final report

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Livestock Data Link- Industry Analysis

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Executive Summary

The Livestock Data Link (LDL) initiative has substantially progressed in the period since the report in April 2012 for Meat and Livestock Australia (MLA) identified a range of potential benefits for the beef processing sector. The key attribute noted at that time was the system's ability to quickly and clearly provide a graphic display for the user which showed the cost of non-compliance for specific groups of livestock or individual carcases against specific target markets and for specific factors. The system's ability to also provide graphical feedback to the user about the existence of animal disease issues in a group, or other reasons for discounts was also described at the time as an important feature of the overall LDL approach.

LDL has now been extended to a number of processing plants (beef and sheepmeat) in the eastern states of Australia to further fine-tune the system for processors' requirements and to assist in looking at non-compliance against a range of criteria. This report describes the results of an industry consultation and analysis approach which (a) identifies opportunities presented in three key sectors of the beef and sheepmeat supply chains; (b) identifies aspects of the LDL system which stakeholders liked and could potentially use in their own production systems; and (c) provides a matrix of the estimated national value of non-compliance against key carcase attributes through discounts and premiums. which assist in quantifying the which processors for s. LDL's capabilities and attributes were explored with a range of businesses and stakeholders in order to further develop the LDL offering.

Preliminary results from the consultation and industry analysis phase of the project are as follows:

a) Beef feedlots (seven feedlot businesses)

This space is already well covered by commercial software in use by numerous feeders (e.g. E-Lynx, Feedlot Vision and others). These systems are usually integrated with processor feedback and carcase results and currently the LDL system is not viewed as offering a profound difference. The relatively high proportion of custom feeders currently involved in the industry also presents an obstacle to LDL introduction to the feedlot sector.

Commercial feedlotters, opportunity feedlotters, and integrated feedlotters expressed low to moderate interest in the LDL system. Firstly, LDL was seen by some participants as replicating a service they already have through other software. In terms of LDL's ability to provide feedback to feedlot suppliers, several enterprises regarded this a potential threat to their commercial position. They perceived LDL could possibly encourage suppliers with good compliance results to regularly expect a premium for the positive track record of carcases coming off their PIC. This group of feedlotters seemed wary of giving suppliers higher expectations than they, the feedlotters, could manage.

Three of the feedlotters in the consultation phase argued LDL results, linked to specific criteria, were theoretical when other factors outside the control of the feedlot could also contribute to non-compliance. These include animal genetics, livestock transport conditions, quality of dressing and other factors. Several of

the custom feeders were hesitant about LDL's potential because in their viewpoint it could give clients (livestock owners) ammunition to find fault with the feeding and husbandry regime at their feedlots.

The concept of using specific target markets was also seen to be problematic, as this could change in the course of the feeding program and also during the grading decisions made at the plant, which is well beyond the control of the feeding operation. If LDL is rolled out into the feedlot sector, attention should be paid to tailoring the system's fields and standard reports to make them more relevant to the feeding sector.

b) Sheep producers (industry stakeholders and individual producers)

This group were highly enthusiastic at the prospect of producers having another tool or mechanism by which they can engage with the outcomes through the supply chain.

In particular the animal health/disease facility in LDL gives the production stage of the supply chain a clear opportunity to get information and guidance about one-off or persistent animal health and carcase dressing issues. Most - not all - producers liked the fact that the LDL reports specifically help them to target and improve on previous performances with specific classes of livestock. This is possibly an under-rated element of LDL: the record keeping and report production capability is strong, user-friendly and clear. While there is other software available to producers to track results, the LDL system can quickly access producers' records and present a graphic report on outcomes by the main criteria of interest.

The downside to the positive feedback about the LDL concept is that mixed farming lamb producers (having other production activities on their enterprise like beef cattle, crops, horticulture, wool production etc) could make less than full use of the system. Their reticence is due to the relatively short production cycle for lamb, and the belief that detailed feedback for various consignments is of limited use for their next lamb crop, some 8 or 12 months away. To counter this, the report suggests that the LDL package initially be marketed more towards dedicated prime lamb producers who closely follow their returns from prime lambs and who actively seek feedback on their production. This can be done through a range of methods.

c) Sheep feedlotters (total of 5 in NSW and Vic)

Consultation results from the sheep feedlot sector were equivocal. In theory LDL could offer these businesses excellent feedback particularly for longer term supply contracts which were discussed in the consultation. The more ambitious feedlotters already recognise the value of this approach about non-compliance costs, some having developed systems akin or even more advanced than the LDL model as part of their businesses' information management tools. This enables them to cull slow growers or feeders, siphon off those without the right conformation for a contract, or quickly turn off those which have exceeded weight range criteria. However fortunes seem to change quickly in the smallstock feeding sector, and other factors emerge to have equal or greater

importance in carcases' acceptability to the buyer and turnoff timing. In this case quickly turning off lambs at or near target weights is the priority for feedlotters, and LDL feedback was therefore viewed as a "nice to know" but not essential option.

d) Sheepmeat processors (8 enterprises and approx 60% of annual lamb kill)

Sheepmeat processors' views about LDL were often influenced by the livestock acquisition methods and their current business model or main customer base. Processors acquiring a high percentage of their sheep through saleyards, including some of the industry's largest players, felt there was only limited application for LDL in their businesses. This group indicate that their buyers and agents are a more direct and effective way of ensuring they get the type of carcases they want for specific markets than tracking compliance through software "after the event". But processors who are involved in direct consignment or supply alliances in a specific geographic areas, with known suppliers, are more positive about what LDL could offer their businesses. For example, if a processor performs a contract kill for supermarkets, their interest and motivation was far lower, as they effectively process the livestock their customer supplies.

Preliminary data from MLA for the period 2010-2013[1] suggested around 36% of lambs processed nationally come through the saleyard or auction systems. Potentially much useful data about compliance criteria including the main categories of fat score and weight range is effectively not going back to the producers' concerned after these transactions about these outcomes.

Two of the smaller sheepmeat processors are closely involved in grading and allocation of carcases for their retail and wholesale customers, using their own methods - largely visual inspection, fat measurement, fat cover and general conformation. They contend this method is more effective than relaying information back to producers (for example, they blacklist suppliers with consistently poor feedback on grass seeds, dog bites, vaccination lesions etc). It must be noted however that several processors would still like to receive the information that can be obtained through LDL in terms of carcase weights, fat cover and other key criteria because they feel it will give them a marketing tool about trends in availability and yield. Despite several processors contending that producers will not take action about the feedback that comes from LDL, they are nevertheless interested in the fast graphic calculation of $ cost/head of non-compliance, and in particular about the ability to build their own target market templates. The report will recommend that this supply chain stage be further explored.

Using data from the processor consultation phase, a preliminary estimate was made that the potential cost of non-compliance for the lamb industry in two major markets (domestic supermarkets and Middle East export) could range upwards from $8.4 million per annum or approx 0.61% of total farm gate value of slaughter lambs (annual slaughter value estimated at $1.4 billion using ABARES data).

[1] "Copy of slaughter and saleyards stats" provided by MLA from NLRS data, August 2013.

Contents

ABBREVIATIONS

HSCW	Hot standard carcase weight
LDL	Livestock Data Link
MLA	Meat and Livestock Australia
NLIS	National Livestock Identification System
NLRS	National Livestock Reporting Service
PAA	ProAnd Associates Australia

1 Background

1.1 Project Purpose

The purpose of the project is to identify and discuss prospects for Livestock Data Link (LDL) in the following supply chain sectors:

- Beef feedlots
- Sheepmeat production
- Sheep feedlots
- Sheepmeat processing (mainly lamb processing)

The report follows an earlier report completed by ProAnd Associates Australia (PAA) for Meat and Livestock Australia (MLA) in April 2012 on the potential impact on the Australian beef industry of non-compliance against specifications for a range of target markets.

1.2 Methodology

The methodology was based on the following approach:

- reviewing uptake and progress of the LDL program
- developing a benefits matrix and discussion tools for each of the four sectors
- conducting a desktop review of animal health / disease issues at processor level and possible impacts on profitability
- developing an interview/survey tool for the pilot plant component of the project to obtain the required information and to maximise the amount of information available in the aggregated industry report
- consultation with processors, producers, feedlotters and where relevant their stakeholder groups to yield relevant information about:
    - existing carcase feedback protocols
    - existing level of data usage and analysis
    - perceptions about the impact of compliance on profitability
    - ranking of compliance characteristics
- Preparation of a final report with conclusions and recommendations.

1.3 Additional report components

The project initially was also to include the following components:

- Component 1: A rapid assessment study for each pilot plant in the LDL pilot program, tailored to each plant's requirements.

- Component 5: An summary report on the main findings from (1) above to be used for further improving LDL service delivery and expansion.

By project end, there was minimal uptake on the offer of a rapid assessment study for the four pilot plants in train at end February 2014. All these companies were already receiving good analysis and reports from the company being used to install, maintain and trouble-shoot the LDL software at their sites. The consulting team believes the lack of uptake for the individual pilot plant studies reflected in part the quality of the information reviews already being provided to them, which included quarterly (sometimes monthly) data summaries on livestock throughput, compliance rates, data consistency categories, throughput levels and other criteria about levels of compliance/non-compliance. The offer of a pilot plant study was therefore suspended in consultation with MLA.

2 Overview of Livestock Data Link (LDL)

LDL enables correlation of information on individual carcases or groups of carcases through the NLIS tag. This results in the generation of a graphic report in a web-based format so the user can quickly see the level of compliance against selected criteria and the estimated cost of non-compliance on a per head and per kg basis. The main measurement criteria available for use are fat score, dentition, weight range and fat colour. Users can develop other criteria for carcases/groups to be measured against: once penalties or discounts are attached to these criteria, the non-compliance cost can then be calculated for these non-standard criteria.

The LDL system is designed to make full and wider use of the NLIS database and its application throughout the Australian livestock industry by giving all parties a better understanding of information about carcases. It is regarded as offering benefits to producers and processors, by enabling both parties to assess compliance levels and to try to close the gap in non-compliance levels.

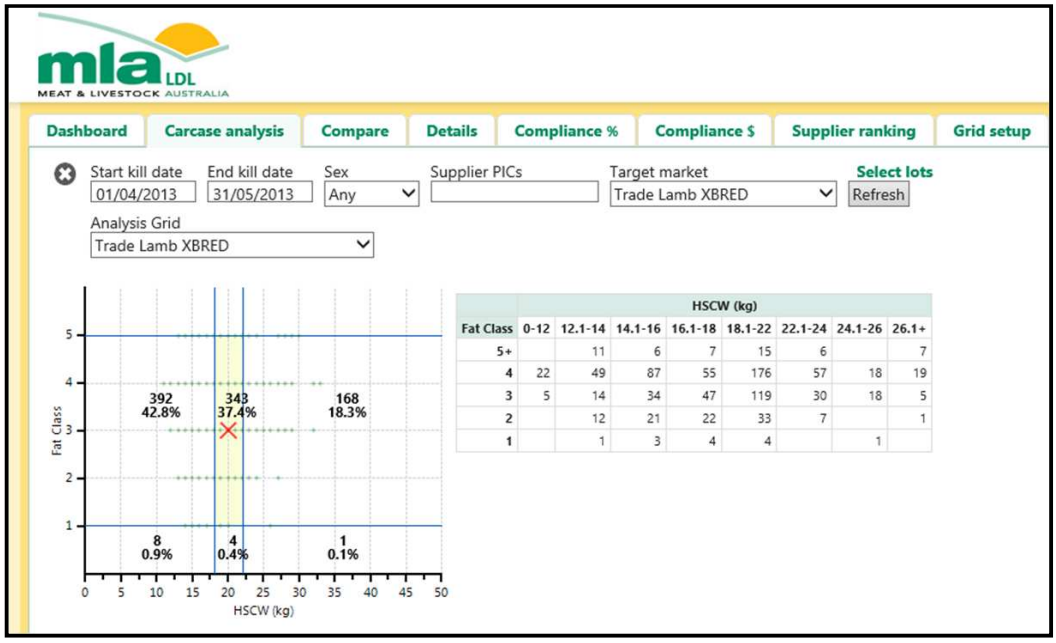
Key in the LDL interface is the easy accessibility of references and links for the user to gather more knowledge in order to lift compliance rate: these hyperlinks offer reference materials, study results and research reports already available in the wider literature but perhaps not as readily.

For processors, LDL is a strong tool to ensuring consistency against specifications from their customers, particularly in terms of weight, fat score and product description.

The LDL program is pre-loaded with the relevant specifications for a range of livestock categories (both beef and sheep). The user can select and compare the carcase results against several analysis grids and note the different compliance levels under each scenario. Figure 1 shows a compliance report on a day's kill

using a Trade Lamb grid, indicating that 43.6% of the total lot (or 400 of 916 lambs) fell below the target market criteria for fat score and HSCW range. This type of quick, graphic feedback is of immense potential to producers and also to processors in looking at performance overall by different suppliers.

Figure 1: Screenshot of LDL report interface: Trade Lamb



The main aim of the consultation phase was to explore the potential relevance and applicability of this graphic report system for other industry sectors where LDL is not currently available.

3 Beef Feedlot Sector

3.1 Consultation Phase

A total of eight feedlot operators were identified for contact and meetings were subsequently held with seven. In addition another company gave responses by telephone about the LDL system in its current state. One other business declined on the basis that there was no obvious benefit to them since they were an in-house feeder and were happy with their current systems and business controls.

A talk sheet was prepared to guide the data collection interviews. The consultation group comprised seven firms from Qld (with two having inter-state feedlots as well as Qld feedlots); and two from NSW/Vic region. Four of the seven feedlot businesses feed their own cattle and also do some contract feeding, for a mix of markets (domestic and export). Two of the companies only feed their own cattle for in-house processing, for a mix of markets and occasionally sell small lots of finished cattle to one or two other processors. One business was a custom feeder only.

3.2 Reported Benefits and Deficiencies of LDL for feedlot operators

3.2.1 Current systems in use

The StockAID, FY3000 and Bunk Management suite of systems by Elynx are currently used by several of these businesses. This suite of systems is reportedly the most popular system in use in the industry. The largest of the lotfeeders interviewed uses an in-house system integrated into their wider production control systems. To them, LDL is a duplicate of the system they already have in use.

3.2.2 Application of LDL in feedlot management

The overall results from this sector indicate that LDL has only limited application for feedlots at the present time. This is partly due to the fact that businesses either have already invested in other software that closely resembles the LDL approach, and to the fact that feeders may not wish to share outcomes of compliance reports. This is a sensitive area for some feedlotters, as it is for some processors. Custom feeders could be expected to show a low level of interest in the LDL offering as they are in effect service providers for livestock owners. Others, who own the cattle and own/lease the facility, are wary of setting up a precedent for premiums to be paid to growers, particularly if they are uncertain what benefit they will get from the processor. Of the eight consulted, one feedlotter saw an opportunity to use LDL's data management and reporting capability to implement a producer feedback system which they currently do not have in use but aspire to. Such a system was a lower priority for other feedlotters visited.

The main reason for lack of interest at this level was the perception that LDL would not offer any more compelling reports or data interpretation than is already available from their existing systems.

3.3 Current feedback mechanisms

Feedlot operators almost universally buy directly from producers with a known performance history. For contract feeding, most are sourced by the cattle owners direct from producers, but occasional lots are sourced from saleyards.

All feedlotters give feedback to producers at feedlot induction against the feedlot buying grid. It is relevant to note that at this point penalties are applied for non-complying weight, dentition, health check results, weight at age/conformation, HGP, sex and breed. Non-compliance results in a price adjustment based on the buying grid penalties.

As well, premiums are commonly paid for specified matters including vaccinated cattle, special breed requirements and lot sizes.

Lot feeders receive standard slaughter floor and chiller assessment feedback from processors: HSCW, dentition, sex, P8 fat, fat cover, fat colour, meat colour, marbling score. As a general rule this is not passed back to producers, and some feedlotters actively avoid it, but is done if the producers consistently ask for it. It was reported during the consultation phase that it is generally the larger producers who ask for feedback on how their livestock have performed.

3.4 Preliminary matrix of main non-compliance issues

Buying grids cover weight specification, dentition specification, weight at age (conformation) specification, sex, breed.

Penalties are applied for non-compliance:

- Induction weight
- Dentition
- Weight at age/conformation
- Breed
- Sex

Non-conforming cattle may be returned to the producer if they cannot be streamed into a suitable feeding program, or in the processor owned feedlots, they will usually be sent direct to slaughter.

Premiums are paid for:

- Vaccinated cattle. The feedlot will pay the cost of vaccination where this has been done prior to induction into the feedlot.
- Specified breeds. The feedlot will pay a premium for specified breeds, usually Wagyu and Black Angus.

3.5 Measuring the impact of non-compliance

All feedlots keep historical performance benchmarks by producer and by breed.

In addition, virtually all lotfeeders have detailed historical performance records at the lot level now going back 20 years or more. It is claimed that these records have helped the business operator to identify preferred breeds and suppliers for their feeding activities.

Pricing mechanisms normally incorporate this history to provide some discrimination in prices offered for cattle, based on historical breed and supplier performance through the feedlot.

3.6 Animal health considerations

Respiratory diseases are the major animal health issue. There is a seasonal component to this and some years are also reported to be far worse than others.

Morbidity and mortality (M&M) are monitored in producer lot performance. Average M&M is allowed for in buy-in pricing; however, above average M&M results in a price adjustment to poorly performing producers, based on the known M&M for that producer.

Vaccinations are allowed for in the buy-in price. Premiums are paid for vaccinated cattle to allow for the cost of the vaccination.

3.7 Other factors

Several of the largest feedlots, including those integrated with abattoirs, will usually pay a small premium for larger lots, since smaller lots result in additional handling and record keeping.

3.8 Conclusions

The consultation phase reinforced the fact that commercial/opportunity feedlots and integrated feedlots keep extensive records in order to identify better breeds, bloodlines, producers and other factors that might contribute to better outcomes. However the space is already well occupied by user-specific software programmes (written for integrated companies) or off-the-shelf solutions like E-lynx (which is reported to have more than 70% of the feedlot system market in Australia) . It was difficult to have respondents identify a point of differentiation for LDL against their current situations.

Some operators also struggled with the merit of having to provide more feedback back to growers than they currently do. Because the extent of feeding margins can be closely guarded in this industry, operators might be loathe to send too much information back to the start of the supply chain for a range of reasons. This group believes the current penalties/premiums system works quite effectively and needs no further refinement. The target market concept was also an area that some operators stated they were unclear about, as there is a wide range of livestock and markets that go through their feed books.

The prevalence of custom feeding in the industry is regarded as a neutral or possibly slightly negative factor for expansion of the LDL program into this sector. As a rule, custom feeders do not see any slaughter/chiller feedback data: this information only goes to the owners of the cattle. While some feeders stated they have occasionally asked for this data, they contended it is not often made available. This is particularly the rule for Wagyu operators and similar elite programs. As well, the owner of the cattle may be the original producer, or could potentially be a trader who buys particular cattle and has them fed and processed for a particular market, so the benefit of information going back to the original producer could be altogether lost.

In the main custom feeders carry out the feeding contract to the owner's directions, and while they keep the owners informed of any issues (health, poor performance etc.) and might make recommendations on care and feeding, the final decision remains with the owner. Even the sale and transport of the cattle is invariably arranged by the owner. Overall, custom feeders could not see an application for LDL in their businesses as there is perceived to be no need in their business model for the functionality of the LDL system

Integrated operations may well have a use for the information presentation function, but invariably will already have a system in place that offers comprehensive and detailed management of the feedlot operation. Notwithstanding the conclusions offered here, the consultation phase identified one relatively small but very pro-active feedlot which was highly interested in LDL because they perceive it as a better means of offering feedback to their supplier than is currently offered through their own software.

4 Producer Sector

4.1 Consultation Phase

Consultation in this sector was initially difficult to organise, although Sheepmeat Council of Australia (SCA) were helpful and forthcoming with their views about the LDL initiative. The group is very positive about LDL's potential and are keenly awaiting its rollout for lamb and possibly other sheep grades.

The remainder of producer consultation has comprised individual producers (approx 15) in Vic and NSW, normally in connection with discussion of other industry issues. Consultation was made throughout the second part of 2013 and care was taken to ensure a wide geographic representation on the matter where possible in the eastern states. Producers consulted are from meat lamb; wool/lamb; crop/lamb; and highly specialised (e.g. organic lamb, saltbush lamb) enterprises.

4.2 Reported Benefits and Deficiencies of LDL for the production sector

4.2.1 Current feedback mechanisms

Many producers and industry in general believe there is insufficient feedback mechanism on offer for improvement in the standard and conformation of carcases. Typically this group of producers state they get next to no feedback from processors despite follow-up enquiries and requests for feedback sheets. It was noted in the processor section of the project that larger enterprises normally offer a printed report or feedback summary (no indications of how timely or complete these details are, or if they carry $ cost guidelines). To this extent, the LDL project would be welcome as the system can report on all the key fields that interest lamb producers, plus also has the potential to send information back on animal health/husbandry issues.

4.2.2 Preliminary matrix of main non-compliance issues

The main non-compliance issues which producers must deal with are indirectly determined by the processors' customer base - including the domestic supermarket trade and buyers for independent processing firms supplying retail butchers, foodservice and other end users. These target markets have a high degree of crossover in regard to fat score, meat colour and carcase conformation. Using LDL in a trial situation, producers could see that a proportion of many lots sold were suitable in a range of target markets, and thus had difficulty seeing why the groups were seen as non -compliant.

The main challenge discussed in virtually all consultations was the practical difficulty of turning off a consistent volume of market-ready lambs at specific points in the production season which were 'right' and would not draw discounts on the basis of weight, fat cover or shape. As mentioned earlier, for some producers in the prime lamb growing areas, particularly where involved in other farming concerns, the paddock is cleared whether the lambs are ready or not, and the chance to change these outcomes next year, through the use of the LDL model approach, is seen as mainly academic.

4.2.3 Animal health considerations

The main animal health issues that producers alluded to in the consultation phase was the presence of dog bites on hind legs as well as concerns about Ovine

Johne's Disease. It is noted in the following section of this report that processors are more concerned about grass-seed infestation on the brisket and leg areas, as well as about vaccination lesions developing which dramatically downgrades the value of the (long cut) leg.

4.3 Current feedback mechanisms

The producers consulted receive feedback - generally regarded as inadequate by the more dynamic producers - from processors when it is requested and usually to a low level of detail. Feedback and penalty sheets typically provide a total sum for deductions, not disaggregated by reason e.g. fat score, nor by lots, if more than one lot was presented per day. To some producers this is acceptable: the more progressive growers actively seek out processors with which they can develop a healthy feedback dialogue and look forward to any information provided. But the number of processors in this category for lambs/sheep is generally regarded as low, and therefore LDL is seen as a workable alternative for producers to get prompt and objective information on their livestock and to be able to build up a better picture over time of what their output value is.

4.4 Other factors

To some extent the composition and operation of the lamb production sector is problematic for the introduction and successful uptake of the LDL system. It is known that a good proportion of lambs are produced from enterprises where other commercial drivers are in operation e.g. wool production, crops, beef cattle, other livestock investments. To the extent that lamb production is viewed by some producers as simply a 'cash crop' with a different set of variables from year to year, with the main aim being to clear the paddock for crops or other activities, there will be a challenge to convincingly portray the benefits of LDL on a long-term basis.

Added to this are the transport and logistics costs for lamb producers who have only 60% or 70% of a truckload ready for market. Often the decision is made to clear the paddock onto the truck mainly on the basis that the additional costs of a second draft will outweigh the revenue from the lambs, so a consequence a good percentage are put on the market or sold over the hooks prior to their ideal finishing point.

With reference to the application of the LDL system in the sheep production and processing sectors, it is noteworthy that the Victorian government has flagged mandating individual animal identification of sheep on the same basis as exists already for cattle. The implications if this were to be introduced are far-reaching, particularly with the impact on NLIS and the LDL system, which at present are restricted to mob-based data. Although sheepmeat is generally regarded as a whole-of-mob mob production, to LDL the introduction of individual animal ID would offer enhanced data; individual discounts or premiums could be traced back to specific bloodlines and genetics, so enhancing breeding programs, and regional defects such as health, could be better identified and tracked.

4.5 Conclusions

In the main, producers are seeking more information about the commercial outcomes of their lamb and sheep production: a no-nonsense easy to drive format like LDL is ideal for this sector almost across the boards. With relative ease a producer can access details about possible discounts, levels of compliance and shortcomings while the record and memory of the transaction is still fresh in his/her mind. Possibly only a modest percentage will keep or refer to these records in the next lambing season: production at this point may come from different ewes, different paddocks, different climate conditions and, importantly, different target markets. To some producers the LDL system will offer them more information than they can exploit. For a percentage of growers, however, particularly those regularly in the trade or export lamb market with a focused agenda on lamb production and improved returns, LDL must be seen as a very powerful tool which they would probably want to develop to the maximum extent possible. The animal health component of the LDL system may have less relevance for lamb growers but nevertheless provides a dead-easy way to link producers with online information about problems specific to their recent livestock consignments.

5 Sheep Feedlot Sector

The Australian sheep feedlot sector is more fragmented when compared to its beef counterpart. With the exception of a few large investment units feeding sheep, many sheep feedlots are operated on an opportunity basis, with high exposure to ration costs for the present season, and no clear decision path about the next season. There is less information overall about costs and results from sheep feedlotting, which should make proprietors keen to discover whatever they can about carcase results at the abattoir.

5.1 Consultation Phase

The consultation phase for this sector was characterised by some delays due to lambing in spring 2013, and lack of availability of two feedlotters. It did involve productive and in-depth meetings with producer/feedlotters in northern NSW and in the south of the state. Of the five feedlotters, all but one had firm supply contracts with supermarkets; the fifth feedlotter regularly finished lambs on feed and marketed through the local saleyards.

The format of these meetings comprised discussion of the aims of LDL, demonstration of the live site using default data, the slide show which enabled closer discussion of how the grids operate and the reports available, and then investigation as to how these could relate in feedlotters' own business decisions which revolve around turning off high value products at the time required by the customer. None of the five feedlotters were custom feeding i.e. they owned all lambs and therefore carried more risk in the transaction.

5.2 Reported Benefits and Deficiencies of LDL for the lamb feedlot sector

5.2.1 Current systems in use

Three of the feedlotters had devised their own grids and feedback sheets, attempting to match any information from plants on carcase/lot performance. Two of the larger feedlotters had evolved very complex systems that include

genetics, meat cutting and yield trials, cross-referenced with other parameters. To this admittedly small group, LDL is a low-impact alternative to what they see as a highly evolved set of records and benchmarks about their production returns. The potential drawback with these in-house systems is that they make comparison with results from other producers' data in the LDL system difficult to achieve because their own systems have so many information fields.

5.2.2 Preliminary matrix of main non-compliance issues

As for lamb and sheep producers, the main compliance issues concerning this group are fat score, carcase weight and also fat depth. In looking for feedback from processors or buyers about how their production measured up, most feedlotters offered the view that weight range and eye muscle size/shape were the most important characteristics. The latter could sometimes be determined by careful management of breed stock used over time, reported the biggest and most established lotfeeders, but it was more of an unknown quantity for the opportunity feedlotters and a factor largely beyond their control.

5.2.3 Animal health considerations

This topic was not covered extensively in the feedlot sector and was seen as a non-issue despite the fact that the LDL system offers a great range of learnings from a range of authoritative sources. It was considered more appropriate for other sectors of the industry particularly for those growers who hold onto sheep for longer for wool production.

5.3 Current feedback mechanisms

Feedlotters are more likely to be part of an established supply chain and to have existing contracts to supply. In turn it seemed there was more scope for them to be offered feedback from the processor or from the ultimate end user e.g. supermarket buyer.

5.4 Conclusions

Of the three production sectors under discussion, this is possibly the sector with the most potential, at least in the early stages of expanding LDL. Unlike the beef feedlot sector, where there is a raft of commercial software with similar actions/outcomes already in the market, sheep feeders are less formally organised and often have had to build their own record keeping and information management systems. LDL offers an alternative that is workable and flexible, allowing sheep feedlotters to quickly check their compliance performance and look at steps they could take with future lamb consignments, either in the current or future production seasons, if their record keeping allows.

6 Sheepmeat Processor Sector

6.1 Consultation Phase

A total of seven processors were part of the consultation phase. These entities consisted of privately-owned single plant companies; toll processing/service kill companies; and companies with plants at other locations. It is estimated these companies could control around 60%-65% of the country's total lamb kill. There were three domestic-registered plants in the consultation phase.

6.2 Reported Benefits and Deficiencies of LDL for the processing sector

6.2.1 Current feedback mechanisms

Approximately 60% of the companies provide feedback sheets for producers, mainly focused on carcase weight and fat cover and a brief explanation for any penalties/discounts made for defects. Provision of feedback appeared to be strongest for livestock acquired on an over-the-hooks (OTH) or direct sale basis, and lowest for auction/saleyard acquisition method. This area needs further attention because it could be key to resolving some of the deterrents for processors sending information back to growers.

6.2.2 Preliminary matrix of main non-compliance issues

The processors in the consultation phase used simple buying grids with a limited set of criteria. These comprise in most cases dentition, weight specification, fat score. Some used breed but most did not.

Processors report that they apply the following penalties when appropriate:

- HSCW
- Dentition
- Fat score

In addition most of them were routinely discounting for:

- Grass seeds in forequarter/brisket/hind leg
- Vaccination bruising on leg

Carcases that do not comply on several criteria may be discounted for one, but normally not more than one, reason. The penalties in the grid provided through LDL aligned on the whole with the discounts in force at the time with the processors consulted. None of the processors indicated they are paying premiums for compliance or for extra attention paid to specifications.

6.2.3 Animal health considerations

The main issue raised in this regard by processors in general was the incidence of worms, scouring and parasites. However the incidence of this in the total lamb population is considered to be relatively low and there was little discussion. In the main, processors wanted to find a means - possibly through LDL - of communicating to producers the negative financial impact of the flaws identified above, namely vaccination bruising and grass seed infestation.

6.3 Estimated Cost of Non-Compliance

A preliminary estimate was made, based on consultation with processors in this phase of the project, as to the value back to producers of non-compliance with the key parameters (HSCW and fat depth). As was noted in the 2012 report, the real cost of carcase downgrades - beef or lamb - due to non-compliance is subjective and only an approximation, as other factors may also be involved which are not calculated at the time or which prevent the true cost of downgrade being passed back to growers.

To arrive at an estimated cost of non-compliance for lamb, processors provided estimates through consultation about the level of non-complying carcases in their throughput mix for two specific markets - domestic (supermarket representing around 70 percent of local lamb utilisation) and export (Middle East representing around 30 percent of total lamb exports). These two target markets accounted for around 60 percent - 65 percent of total lamb slaughterings in the period 2011-2013. Processors also ranked the most important carcase attributes for each market (HSCW weight range and fat depth although other criteria were also important including fat colour, fat coverage, eye muscle size along with other criteria). There was relatively little variation between the two markets against these criteria. The total number of carcases destined for the two markets is derived from ABS and MLA calculations.

Processors then indicated the level of the discounts they presently deduct (per kg carcase weight basis) for non-compliance. Carcases may be penalised against one or both criteria, or processors may issue no deductions as well (this is most often related to seasons' run and suitability to move carcases across to other markets including foodservice, butcher trade and a range of export markets).

The cost of lamb carcase downgrades due to non-compliance is at best an approximation and is therefore estimated on the following basis:

- Two of five potential lamb sectors are assessed which together account for an estimated 60%-65% of the total Australian lamb kill i.e. approximately 12.0 million head per annum.
- The discount applied for each sector is estimated as the average across the major attributes described in the LDL Carcase Target Matrix. As previously noted these discounts may not be applied in all circumstances – processors may select not to discount for a range of commercial reasons.
- The percentage of each class of livestock affected by discounting is estimated using processor consultation data and is estimated as the average across all five major attributes shown in the LDL Carcase Target Matrix for that class of cattle.

Figure 2: Potential Loss to Lamb Industry from Non-Compliance

Sector	Estimated total industry throughput for this class of stock (million head per annum)	Average discount applied by processors across major attributes	Average percentage of this class of stock that are non-compliant	Possible Total Cost to Sector ($ per annum)
Domestic Supermarket Carcase	7.5 - 8.0	$3.60 head	22.5%	$ 6.5 million
Middle East	3.0 - 3.5	$2.90 head	18.5%	$ 1.9 million
Total	**10.5 m - 12.0 m**			**$ 8.4 million**

Therefore the total potential cost of non-compliance for the lamb industry could range from $8.4 million per annum or approx 0.61% of total farm gate value of slaughter lambs (annual slaughter value estimated at $1.4 billion using ABARES data).

6.4 Other factors

A number of processors contend that lamb producers in particular are not interested in receiving detailed feedback on their lambs and that because they often turn them off on a paddock basis, they are not aiming for a particular market but are instead reacting to seasonal conditions, pressure from other farming commitments, good pricing signal,; or a belief that the mob as a whole are ready for market. Perhaps not surprisingly this group of processors are often reluctant to provide any detailed feedback or explanation for discounts (or to offer premiums for good outcomes).

By contrast, the consultation phase identified a number of plants with management that see good potential in the LDL initiative for sheep/lambs. Part of the benefit they perceive from LDL is the ability to gather a large body of information quickly and efficiently which can later be used for spotting trends on seasonality, availability, carcase weights, fat score, etc, and to use that information to track effectiveness of their marketing campaigns, producer alliance programs, regions/origin, operator and other fields recorded with the carcase data.

Of the eight processors included in the consultation phase, there was some disquiet as to the definition of the target markets, with the wish expressed that the choices were wider than the two currently offered in the lamb component of LDL. There seemed to be a perceived need for a further category which correlates more closely with their specific markets (although this could reasonably differ from processor to processor, and could vary from year to year). It may be necessary to see if any further refinements could be made to the existing LDL framework in response to these comments.

7 Conclusions and Recommendations

The report finds that different industry sectors will have different expectations and perceive different benefits from LDL, but that these can be effectively managed in order to continually improve its relevance to these diverse groups. Most beef feedlots already have commercial software to help them manage compliance and to track performance results: at this stage it is unlikely that there will be strong interest arising from this industry sector. The high percentage of custom feeding which currently occurs in the sector potentially makes it harder to “sell” LDL to feedlotters. Companies overall in this sector are somewhat reluctant to discuss the outcomes with their suppliers in terms of premiums and discounts.

The situation is somewhat different with sheep producers and in particular lamb producers who are more inclined to seek more detailed information on their production outcomes. If selling through saleyards currently, performance at works details cannot be accessed easily. Producers who grow lambs on a loose

supply contract basis or sell lambs over-the-hooks, will have more application for the LDL initiative. However, because many lamb growers are also involved in other agricultural production, including crops and cattle, they may perceive LDL as an interesting tool but one which they cannot find immediate application for in terms of their own priorities. There will, of course, be exceptions, and many growers already use several of the financial and production tools available on the internet/MLA website to help them look at their business's profitability and productivity. The fact remains that LDL offers an easy graphics report on the results obtained from different mobs/groups at slaughter, which producers can analyse in conjunction with the production, feed, rainfall and other records they maintain for their enterprises. In this respect, LDL offers a solid means of checking on outcomes and returns.

Sheep feedlotters are a potentially good sector to cultivate for LDL expansion, particularly given the relative lack of commercial quality software for livestock performance from this type of production setting. However the consultation process underscored that this sector can be volatile and sometimes decisions will be made for sound commercial reasons which are not always borne out by the carcase/mob performance results produced.

The report makes the following recommendations in regard to development of LDL.

1) Affirm the need to keep report graphics and charts simple and streamlined for ease of use by people in all sectors

2) Liaise with a small number of lamb feedlotters or alliances initially to further convey benefits of LDL as a quick information management tool and with a view to encouraging LDL uptake

3) Improve site's functionality with this group by offering relevant reports and studies through the reference links capability

4) Work with processors in particular to emphasise the full potential for LDL to be in producers' interests by simplifying and graphically demonstrating the full cost to processors of out-of-spec livestock.

5) Attempt where appropriate to counter the traditional response of the sheep/lamb production sector to manage their turnoff on an all-out paddock by paddock basis, and instead promote market readiness, which LDL graphically displays.

6) Scope exists to include active and progressive livestock agents as part of the LDL implementation and development as it can offer a point of difference with other agencies.

8 List of Consultations

The following persons/entities were approached for input and perspective on the LDL project.

A.J Bush & Sons Pty Ltd	JBS (Australia) Ltd
Argyle Meats Pty Ltd	JBS Australia feedlots division
Cowra Abattoirs Pty Ltd	Kerwee Feedlot, Jondaryan (Stockyard Beef)
Elders Limited	Radford Meats
Fletcher International Exports Pty Ltd	Sandalwood Feedlot
G M Scott Pty Ltd	Sheepmeat Council of Australia
H W Greenham Pty Ltd	Thomas Foods International Pty Ltd
Hillside Abattoirs Pty Ltd	Producers and producer alliances in the following areas: Armidale NSW Coonamble NSW Cootamundra NSW Cowra NSW Dubbo NSW Wagga NSW Walcha NSW Bordertown SA Stawell Vic
ICM Agribusiness	V & J Walsh Pty Ltd
ICM Agribusiness Peechelba Feedlot	Whyalla Feedlot

9 References

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