45%

■ Aware and used* ■ Aware and not used ■ Unaware

*NB: Usage is not specific to current operations and may reflect usage in past roles.

Q37. Next I'm going to read out some features that you may or may not have used on the LAMBPLAN website, including the MateSel part of it. For each one, let me know if you were aware of it and if so, whether you have used it or not.
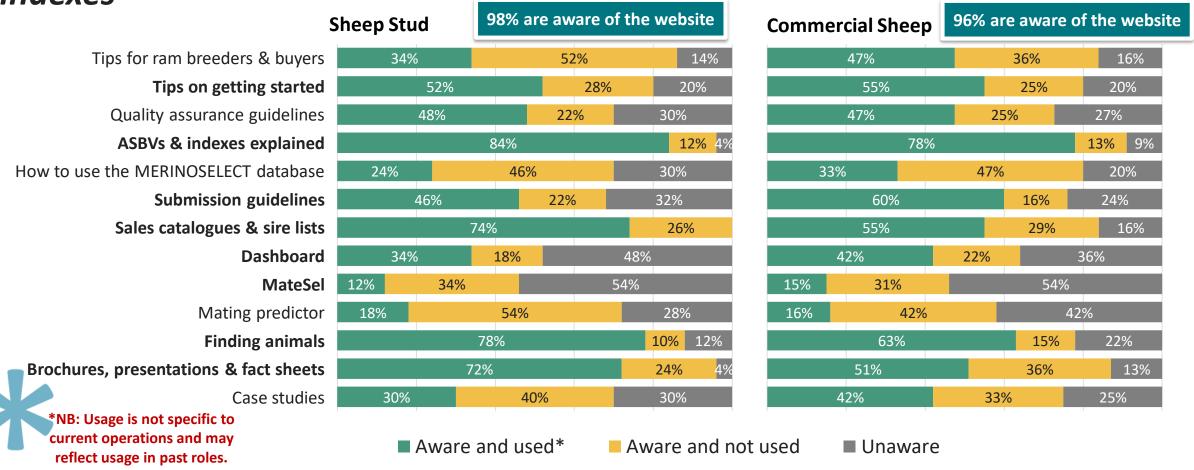
Base: Those from the sheep database listed as LP users: Sheep Stud (n=80), Commercial Sheep (n=62)

GAME CHANGERS

Most sheep Producers are aware of the MS website whether they use it or not; usage focuses on *tips, help & factsheets*, with many seeking *help on ASBVs & indexes*

Sheep Stud

98% are aware of the website

Commercial Sheep

96% are aware of the website

Feature	Sheep Stud: Aware and used*	Aware and not used	Unaware	Commercial Sheep: Aware and used*	Aware and not used	Unaware
Tips for ram breeders & buyers	34%	52%	14%	47%	36%	16%
Tips on getting started	52%	28%	20%	55%	25%	20%
Quality assurance guidelines	48%	22%	30%	47%	25%	27%
ASBVs & indexes explained	84%	12%	4%	78%	13%	9%
How to use the MERINOSELECT database	24%	46%	30%	33%	47%	20%
Submission guidelines	46%	22%	32%	60%	16%	24%
Sales catalogues & sire lists	74%	26%		55%	29%	16%
Dashboard	34%	18%	48%	42%	22%	36%
MateSel	12%	34%	54%	15%	31%	54%
Mating predictor	18%	54%	28%	16%	42%	42%
Finding animals	78%	10%	12%	63%	15%	22%
Brochures, presentations & fact sheets	72%	24%	4%	51%	36%	13%
Case studies	30%	40%	30%	42%	33%	25%

*NB: Usage is not specific to current operations and may reflect usage in past roles.

■ Aware and used*   ■ Aware and not used   ■ Unaware

Q37. *Next I'm going to read out some features that you may or may not have used on the MERINOSELECT website, including the MateSel part of it. For each one, let me know if you were aware of it and if so, whether you have used it or not.*

Base: *Those from the sheep database listed as MS users: Sheep Stud (n=51), Commercial Sheep (n=55)*

GAME CHANGERS

Key Learnings: Training & Extension Resources

1. **Informal information sources still predominate** (also higher for accessibility and cost), followed by breed societies and MLA.

2. **Lack of motivation** is the main reason for lack of formal training.

3. Go-to **trainers** largely felt to be programme suppliers or MLA, but many use informal connections.

4. Website usage varies, but appears to be generally underused (ref: lack of motivation).

   - BP website awareness is very low amongst Commercial cattle Producers, whereas the Sheep Genetics website has higher degrees of awareness and usage amongst both MS / LP Users and Non-Users.

   - The most commonly-used sections are the *tips, tutorials, factsheets, sales catalogues* and *technicians*.

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Achieving Desired Behaviour Change

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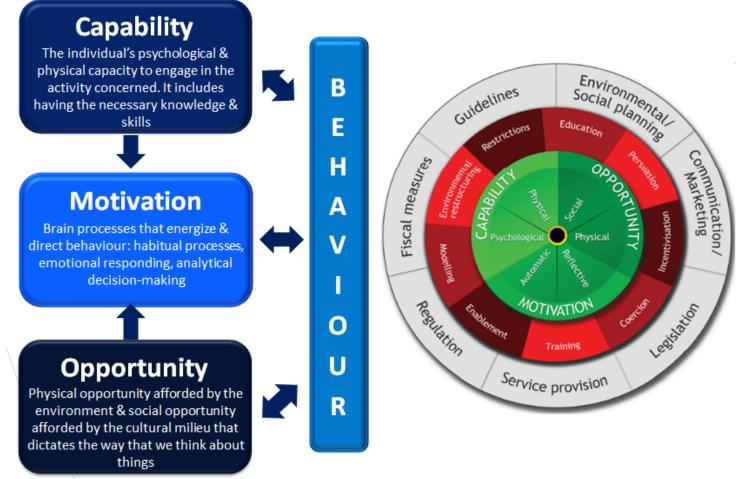
Background to the Analysis Used

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Introduction to the COM-B Model for understanding Behavioural Change

The COM-B model is a widely used model throughout the public sector around the world. Background information on COM-B can be found here: http://www.implementationscience.com/content/6/1/42.

Reference: Michie *et al*, 2011, 'The behaviour change wheel: A new method for characterising and designing behaviour change interventions', in Implementation Science 2011, 6:42 http://www.implementationscience.com/content/6/1/42

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Introduction to the COM-B Model for understanding Behavioural Change

The COM-B framework recognises that for any given behaviour to occur, three conditions must be met - the people concerned must:

- Have the <u>ability</u> to do it, i.e. they must have the knowledge, skill, mental resources, etc. This is the **Capability** requirement.
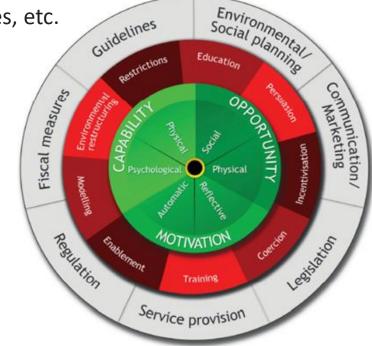
- Have the <u>opportunity</u> in terms of a conducive physical and social environment, i.e. they must be able to afford it, it must be easily used / accessible, and they must have the time, tools, etc. This is the **Opportunity** requirement.

- Have the <u>motivation</u>, i.e. they must be more highly motivated to do it than not to, or to engage in a competing behaviour. This is the **Motivation** requirement.

By using this model, we able to:

- Measure everything of importance;

- Identify the barriers and drivers of better BREEDPLAN, LAMBPLAN and MERINOSELECT usage;

- Identify the best strategies for improving the situation.

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Introducing the Ipsos Bayes Net (IBN) driver analysis

IBN looks at the relationship between the desired outcome (Brand / Product Desire) and key attributes. The IBN helps us understand…

The relative <u>strength</u> of different attributes; the <u>relationship</u> between image attributes; and advocacy (the highest level of loyalty).

WHAT TO FOCUS ON
Identifies which attributes (taken from the COM-B template) to focus on to grow usage.

BOP-based breeding v.impt for business like mine — 215
Intend to keep using BP — 183
BP a routine part of work
BP used to track genetic progress
Easy to see financial payback from BP
Respect & rely upon BP people to improve it
BP easy & efficient to use
Easily able to use internet-tools to make better business decisions.
Customers expect me to use BP to improve my animals
EBV data provides me with all I need to know
Bad consequences from not using BP
Understand how BP EBV data is calculated
Businesses like mine are expected to use BP
Plenty of BP training available
I know everything I need to know about BP — 62
Not enough time to learn more about BP — 54
Using BP can be stressful — 49

I can always find the item I was looking for

They sell competitively items

Gateway drivers of Attraction

They advertise themselves well

Attraction

They look after their customers post-purchase

Store staff are helpful and knowledgeable

AND HOW TO FOCUS ON THEM
Understands how people associate and connect attributes, which assists with developing action plans.

Note: Above are visualisations for illustrative purposes only.

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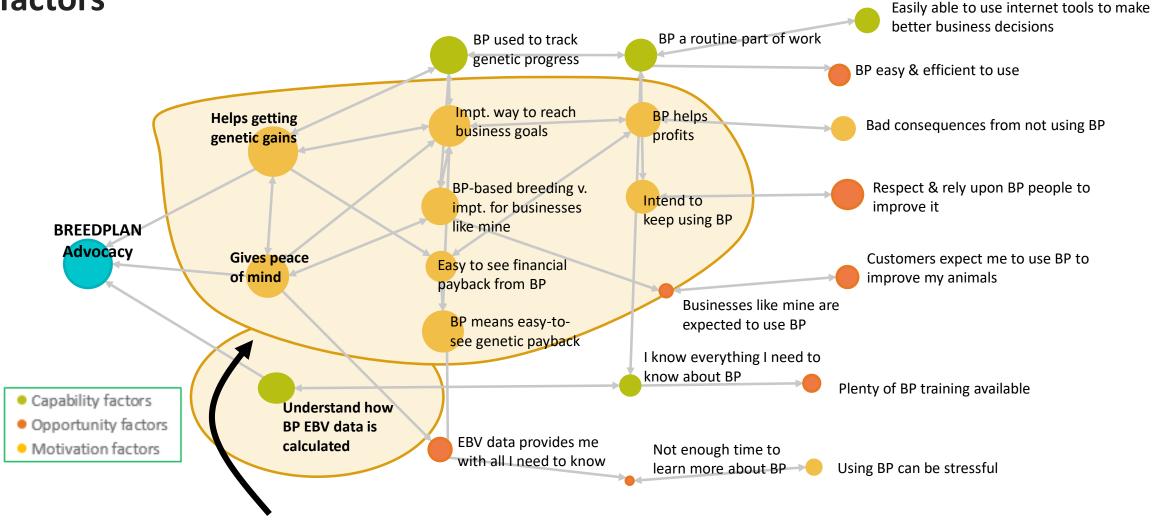
Identifying What Is Truly Motivating

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IBN analysis reveals that Studs' BP support is mostly driven by *Motivational* factors

Easily able to use internet tools to make better business decisions

BP used to track genetic progress

BP a routine part of work

BP easy & efficient to use

Helps getting genetic gains

Impt. way to reach business goals

BP helps profits

Bad consequences from not using BP

BP-based breeding v. impt. for businesses like mine

Intend to keep using BP

Respect & rely upon BP people to improve it

BREEDPLAN Advocacy

Gives peace of mind

Easy to see financial payback from BP

Customers expect me to use BP to improve my animals

BP means easy-to-see genetic payback

Businesses like mine are expected to use BP

I know everything I need to know about BP

Plenty of BP training available

Understand how BP EBV data is calculated

EBV data provides me with all I need to know

Not enough time to learn more about BP

Using BP can be stressful

Legend:
- ● Capability factors
- ● Opportunity factors
- ● Motivation factors

These are the factors to communicate to increase BP uptake amongst Studs

Base: Cattle Stud – BP user (n=544)

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Motivation factors need to be the main focus

Performance (vertical axis)

Importance (horizontal axis)

Raise Priority of These Factors

Maintain Performance

Low Priority for Improvement

High Priority for Improvement

Intend to keep using BP

BP-based breeding v. impt for businesses like mine

Easily able to use internet tools to make better business decisions

Respect & rely upon BP people to improve it

BP used to track genetic progress

Businesses like mine are expected to use BP

BP a routine part of work

Helps get genetic gains

Customers expect me to use BP to improve my animals

BP easy & efficient to use

Impt. way to reach business goals

Understand how BP EBV data is calculated

Gives peace of mind

Plenty of BP training available

BP helps profits

BP means easy-to-see genetic payback

I know everything I need to know about BP

Easy to see financial payback from BP

Not enough time to learn more about BP

EBV data provides me with all I need to know

Using BP can be stressful

Legend:
- Capability factors
- Opportunity factors
- Motivation factors

Q38. For this last set of remaining questions, I'm going to read a statement out to you, and ask how much you agree or disagree with it, using a 7-point scale. So, if you completely agree that the statement describes you perfectly, you would give a score of 7. If you completely disagreed with the statement, you would give a score of 1. For all the statements I read to you, please consider them in terms of using BREEDPLAN information such as EBVs to make your breeding or purchase decisions
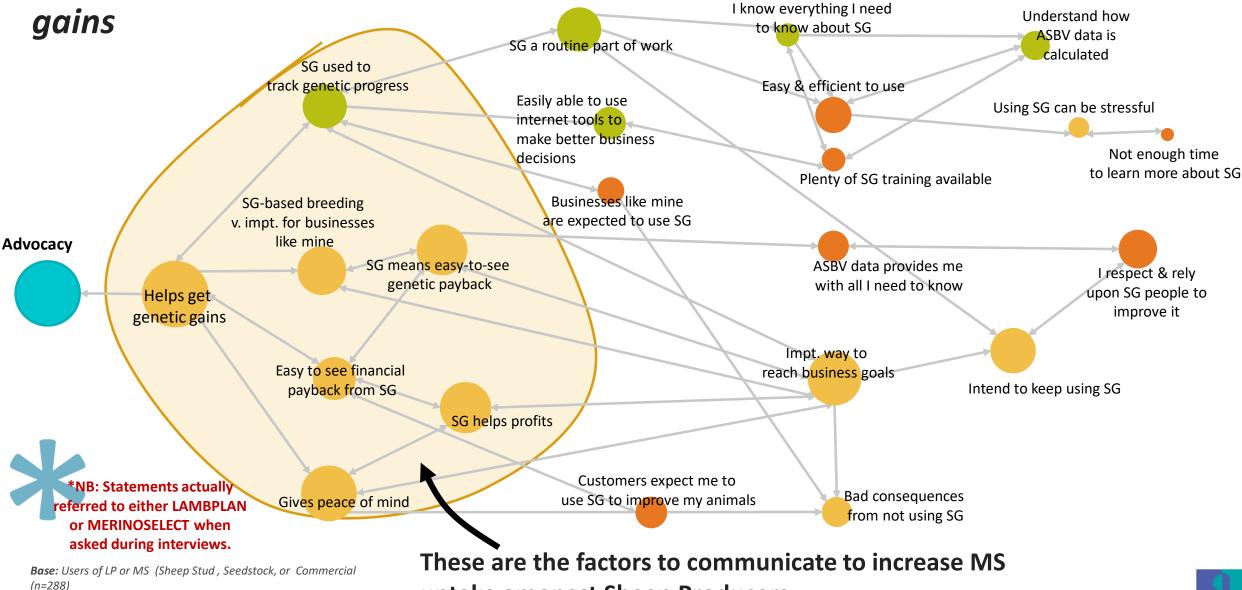
Base: *Users of BP who own a farm with cattle stud or seedstock (n=544)*

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Commercial cattle Producers need to be motivated & to see that BP can be *easy & efficient to use*

Using BP can be stressful

Not enough time to learn more about BP

BP used to track genetic progress

Intend to keep using BP

BP a routine part of work

BP easy & efficient to use

I know everything I need to know about BP

Businesses like mine are expected to use BP

BP-based breeding v. impt. for businesses like mine

Plenty of BP training available

Advocacy

Helps get genetic gains

Impt. way to reach business goals

Understand how BP EBV data is calculated

Easily able to use internet tools to make better business decisions

Gives peace of mind

BP helps profits

Easy to see financial payback from BP

Bad consequences from not using BP

BP means easy-to-see genetic payback

EBV data provides me with all I need to know

Customers expect me to use BP to improve my animals

Respect & rely upon BP people to improve it

- Capability factors
- Opportunity factors
- Motivation factors
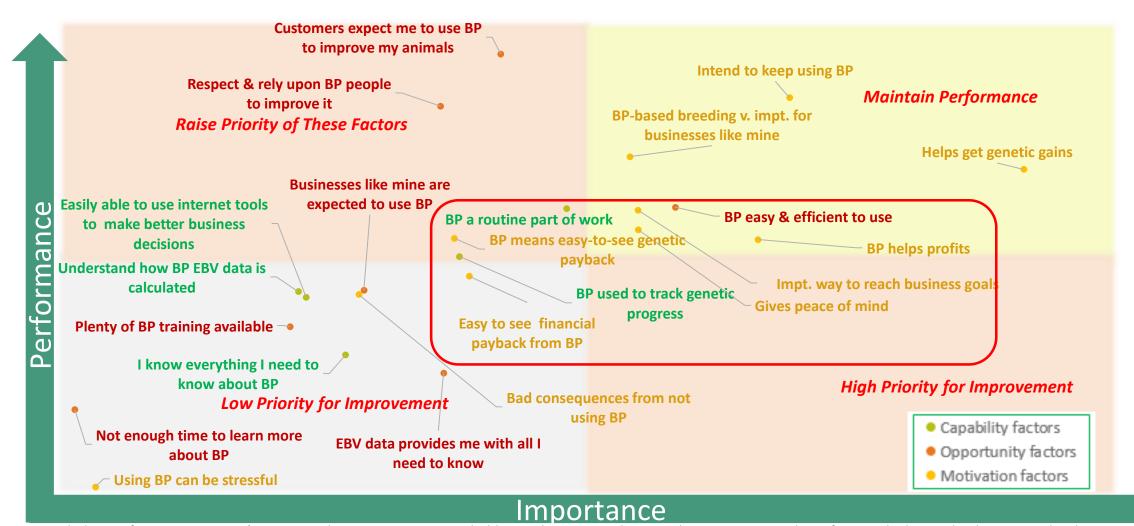
These are the factors to communicate to increase BP uptake amongst Commercial cattle Producers

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Motivation factors need to be the main focus

GAME CHANGERS

Sheep Producers need to be motivated & to see that LP & MS help get *genetic gains*

Advocacy

SG a routine part of work

I know everything I need to know about SG

Understand how ASBV data is calculated

SG used to track genetic progress

Easy & efficient to use

Using SG can be stressful

Easily able to use internet tools to make better business decisions

Not enough time to learn more about SG

SG-based breeding v. impt. for businesses like mine

Plenty of SG training available

Businesses like mine are expected to use SG

Helps get genetic gains

SG means easy-to-see genetic payback

ASBV data provides me with all I need to know

I respect & rely upon SG people to improve it

Easy to see financial payback from SG

Impt. way to reach business goals

Intend to keep using SG

SG helps profits

Customers expect me to use SG to improve my animals

Gives peace of mind

Bad consequences from not using SG

*NB: Statements actually referred to either LAMBPLAN or MERINOSELECT when asked during interviews.

These are the factors to communicate to increase MS uptake amongst Sheep Producers

Base: Users of LP or MS (Sheep Stud , Seedstock, or Commercial (n=288)

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Merino farmers need to agree that MS is an easy-to-use way to see and improve financial and genetic gains

Performance (vertical axis)

Importance (MERINOSELECT) (horizontal axis)

Raise Priority of These Factors

Maintain Performance

Respect & rely upon MS people to improve it

Intend to keep using MS

MS-based breeding v. impt. for business like mine

Impt. way to reach business goals

Helps get genetic gains

Customers expect me to use MS to improve my animals

MS used to track genetic progress

MS helps profits

Understand how ASBV data is calculated

MS a routine part of work

MS easy & efficient to use

Gives peace of mind

Plenty of MS training available

Easily able to use internet tools to make better business decisions

MS means easy-to-see genetic payback

I know everything I need to know about MS

Bad consequences from not using MS

Easy to see financial payback from MS

Not enough time to learn more about MS

Low Priority for Improvement

Businesses like mine are expected to use MS

High Priority for Improvement

ASBV data provides me with all I need to know

Using MS can be stressful

Note that the 'Importance re: MERINOSELECT' calculation is based on users of LP and users of MS combined in order to attain the required minimum sample size for accurate statistical calculation.

Legend:
- Capability factors
- Opportunity factors
- Motivation factors

Q38. For this last set of remaining questions, I'm going to read a statement out to you, and ask how much you agree or disagree with it, using a 7-point scale. So, if you completely agree that the statement describes you perfectly, you would give a score of 7. If you completely disagreed with the statement, you would give a score of 1. For all the statements I read to you, please consider them in terms of using MERINOSELECT information such as ASBVs to make your breeding or purchase decisions.
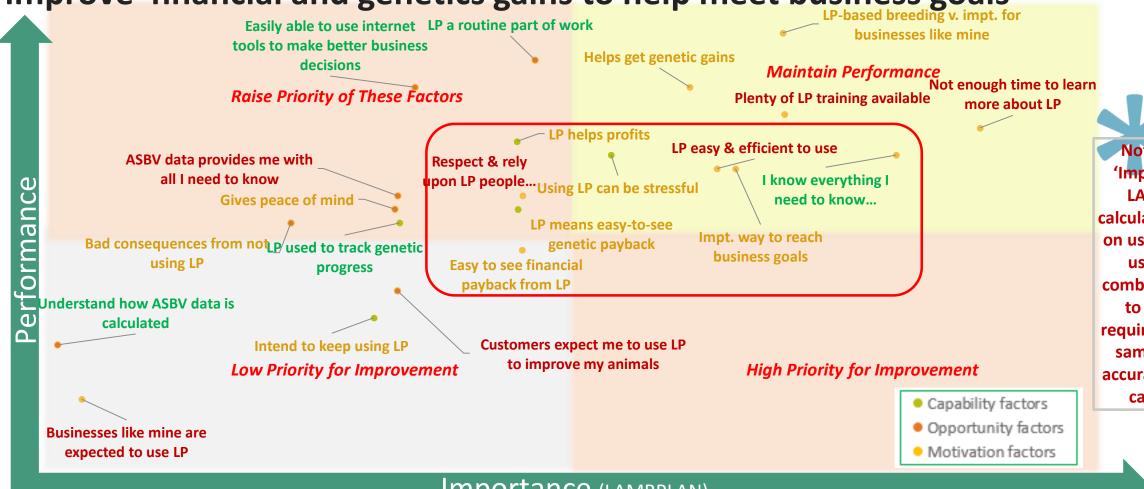
Base: *Importance – All users of MS and LP (n=288), Performance – MS users (n=119)*

GAME CHANGERS

Sheep farmers need to agree that LP is an easy-to-use way to see and improve financial and genetics gains to help meet business goals

Performance (vertical axis)

Importance (LAMBPLAN) (horizontal axis)

Raise Priority of These Factors

Maintain Performance

Low Priority for Improvement

High Priority for Improvement

- Easily able to use internet tools to make better business decisions
- LP a routine part of work
- LP-based breeding v. impt. for businesses like mine
- Helps get genetic gains
- Plenty of LP training available
- Not enough time to learn more about LP
- LP helps profits
- LP easy & efficient to use
- ASBV data provides me with all I need to know
- Respect & rely upon LP people...
- Using LP can be stressful
- I know everything I need to know...
- Gives peace of mind
- LP means easy-to-see genetic payback
- Impt. way to reach business goals
- Bad consequences from not using LP
- LP used to track genetic progress
- Easy to see financial payback from LP
- Understand how ASBV data is calculated
- Intend to keep using LP
- Customers expect me to use LP to improve my animals
- Businesses like mine are expected to use LP

Note that the 'Importance re: LAMBPLAN' calculation is based on users of LP and users of MS combined in order to attain the required minimum sample size for accurate statistical calculation.

Legend:
- Capability factors
- Opportunity factors
- Motivation factors

Q38. For this last set of remaining questions, I'm going to read a statement out to you, and ask how much you agree or disagree with it, using a 7-point scale. So, if you completely agree that the statement describes you perfectly, you would give a score of 7. If you completely disagreed with the statement, you would give a score of 1. For all the statements I read to you, please consider them in terms of using LAMBPLAN information such as ASBVs to make your breeding or purchase decisions.

Base: Importance – All users of MS and LP (n=288), Performance – LP users (n=169)

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Key messages / content have to address *motivation*:

1. **Remove the mystery:** Explain how metrics are calculated – the more the better.

2. Ensure the system is **easy and routine** to use.

3. Ensure that the **genetic and financial payback** is easy to model and track.

4. Highlight the **peace of mind** that comes from reducing the incidence of unwanted traits as much as achieving the desired ones.

5. Highlight the enhanced ability of these systems to enable Producers to **make profits and progress towards business goals**.

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Summary of Key Points: QUANTITATIVE SURVEY

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Key Learnings: Business Profile

1. A lot of breeding software variance; many informal DIY tracking options used including pen and paper, and even just memory.
   The perceived need to adopt a new tracking system is a likely barrier to uptake.

2. No relationship between Producers' duration in breeding, operation size and system usage – usage is not an issue of small / new /old / large farms…
   Usage is a consequence of Producers' personal attitude, not functional elements.

3. Breed society membership naturally higher amongst PLAN Users, but many Non-Users are also breed society members.
   Breed societies can provide access to many Non-Users.

4. The larger incidence of composite breeds in the North leads ***to a focus on different traits, reduced BREEDPLAN Usage and Trust.***

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Key Learnings: Genetic Progress

1. The presence of set breeding objectives is not a predictor of PLAN usage.
   Cannot assume that Non-Users are 'slack' or have a poor handle on their breeding.

2. Those using PLANs employ a wider range of metrics and are also more likely to track 'hidden' traits; Non-Users are more likely to rely on fewer, more visual assessments.
   Non-Users are likely to view PLAN uptake as requiring a lot of extra, possibly unnecessary recording.

3. With the exception of MERINOSELECT Studs, satisfaction with genetic gains is not related to PLAN usage.
   With Non-Users being just as satisfied with their genetic gains, the promise of more satisfactory gains will not be effective nor justifiable.

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Key Learnings: Trust & PLAN Perceptions

1. Users trust the PLANs, but:

   - Studs' Trust is under-performing (the more Users know, the more they are inclined to question).

   - Commercial Users' Trust is 'Blind' and thus prone to being undermined.

   Biggest complaints concern **data inaccuracy / non-transparency; the data capture / entry effort required;** and the **slow rate of progress**.
   More transparency and information is required to increase trust and advocacy.

2. Genetics management is mainly related to trait selection rather than *avoidance*.
   Need to highlight that good trait management is about trait reduction as well as promotion.

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Key Learnings: Training & Extension

1. Go-to trainers largely felt to be programme suppliers or MLA. Website usage varies but appears to be generally under-used.

2. Most information sources are skewed towards the informal and non-specialist contacts. ***There is an argument for extending basic knowledge and advocacy throughout the industry so that enquiries are met with consistent feedback and direction.***

3. ***Lack of motivation*** is the main reason for lack of formal training. Motivation being hampered by Non-Users...

   - Being no more dissatisfied than Users;
   - Knowing little detail about the PLANs except that they seem to involve more work.

GAME CHANGERS

Key messages / content have to address *motivation*:

1. **Remove the mystery:** Explain how metrics are calculated – the more the better.

2. Ensure the system is **easy and routine** to use.

3. Consider a focus on the actual **transition** processes required.

4. Ensure that the **genetic and financial payback** is easy to model and track.

5. Highlight the **peace of mind** that comes from reducing the incidence of unwanted traits as much as achieving the desired ones.

6. Highlight the enhanced ability of these systems to enable Producers to **make profits and progress towards business goals**.

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CONCLUSIONS & RECOMMENDATIONS

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Producers do 'get' the value of genetics-based breeding & purchasing

- This research has confirmed that Australian cattle and sheep Producers mostly:

  - DO value and track their genetic gains;

  - DO make breeding and purchase decisions based in large part on the desire to control the genetic quality of their stock;

  - DO generally have more positive than negative impressions of BREEDPLAN / LAMBPLAN / MERINOSELECT;

  - DO know where to go to get more information or training;

  - Are equally satisfied with their progress regardless of whether they use a PLAN or not.

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Despite Producers' current usage of genetics-based buying / breeding, the PLANs offer too little for the effort required

- The key problems for Producers using / considering BREEDPLAN / LAMBPLAN / MERINOSELECT are that:

  - The full range of traits that they value and record are seldom all included in BREEDPLAN / LAMBPLAN / MERINOSELECT (especially the Northern, often composite breeders), which weakens the perceived accuracy and value of the PLANs, accentuated by the 'black box' nature of their calculations.

  - The time, complexities and effort involved in data capture raise questions about (deliberate or accidental) data accuracies and thereby reduce the attraction of contributing one's own data or relying too much on PLAN data.

  - The returns to be made from trait management are clouded and sometimes seen to be overrun by the more immediate and tangible factors that also influence animal productivity.

  - This is accentuated by the suggestion from the qualitative stage that trait management is seen more as a means to avoid unwanted traits than to breed specifically for others (i.e. is an insurance against negative outcomes instead of an investment into positive outcomes).

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Changing the TOOLS

- Making data entry easier and more accurate (e.g. changing interface or processes, creating an input app).

- Enabling Users to record other user-defined / -customised traits, even if they are not included in EBV / ASBV calculation (to enable a single data collection point).

- Enabling easier introduction of new bloodlines (e.g. for Studs importing new animals).

- Widening range of breeds catered for, especially composites and those favoured in the North.

- Increasing the amount of financial modelling available.

- Add a 'mythbusting' section to acknowledge and address the concerns and misconceptions identified here.

Changing the INDUSTRY

- Make the improved PLANs and tools measures ubiquitous – work to make them the norm in all sales, breed societies and related channels.

- Go on the charm offensive once improvements are made ➔ ➔

Changing the MESSAGES

- The industry standard, expected and used by more Producers.

- A proven way to help reach business goals and improve profits.

- Easy-to-see financial and genetic payback.

- Improved, easier and more efficient.

- Helps speed up genetic gains.

- Increases the positive effects of improvements made throughout the farm systems.

- Gives peace of mind – reduces likelihood of unwanted traits.

- Understandable, transparent EBV / ASBV calculations.

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Contacts

Jonathan Dodd
Research Director

✉ jonathan.dodd@ipsos.com

📞 +64 21 538 634

Daniel Peeters
Researcher

✉ Daniel.peeters@ipsos.com

📞 +64 9 538 0542

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