

# Cattle pregnancy testing and ovarian scanning

for commercial purposes and  
scientific research, by laypersons

Consultation Regulatory Impact Statement



This publication has been compiled by Biosecurity Queensland, Department of Agriculture and Fisheries.

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## Summary

Pregnancy testing of cattle plays an important role in protecting animal welfare in the Queensland cattle industry and enabling international market access for live exports. It considerably assists in herd management and so, along with scientific research into animal productivity and implementation of practices that improve performance, can contribute significantly to the productivity of beef and dairy herds.

In 2016-17 cattle and calf production in Queensland was worth \$5,246 million to the State including \$264 million from live exports, while milk production was worth \$251 million at the farm gate. Off-farm processing adds considerably to these figures.

Under the Veterinary Surgeons Act 1936 (VS Act) performance of an “act of veterinary science” such as pregnancy testing for fee or reward is restricted to registered veterinary surgeons. This restriction is generally known as the practice restriction.

This Regulatory Impact Statement (RIS) examines the appropriateness of the practice restriction as it relates to:

- pregnancy testing of cattle by laypersons, by both rectal palpation and transrectal ultrasonography, for fee or reward (Section 4 VS Act); and
- ovarian ultrasound scanning performed by laypersons, where the activity has been approved by an Animal Ethics Committee under the Scientific Use Code, pursuant to Section 6 of the Animal Care and Protection Act 2001 (ACP Act).

AgForce, on behalf of the Queensland cattle industry, has sought the removal of the practice restriction in order to allow cattle producers a greater choice of service providers. The driver for this request is not necessarily to introduction of competition in pricing charged by veterinary surgeons. Rather, AgForce anticipates:

- more timely access to pregnancy testing services;
- avoidance of logistical challenges, and associated opportunity costs, as producers await the availability of a veterinarian to conduct pregnancy testing; and
- some reduction in travel costs charged by where long distances are covered by testers.

Anecdotal evidence is that these costs may be of the order of \$5 per head for pregnancy testing for the live export trade and less than this, but still significant, for pregnancy testing for herd management purposes. Illustratively, if removal of the practice restriction could reduce the cost by an average of \$1 per test for half of the PREgCHECK™ tests currently conducted, in a year this would save producers more than \$1.58 million per annum.

The costs of removing the practice restriction (or, equally, the benefits of retaining the practice restriction) are more difficult to quantify. The concerns centre around potential loss of testing quality and any adverse animal welfare or productivity consequences. Productivity consequences would largely be borne by producers, who could respond by continuing to use services perceived to be of higher quality, including professional veterinary services.

Animal welfare is of broader concern to society. The AVA contends that lay testing is of noticeably lower quality than professional testing. They have concerns about significant consequences for animal welfare, both in terms of pain and suffering imposed by the test itself and by inappropriate treatment of animals wrongly tested as not being pregnant. This may be true for relatively inexperienced lay testers, which would include producers currently allowed to test their own cattle under the exemption in the practice restriction where tests are not conducted for fee or reward. It

would be less true for experienced people attracted into lay testing commercially if the practice restriction was removed.

The extent of any animal welfare consequences, and society's valuation of those consequences, is impossible to quantify.

The AVA contends that the practice restriction has a range of incidental benefits derived from the greater exposure of cattle to veterinarians. These include a greater likelihood of identification of other animal health, welfare and biosecurity issues. Again, these impacts are impossible to quantify. For these reasons, it is not possible to conduct a meaningful cost-benefit analysis of the issue.

AgForce has further proposed the development of an accreditation scheme for lay pregnancy testers in one of the following forms:

1. The Department directly accredits laypersons along the lines of schemes operating in Western Australia and the Northern Territory; or
2. The Government approves an industry delivered accreditation scheme, where an industry body accredits individual testers.

This would maintain testing quality – and possibly even increase testing quality compared with tests conducted non-commercially by cattle owners themselves. The first option above falls within current Commonwealth guidelines for acceptance of lay pregnancy testers for live export. The second option would require industry to seek recognition of the arrangement directly from the Commonwealth.

The RIS also considers the impact of the practice restriction in relation to scientific research conducted under an Animal Ethics Committee approval under the *Animal Care and Protection Act 2001*. The AVA suggests that local veterinary surgeons are readily available to conduct the procedure. Researchers contend that the use of consistently available lay technicians provides more consistent diagnostic interpretation of ovarian scanning and promotes greater progress in productivity research.

The RIS nominates four policy objectives for consideration of this issue:

- Support for the agricultural sector's viability in an increasingly competitive international and domestic market;
- Support for the integrity of pregnancy testing and scientific research results;
- Incorporation of the importance of animal welfare as part of the social licence of providers of pregnancy testing services, to operate; and
- Imposing the lowest responsible regulatory burden, including costs to Government and compliance costs to the private sector.

Three options are proposed for consideration:

1. Status Quo – continue to restrict performance of pregnancy testing and use of transrectal ultrasonography to veterinary surgeons.
2. Remove the practice restriction – include pregnancy testing in the list of acts that are not veterinary science in Section 3 of the Veterinary Surgeons Regulation 2016 and enable conduct of transrectal ultrasound ovarian scanning under supervision of an Animal Ethics Committee.
3. Authorise laypersons to:
  - conduct pregnancy testing of cattle under an approved industry administered accreditation scheme; and
  - perform transrectal ovarian scanning under an AEC approval.

Option 3 is preferred because it provides a balanced solution in relation to availability of reliable testers in remote areas, animal welfare and veterinary practice viability. While it does not provide an immediate solution for testing of cattle destined for live export, it provides industry with a platform to seek endorsement of a scheme for lay testing from the Australian Government if desirable.

While a more detailed assessment can be found at Appendix D, the key issues are summarised in the following table:

	Option 1	Option 2	Option 3
Extra providers for remote areas for herd management	No gain in provider numbers	New entrants (legal) – unclear if increase would reflect or exceed black market	New entrants (legal) – estimated at 20-30 providers.
Extra providers for remote areas for export market	No gain in provider numbers	No gain in provider numbers	No immediate gain in provider numbers. However provides platform for industry to progress recognition of an accreditation scheme to the Commonwealth
Accuracy of diagnosis	Recognised training skill set	Variable skill set, due to mix in veterinary and lay testers of varying quality	Recognised specific training and skill set
Animal welfare	Recognised skill set plus additional services	Variable skill set and recognition, however previously black market testers may be willing to report animal welfare concerns	Recognised skill set, but limited to pregnancy diagnosis. Previously black market testers may be willing to report animal welfare concerns
Consistent research observations	Compromised by lack of continuity of personnel	Supported by consistency of personnel	Supported by consistency of personnel
Regulatory burden	Heaviest burden, but compromised on ability to conduct effective compliance	Lowest burden under the VS Act. Compliance under ACP Act conflicted.	Accredited persons have additional responsibilities, but barriers lower than veterinary surgeons
Availability of veterinary surgeons for other purpose	Preserved, with no right of election by consumers	Compromised as may threaten viability of more veterinary practices. Consumers can still elect to engage a veterinary surgeon.	Compromised, but with a more limited number of new entrants. Consumers can still elect to engage a veterinary surgeon.

Nonetheless, adoption of the final option will depend on the outcome of the public consultation process.

## Send us your feedback

Consultation on the RIS is open until close of business on Friday, 14 December 2018. Please send feedback to [bioseclegislation@daf.qld.gov.au](mailto:bioseclegislation@daf.qld.gov.au).

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# 1 Background

## 1.1 Purpose of this Regulatory Impact Statement

Pregnancy testing of cattle plays an important role in protecting animal welfare<sup>1</sup> and enabling international market access. Along with scientific research into animal productivity, and implementation of practices that improve performance, it can contribute significantly to the productivity of beef and dairy herds.

Under the *Veterinary Surgeons Act 1936* (VS Act) it is currently not an offence within Queensland for a layperson to perform an “act of veterinary science” where they do not receive fee or reward<sup>2</sup>. However, where the act is performed on a commercial basis, or provided pursuant to a remuneration arrangement, then performance of such an act is restricted to registered veterinary surgeons as “an act of veterinary science”. This restriction is generally known as the practice restriction.

This regulatory impact statement (RIS) will examine the appropriateness of the practice restriction as it applies to:

- pregnancy testing of cattle by laypersons, by both rectal palpation and transrectal ultrasonography, for fee or reward (Section 4 VS Act); and
- ovarian ultrasound scanning performed by laypersons, where the activity has been approved by an Animal Ethics Committee under the Scientific Use Code, pursuant to Section 6 of the *Animal Care and Protection Act 2001* (ACP Act).

## 1.2 Status of the review of the Veterinary Surgeons Act

In January 2013 a review committee consisting of five veterinarians was established to conduct a review of the VS Act. This committee released an information paper for public comment in September 2013, and presented its draft report to Government in May 2014.

The review highlighted the competing interests in regulation of the profession. In particular the practice restriction and the approval of a premises where veterinary science is practised were highly contentious. Given the difficulty in reconciling the competing positions of stakeholders in relation to the 2014 review report, it has been closed.

The Palaszczuk Government has determined to address the issue of lay pregnancy testing, and ultrasound ovarian scanning by laypersons under the Scientific Use Code, on a standalone basis.

## 1.3 What is a Regulatory Impact Statement

A crucial element in developing best practice regulation is effective regulatory impact analysis. This is a systematic approach to assessing the impacts of proposed regulatory policy options and is an integral part of good policy making processes. It is designed to improve the quality of regulatory policy by providing relevant and timely information to government decision makers about the expected impacts of different policy options for addressing a particular issue.

A key element of regulatory impact analysis is the Regulatory Impact Statement (RIS), which provides government decision makers with useful information on which to base their policy decisions and informs stakeholders of the reasons why a particular option is preferred. It also allows stakeholders to comment and provide new evidence in support of various policy options.

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<sup>1</sup> Refer discussion at 2.1.1 in relation to role of pregnancy testing in animal welfare.

<sup>2</sup> Advice from Crown Law dated 23 June 2009, indicates that while “fee” indicates payment for a particular service, reward implies return or remuneration for service more generally, such as a salary or wage.

One of the most important steps in a RIS is the assessment of impacts likely to result from implementing a proposal. A comprehensive RIS should consider all significant costs and benefits that a proposal is likely to impose on the community.<sup>3</sup>

## 2 Pregnancy Testing

### 2.1 Why pregnancy status matters

The pregnancy status of animals is important in a number of aspects including live export market access protocols, herd fertility, pasture management, business risk assessments, on farm productivity and animal welfare.

#### 2.1.1 Animal welfare

Pregnancy status has animal welfare implications for managing stock during drought, stock density in transit, stress and deaths of cows during land and sea shipment, stress and deaths of calves born in transit or in feedlots, heat stress at destination and the stage of development of foetuses at the point of slaughter.

The Independent Review of Australia's Livestock Export Trade commissioned by Senator Joe Ludwig, the then Minister for Agriculture, Fisheries and Forestry, and undertaken by Bill Farmer AO in 2011, observes "pregnancy testing is not foolproof in early pregnancy, but for breeding livestock early-pregnant (first third of pregnancy) animals should not be at greater risk than non-pregnant animals. However, as the pregnancy progresses so the risks increase."

The Animal Welfare Standards and Guidelines for the Land Transport of Livestock<sup>4</sup> also come into play for land transport of cattle more than 6 months pregnant and particularly within 4 weeks of delivery. Standards and guidelines in relation to spelling and watering of pregnant animals during transport were adopted under the ACP Act in January 2014.

In addition to the welfare risk to export animals posed by incorrect diagnosis of pregnancy status in animals beyond the third trimester<sup>5</sup>, welfare risks can also arise in a herd management context. For example, turning out animals incorrectly diagnosed as empty (not pregnant) into unmonitored paddocks that will not sustain the cow and calf, can result in pregnancy toxemia, animal suffering and deaths<sup>6</sup>. The Australian Animal Welfare Standards and Guidelines recognise the need to ensure adequate food supply for pregnant animals in Guidelines G2.1, G7.2 and G7.4<sup>7</sup>.

#### 2.1.2 Market access

Pregnant heifers are not desirable in importing country feedlots as pregnancy status affects commercial return on the animal. This is because:

- heifers are purchased on a live-weight basis, and so importers are paying for weight which cannot be recuperated as saleable product; and

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<sup>3</sup> Queensland Treasury, *The Queensland Government Guide to Better Regulation*, August 2016, <https://s3.treasury.qld.gov.au/files/guide-to-better-regulation.pdf>

<sup>4</sup> <http://www.animalwelfarestandards.net.au/files/2015/12/Land-transport-of-livestock-Standards-and-Guidelines-Version-1.-1-21-September-2012.pdf>

<sup>5</sup> Independent Review of Australian Livestock retrieved 25 September 2017 [http://www.agriculture.gov.au/Style%20Library/Images/DAFF/\\_data/assets/pdffile/0007/2401693/ind-ep-review-aust-livestock-export-trade.pdf](http://www.agriculture.gov.au/Style%20Library/Images/DAFF/_data/assets/pdffile/0007/2401693/ind-ep-review-aust-livestock-export-trade.pdf), page 61.

<sup>6</sup> <https://www.mla.com.au/research-and-development/animal-health-welfare-and-biosecurity/diseases/nutritional/pregnancy-toxaemia/>

<sup>7</sup> <http://www.animalwelfarestandards.net.au/files/2016/02/Cattle-Standards-and-Guidelines-Endorsed-Jan-2016-250116.pdf>

- for pregnant animals extra feed is diverted to the growing foetus rather than being used for maintenance and growth of the animal carrying the calf.

In Indonesia, the slaughter of pregnant animals is also resisted on religious grounds. Animals that are visually pregnant are fed until calving and incur significant extra holding costs for the importer.

### 2.1.3 Herd management

According to the Australian Veterinary Association (AVA) PREgCHECK™ Accreditation Scheme, inaccurately diagnosed pregnancy can cost producers on average at least \$300 per animal.<sup>8</sup>

For producers who breed either dairy or beef cattle, identifying the presence of infertile or empty cows can significantly affect farm economics by impacting fodder availability; pasture management outlays; expenditure on nutritional supplements, vaccinations and treatment for parasites; and time and expenditure on control, prevention and treatment of reproductive diseases<sup>9</sup>. The fertility status of cattle will influence decisions around herd culling, growing out and sale planning and will also impact sale price and market reputation of the producer.

Like any business, Northern beef producer profits are influenced by productivity and input costs. In the case of beef operations, some key drivers of productivity are reducing mortality, increasing sale weight and optimising reproductive rates. For example, the production of one extra weaner per 100 females is equal to an additional 1.5 kilograms per adult equivalent and offers the producer the additional income associated with the additional weight<sup>10</sup>.

## 1.4 The beneficiaries of pregnancy testing

Beyond the welfare of the animals, the beneficiaries of accurate pregnancy testing are:

- dairy operators for the purpose of herd management and calving intervals;
- cattle breeders and finishers, for purposes of herd management and final yields;
- feed lot operators and other finishers of beef herds, for purposes of yield of each animal;
- exporters of live animals wishing to protect market access, where animal welfare or pregnancy status can affect the desirability of Australian product;
- the general public, by protecting animals from adverse animal welfare outcomes due to either poor pregnancy testing technique or adverse events associated with inappropriate pregnancy status for transport;
- providers of pregnancy testing services, including laypersons, veterinary surgeons and NCPD/PREgCHECK™ veterinarians; and
- manufacturers and distributors of diagnostic tests and equipment used for pregnancy testing.

Market access has national significance. While this RIS is in relation to pregnancy testing of cattle within Queensland, the integrity of pregnancy testing outcomes in Queensland contributes to the international reputation of Australia as a whole. In turn, Queensland is exposed to reputational risk associated with the outcomes of other Australian jurisdictions.

## 1.5 Types of pregnancy testing

There are a number of different methods for pregnancy testing in cattle including rectal palpation, rectal ultrasonography, flank ultrasonography, milk tests and blood tests. These different methods vary in their suitability for early testing, foetal aging and for anatomical variations between animals.

<sup>8</sup> [http://www.ava.com.au/sites/default/files/ACV\\_website/ACV\\_A4FACT-PREG.pdf](http://www.ava.com.au/sites/default/files/ACV_website/ACV_A4FACT-PREG.pdf)

<sup>9</sup> <http://www.bvvets.com.au/resources/Pregnancy%20Testing%20Cows.pdf>,

[http://www.ava.com.au/sites/default/files/ACV\\_website/Dairy%20Case%20study\\_Final.pdf](http://www.ava.com.au/sites/default/files/ACV_website/Dairy%20Case%20study_Final.pdf)

<sup>10</sup> <https://futurebeef.com.au/wp-content/uploads/Improving-the-performance-of-northern-beef-enterprises.pdf>

There are also varying levels of accuracy, costs, time involved and risks associated with performance of each method, for the animal and the tester.

This RIS will only consider whether the most reliable methods of pregnancy testing. A discussion of pregnancy testing techniques can be found at Appendix A.

**Risks of invasive techniques include injury, or infection, to both the calf and cow and associated complications.**

**Risks to the tester of invasive techniques can include repetitive strain injuries and traumatic injuries to limbs.**

## 2.2 Types of pregnancy testing providers

### 2.2.1 Laypersons

While Queensland legislation provides that acts of veterinary science cannot be practised by other than veterinarians, for fee or reward, lay pregnancy testing training is provided at various Queensland training facilities to “Gain the necessary skills to conduct pregnancy testing on your own livestock”<sup>11</sup>. The training does not cover ultrasound testing techniques.

Current training for pregnancy testing for laypersons is relatively short and specific<sup>12</sup>. Some courses run for two days<sup>13</sup> <sup>14</sup>while training through Queensland Agricultural Training Colleges last three days (QATC)<sup>15</sup>. QATC describes the content as covering “draft animals and source information on joining to assist in pregnancy testing; restrain each animal for pregnancy testing using humane methods and facilities; detect pregnancy through several manually determined key indicators; maintain records of pregnancy testing; monitor animals after pregnancy testing”.

Competency elements, performance criteria and assessment parameters are detailed in the Commonwealth accredited training pages<sup>16</sup>. For the “Pregnancy Test Animals” qualification (AHCLSK408), there are six registered training providers (RTO) operating in Queensland<sup>17</sup>.

### 2.2.2 Veterinarians

In essence, Part 4 of the VS Act provides that a person is entitled to be registered as a veterinary surgeon if the person is the holder of a degree or diploma in veterinary science of a university or other body or a member of a college or other body of veterinary surgeons recognised under the Regulation.

A veterinary science degree takes five to six years of study<sup>18</sup> and is a prerequisite to gaining registration as a veterinary surgeon in Queensland. The course includes units on cell biology and

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<sup>11</sup> For example see [http://www.qatc.edu.au/courses/FactSheets/2017%20Short%20-%20Cattle%20\(Preg%20testing\)%20-%20EAC-Emerald-2019-12-31.pdf#search=pregnancy%20testing](http://www.qatc.edu.au/courses/FactSheets/2017%20Short%20-%20Cattle%20(Preg%20testing)%20-%20EAC-Emerald-2019-12-31.pdf#search=pregnancy%20testing).

<sup>12</sup> <https://training.gov.au/Training/Details/AHCLSK408> retrieved 29 January 2018.

<sup>13</sup> <http://www.allstateag.com.au/eventschedule/cattle-pregnancy-testing-course/> retrieved 29 January 2018.

<sup>14</sup> <http://sulcoradvisory.com.au/> retrieved 29 January 2018.

<sup>15</sup> <https://www.qatc.edu.au/courses/course-finder/preg-testing-cattle/> retrieved 29 January 2018.

<sup>16</sup> <https://training.gov.au/Training/Details/AHCLSK408#>

<sup>17</sup> Search <https://training.gov.au/Search/SearchOrganisation> on 18 August 2017 - RTO numbers 31503, 50898, 31788, 70207, 31258 and 1511.

<sup>18</sup> <http://www.ava.com.au/node/1114> retrieved 25 January 2018.

biochemistry, chemistry, animal structure and function, transition to disease, clinical sciences and clinical practice<sup>19</sup> and addresses a wide range of animal types.

Pregnancy diagnosis of cattle is taught as a component of a veterinary degree and includes instruction in anatomy, physiology and theriogenology, followed by competencies in manipulation of the reproductive tract of cattle. Competencies are intended to ensure students can identify a distressed animal and distinguish structures such as the bladder, rumen and kidney.

### **2.2.3 PREgCHECK™ Accreditation Scheme**

Under Export Advisory Notice 2016-22 PREgCHECK™ accredited testers are the only authorised providers of pregnancy testing services for export breeder and productive cattle to be transported by air or sea journeys of 10 days or more.

The PREgCHECK™ scheme was originally established by the AVA as certification system for cattle pregnancy diagnosis by ACV<sup>20</sup>. Accredited testers under the NCPD Scheme have their own unique NCPD registration number and are the only people authorised to use the NCPD Scheme Certification Mark on cattle tail tags, which are used to identify the pregnancy status of the animal.

Accreditation under the scheme is only available to registered veterinarians who are ACV members<sup>21</sup>. Experience in testing 2,000 head of cattle using manual palpation is required plus completion of a practical exam. The exam requires a total of 100 animals to be tested and the age of each foetus determined with a certain accuracy.

Once a pregnancy test is conducted, a certificate is issued by the veterinarian detailing the owner, veterinarian's name and registration number, testing date, total cattle tested and the number series of the pregnancy status identification tags applied<sup>22</sup>.

PREgCHECK™ includes the power to deal with unsatisfactory levels of performance. It includes details of criteria for application, admission and the complaints, investigation and sanctions system that operates under the scheme.

PREgCHECK™ training also includes modules on interpreting the results of pregnancy testing in herds to enable productivity comparisons against like enterprises and provide insights on retention of animals, desirable herd age profiles, nutrition, patterns of foetal age and economic performance.

Currently rectal palpation and B-mode ultrasonography are the only pregnancy diagnosis techniques approved for use under the PREgCHECK™ Accreditation Scheme.

### **2.2.4 Queensland providers and market served**

A discussion of the different markets created by Queensland and Australian Government legislation can be found at Appendix B. The following table summarises the outcomes of the legislation in terms of types of providers available and the types of markets/testing services they serve:

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<sup>19</sup> <https://www.jcu.edu.au/courses-and-study/courses/bachelor-of-veterinary-science> retrieved 25 January 2018.

<sup>20</sup> <http://www.ava.com.au/cattle/pregcheck-public>

<sup>21</sup> <http://www.ava.com.au/newsarticle/new-cattle-tags-protect-buyers-and-sellers>

<sup>22</sup> <http://www.ava.com.au/cattle/pregcheck-public>

**Table 1 - Queensland pregnancy testing provider segments**

QUEENSLAND MARKET FOR PREGNANCY TESTING OF CATTLE	Export Productive with sea journey > 9 days or air	Export Productive with journey < 10 days	Export Feeder/ slaughter	Herd Management	Own herd/ neighbour/ friend	Illegal or questionable markets	
						Grey Market	Black market
Relevant control	ASEL & VS Act	ASEL & VS Act	ASEL & VS Act	VS Act & ACP Act	VS Act & ACP Act	Market driven	Market driven
PREgHECK	✓	✓	✓	✓	✓	n/a	n/a
Vet who can demonstrable experience	✗	✓	✓	✓	✓	n/a	n/a
Veterinarian	✗	✗	✓	✓	✓	n/a	n/a
Unpaid layperson	✗	✗	✗	✓	✓	n/a	n/a
Paid layperson	✗	✗	✗	✗	✗	?	✗
Accredited layperson	✗	✗	✗	✗	✗	n/a	n/a

Unlike the Northern Territory and Western Australia, it is currently not possible to accredit laypersons to conduct pregnancy testing for fee or reward. Queensland's current requirements are out of step with most other Australian jurisdictions:

**Table 2 - Pregnancy testing legal requirements by jurisdiction**

Jurisdiction	Requirements
Northern Territory:	Veterinarians and accredited lay persons permitted
Western Australia:	Veterinarians and accredited laypersons permitted
South Australia:	Veterinarians and laypersons by transrectal ultrasound permitted
Tasmania:	Veterinarians and laypersons by external ultrasound permitted
Victoria:	Veterinarians and laypersons by manual palpation permitted
New South Wales:	Veterinarians and laypersons by manual palpation permitted

A brief outline of the requirements of other jurisdictions can be found at Appendix B.

### 3 The Problem in relation to pregnancy testing services

#### 3.1 Pregnancy testing of cattle as an act of veterinary science

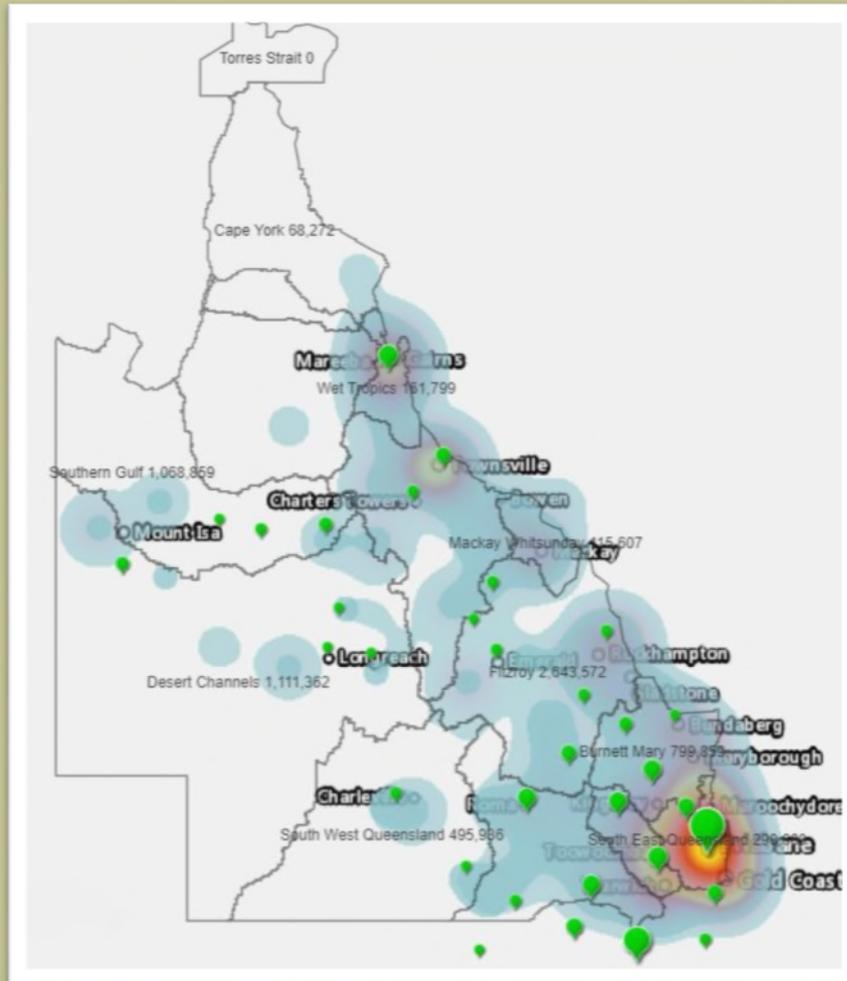
In 1990, a majority of the Queensland Supreme Court held that pregnancy testing, in itself, was an act of veterinary science<sup>23</sup>. The majority's reasoning was that a person performs an act of veterinary science if they use skill and knowledge of the same kind (but not necessarily the same quality) as that used by a veterinarian. All judges considered it was irrelevant whether or not the act is commonly performed by non-veterinarians.

<sup>23</sup> Muggleton v. Hall; ex parte Hall [1990] 1 Qd R 26.

Pregnancy testing has not been prescribed “to not be veterinary science” under the Veterinary Surgeons Regulation 2016 (the Regulation). Therefore, regardless of the diagnostic tool used, it is an offence for a layperson to undertake pregnancy testing for fee or reward.

**Some stakeholders consider that the maintenance of the practice restriction is depriving producers and laypersons of the opportunity to meet demand for testing services, particularly in some remote areas of the State:**

**Figure 1 - Indicative distribution of veterinary surgeons in Queensland<sup>24</sup>**



PREgCHECK veterinarians

While there are recognised shortcomings in the data, and the ability to present the data in such a small format, the map still demonstrates there are vast areas and cattle populations to be served in the Northern Gulf, Southern Gulf and Desert Channels, with only a smattering of providers.

**This is said to result in operational efficiencies and consequent opportunity costs. There are a number of trade-offs to consider, including availability of veterinary surgeons to these areas, where veterinary practice viability could be threatened by competition from laypersons.**

<sup>24</sup> Shortcomings include: point placed at centre of postcode (which in some cases places outside NRM region), large animal veterinarians have self-assessed and may relate to horses, points in time do not align (but all within last 4 years), difficulty of conveying concentration in small format.

## 3.2 Rationale for Queensland Regulation

A considerable level of skill is involved in pregnancy testing of cattle and is aided by experience and professionalism. This is recognised by the Australian Cattle Veterinarian's PREgCHECK™ accreditation scheme, and by accreditation schemes in other jurisdictions, which require the initial development of testing skills and maintenance of those skills through repetition and consistent practice. For example, the Western Australian scheme requires a rolling three year average of 500 per year<sup>25</sup>, as does the Northern Territory<sup>26</sup>. The PREgCHECK™ scheme stipulates at least 1,000 tests per year<sup>27</sup>.

False results have adverse consequences for herd management and therefore industry productivity; incorrect diagnosis can adversely affect market access and returns and have severe consequences for animal welfare.

These adverse consequences extend beyond cattle owners. Productivity impacts affect the broader supply chain and the communities depending on it, while animal welfare is a concern for the community as a whole.

While high standards of animal welfare have a productivity benefit for cattle owners, owners do not necessarily have a financial incentive to achieve the standards of animal welfare demanded by the community. In the absence of regulation, some cattle owners may not choose a standard of service that meets this broader societal interest.

The issue is not necessarily regulation *per se*, but rather the extent of regulation – whether a full veterinary degree is required or whether a narrower standard of qualification is required. There are costs and benefits that must be assessed:

- The more restrictive the regulation, the greater difficulty cattle producers may have in accessing testing services and the higher the direct travel cost and holding costs could be;
- The less restrictive the regulation, there is a *prima facie* risk that the quality of service will deteriorate in terms of accuracy and resultant animal welfare issues or productivity outcomes.

Regulation may also have some incidental consequences, both positively and negatively:

- On the positive side, if producers are required to engage veterinary surgeons, incidental benefits may accrue in terms of disease diagnosis and identification of other health issues that may adversely impact on herd productivity.
- Conversely, regulation may create a disincentive for lay testers operating illegally to report other animal health and welfare concerns.

## 3.3 AgForce concerns

AgForce has suggested that the requirement to use veterinary surgeons is sometimes resulting in circumstances where primary diagnosis is being verified by a second practitioner e.g. inexperienced veterinary surgeons or accredited laypersons being checked by ACV veterinary surgeons prior to export. This can result in unnecessary stress being placed on those animals being retested<sup>28</sup>. The

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<sup>25</sup> <http://www.vsbwa.org.au/wp-content/uploads/2013/07/Form-3.7-Pregnancy-Testing-of-Cattle-Authorised-Person-01112016.pdf>

<sup>26</sup> [https://nt.gov.au/\\_data/assets/pdf\\_file/0003/373629/guidelines-accreditation-non-veterinary-preg-testing-cattle-export.pdf](https://nt.gov.au/_data/assets/pdf_file/0003/373629/guidelines-accreditation-non-veterinary-preg-testing-cattle-export.pdf)

<sup>27</sup> Pregnancy Diagnosis in Cattle, 3<sup>rd</sup> ed., Australian Cattle Veterinarians, 2014 pp. 75-76.

<sup>28</sup> AgForce, Lay pregnancy testing of cattle for live exports Meeting Brief: Tuesday October 11 2016

AVA has argued to the Department that double testing, with consequential risks to animal welfare, is more likely to occur to check pregnancy tests undertaken by lay testers.

An additional consideration applying to any regulation is its acceptance by the target community. If a regulation is not accepted, resulting in widespread avoidance or non-compliance, this has adverse implications for the community as a whole.

### **3.4 AVA Support for the current regulatory environment**

The AVA contends that Delivery of pregnancy testing services by laypersons could threaten the financial viability of regional veterinary practices. It suggests that producers could therefore lose access to the full range of veterinary services they require and that the presence of veterinary surgeons in rural areas plays a role in passive biosecurity surveillance, emergency response and identification of animal health and welfare concerns in general.

It also argues that inexpert delivery of pregnancy testing that results in either injury to animals, or unreliable diagnostic outcomes, has the potential to discourage producer adoption of pregnancy testing and thereby deprive industry of a valid herd productivity advantage.

Finally, the AVA notes that veterinary presence can act as a reminder for disease prevention such as vaccinations, trace element advice, drought management as well as the benefit of passive biosecurity surveillance on farm.

### **3.5 Issues with current Queensland legislation**

There are some anomalies in our legislative environment that are discussed below.

#### **3.5.1 Lay testing without fee or reward**

In considering any change to Queensland legislation, protecting the welfare of animals must also be considered in light of section 25M of the VS Act which provides that it is not an offence to practice veterinary science other than for fee or reward. In addition, section 3(1)(h) of the Regulation provides that teaching techniques about pregnancy testing of cattle by a veterinary surgeon to an owner of cattle is not considered to be an act of veterinary science.

The exception under S25M may accommodate those circumstances where cattle producers are themselves capable of testing to a standard that is adequate for their purposes. In those circumstances, regulation to the contrary may be unenforceable.

**However, the issue that must be addressed in this case, is the apparent acceptability of animal welfare risk where lay owners pregnancy test cattle, yet animal welfare risk is argued to be heightened where lay testers are being paid.**

#### **3.5.2 Conflicting influence of ownership**

Within Australia, the Livestock Production Assurance (LPA) Scheme provides an on-farm assurance program covering food safety, animal welfare and biosecurity<sup>29</sup> and is discussed in more detail at 7.4.2.

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<sup>29</sup> <https://www.mla.com.au/meat-safety-and-traceability/red-meat-integrity-system/about-the-livestock-production-assurance-program/>

It is arguable that even without the existence of the LPA, the owner of cattle has a vested interest in the continued welfare of their livestock and that might be regarded as a significant driver for good welfare practices.

Despite both this vested and LPA interest, there may be owners that lack clarity about animal welfare and may, at times, be less than diligent about when:

- an animal should be excluded from testing; or
- the risk to welfare from false negatives (the animal is tested empty but is actually pregnant) is relevant.

The pressure of opinions, formed by owners, also has potential to be passed to both veterinary and lay practitioners engaged by the owner. A pregnancy testing provider must be able to deal with discretionary pressure that may come from owners and have the support of a professional body for those incidents where they feel obliged to depart with an owner's wishes.

### **3.5.3 Reputational risk of providers of testing services**

It is arguable, that for both veterinary and lay providers, the ongoing welfare of animals being tested will reflect on the reputation of the operator and the likelihood of return or referral business. A provider with a reputation for inflicting injury or stock loss does not present an attractive choice to producers and poses a threat to the social licence of other providers operating in the same class. Therefore, in the absence of the discretion of ownership, there is a meaningful incentive on pregnancy testing service providers to protect the welfare of any animal intended to be tested.

### **3.5.4 Illegal Operators**

It appears likely that a "black market" exists in Queensland, where laypersons are unlawfully providing pregnancy testing services, for fee or reward. Motivations for this could include:

- the incorrect belief (due to common practice, incorrect advice or the lack of restrictions in human health care) that it is lawful for a non-veterinarian to perform such acts
- perceptions surrounding the impracticality, or cost, for veterinarians to perform the acts
- the opinion that the restriction is not justified.

Compliance efforts in relation to unauthorised operators are hindered by the reluctance of users to provide evidence that would extinguish access to the service. With the exception of any welfare issues that may arise under the ACP Act, both the harms and benefits that are associated with use of illegal operations is private.

In the absence of willing witnesses, the capacity to undertake active compliance activity is limited, and in the absence of major animal welfare concerns, it is difficult to justify expending the significant public resources that would be required to establish the evidence needed for a successful prosecution.

In addition to a "black market", there is also likely to be a "grey market" for some acts of veterinary science, including pregnancy testing. An example might be where a contractor provides a number of herd management services to a producer such as mustering and branding. Pregnancy testing services may be included, but not separately charged for, and so not obviously provided for fee or reward.

The extent of “black” or “grey” market activity is unknown. Advice from the AVA is that veterinary surgeons conduct an estimated 79% of pregnancy testing undertaken in Queensland<sup>30</sup>. The remaining 21% would be tested on a non-commercial basis or in the “black” or “grey” markets for non-professional testing services.

The continued use and protection of illegal providers suggests that users value the service. The *prima facie* inference here is that both accuracy rates and losses due to poor animal welfare practices are being self-regulated via market forces, although this does not necessarily indicate that accuracy could not be improved or that higher animal welfare outcomes are not warranted.

### 3.5.5 Other invasive procedures

Other invasive, and therefore risky, activities that can be legally conducted by laypersons (with or without fee or reward) in Queensland include semen collection, artificial insemination and embryo transfer (where no surgical element is involved) are at odds with the current restriction on pregnancy testing. The Willis dropped ovary technique is a case in point<sup>31</sup>.

#### Case Study: Willis dropped ovary technique

Section 3(1)(c) of the Regulation provides that the Willis dropped-ovary technique (WDOT) is not considered to be an act of veterinary science. WDOT is used for spaying cattle by dropping ovaries into the abdomen using a prescribed instrument. It involves piercing the wall of the vagina with the instrument, placing each of the ovaries into a hole in the instrument via rectal manipulation, severing the ovaries with a sharp edge and dropping the ovaries into the abdomen.

In a 2003 study article Jubb *et al* observed that:

*The WDOT, when used by the more experienced operator in this study at Site 3, achieved a high processing rate, low morbidity and minor temporary effects on growth of animals. The ... one death that occurred at Site 3 show that the technique ... is not free of risk. The difficulties and complications encountered by the less experienced operator at Sites 1 and 2 show that the technique can be difficult to master, even by someone experienced in palpation of the reproductive tract.*

The observation that experience in palpation of the reproductive tract might be an advantage in conducting WDOT indicates that WDOT is the more risky procedure.

## 3.6 Understanding the points of vulnerability in the supply chain

To fully consider the development of options to address the problem, it is also necessary to identify other points of vulnerability in the supply chain.

### 3.6.1 Adverse export events

The Australian Department of Agriculture and Water Resources (DAWR) undertakes investigation of adverse events as a result of industry, animal welfare groups and general public complaints as well as self-reporting by exporters and departmental audits. An examination of the investigations noted at 21 March 2017 on the DAWR website<sup>32</sup> reveals that of the 134 investigations noted, only six specifically note ASEL as the relevant standard.<sup>33</sup> Of those, only two relate to pregnancy status: one relates to

<sup>30</sup> AVA, *Pregnancy diagnosis of cattle for live export*, Submission from the Australian Veterinary Association and Australian Cattle Veterinarians to Queensland Department of Agriculture and Fisheries, February 2016

<sup>31</sup> TF Jubb, G Fordyce, MJ Bolam, DJ Hadden, NJ Cooper, TR Whyte, LA Fitzpatrick, F Hill & MJ D’Occhio, *Australian Veterinary Journal*, Vol 81, Nos 1 & 2, January, February 2003

<sup>32</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-regulatory-compliance>

<sup>33</sup> There are a possible 5 or 6 other matters that may relate to animal head counts, unloading or on board conditions.

the pregnancy status of breeder cattle to Qatar by air; and the other slaughter cattle bound for Mauritius by ship.

While the vulnerabilities identified in these investigations have since been addressed, the lessons learned serve to highlight the issues that must be addressed in any proposal for lay pregnancy testing.

### **3.6.2 Breeder cattle sent to Qatar by air**

In this case the complainant was concerned that full term calves were born, earlier than would be expected if they had been 250 days (or less) pregnant at the time of export.

As the export was for breeder purposes, a PREGCHECK™ veterinarian was required to undertake foetal aging. When the complaint was made, the department referred the matter to the National Cattle Pregnancy Diagnosis Scheme. NCPD advised that there is a two week margin of error acceptable for cattle up to approximately four months of gestation and that after four months, the margin for error increases to 30 days.

As normal gestation ranges from 272 to 293 days, it is possible that a cow diagnosed as 250 days pregnant before departure was already at 280 days and therefore within the parameters for a full term birth.

Consequently, no breach of ASEL was established in relation to the pregnancy testing.<sup>34</sup>

### **3.6.3 Slaughter cattle sent to Mauritius by sea**

On 4 October 2012, 2061 slaughter cattle were exported from Geraldton, Western Australia to Mauritius. In November 2012 the importer advised the exporter, that while in the feedlot in Mauritius, two heifers had given birth and four others aborted pregnancies.

The exporter sent a veterinarian to Mauritius in November 2012 to determine if there were any more pregnant animals. Out of 260 animals tested, 15 were found to be pregnant and nine of those pregnancies should have been detectable before export. The investigation also uncovered information that two calves were born aboard ship.

There were a number of possible issues identified as contributors to this incident:

- while the exporter produced a pregnancy declaration from a registered veterinarian that the animals were not pregnant, the certificate was found to be out of date;
- inadequate animal identification and record keeping on the part of the exporter; and
- inaccurate pregnancy testing by some of the testers.

Remedial actions have since been put in place by the exporter and Export Advisory Notices issued by DAWR.<sup>35</sup>

### **3.6.4 Supporting data for welfare concerns**

Apart from these two incidents investigated by the Commonwealth, securing any reliable empirical data in relation to failures by providers of pregnancy testing providers is problematic.

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<sup>34</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-regulatory-compliance/qatar-breach-allegations>

<sup>35</sup> [http://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-regulatory-compliance/mauritius\\_-\\_january\\_2014](http://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/regulatory-framework/compliance-investigations/investigations-regulatory-compliance/mauritius_-_january_2014)

Supply chain players are reluctant to alienate other players within the supply chain. There also appears to be a fear that disclosure of any failings in the system would promote an adverse reaction from regulators at a state, territory, national and international level.

### 3.6.5 Identifying the points of vulnerability

Nonetheless, there are a number of factors that need to be taken into consideration.

For example, an alleged 2015 incident out of Darwin, is cited as an example of where lay pregnancy testing providers are failing to deliver reliable outcomes. It is alleged that an exporter arranged for a secondary scan by a PREgCHECK™ veterinarian, of cattle originally certified by a lay practitioner. Of the 1,360 cattle subject to secondary testing, the NCPD is alleged to have determined that 95 (7%) would have been detectably pregnant at the time the lay certification was provided. While around half of the pregnancies were said to be between 2-3 months, it is alleged that 30% were 4-5 months and 20% were 6-7 months pregnant<sup>36</sup>.

The presence of pregnancies, particularly those that are advanced, is *prima facie* damning whether the tester is a veterinary surgeon or a layperson. The AVA suggests there is other anecdotal evidence that Northern Territory exporters, who have their cattle re-tested, consistently find false negatives of around 5% in heifers tested by laypersons and that the error rate for veterinary surgeons is consistently lower. The skill set of any tester is a clear point of vulnerability<sup>37</sup>.

While not necessarily present in the above example, the ACV has also identified a number of additional points of vulnerability in the supply chain that could allow detectably pregnant animals to enter a consignment whether the tester is a veterinary surgeon or layperson:

- Out of date certificates presented by exporters
- Provision of the wrong certificate by exporters
- Scanning the incorrect animal
- Failure to reliably tag or identify pregnant and non-pregnant animals
- Errors in drafting according to pregnancy status (on occasion extending to a mob)
- Incorrect recording of status by the note keeper assisting the tester/s
- Poor management of stock between testing on farm and time to loading at the dock
- The temptation to use the sale opportunity to remove pregnant cows with poor temperaments from the herd
- Producer commitment to compliance and a lack of care in management.

Generally, the causes of non-compliance in any regulatory environment can range from a lack of awareness or understanding, difficulty of compliance, perceptions about the chances of non-compliance being detected, to deliberate flouting of “the rules” for personal gain.

Observations about producer compliance commitment can apply equally to the providers of pregnancy testing services. That is, it is conceivable that some providers of testing services could be tempted to provide certificates for testing that is not undertaken or that is at odds with actual pregnancy detections.

Confounding factors need to be eliminated in order to isolate the integrity and competency of the pregnancy testing provider, no matter whether the tester is a registered veterinarian, a PREgCHECK™ veterinarian or a layperson. Without open and cooperative participation of all players

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<sup>36</sup> Submission of the AVA, received by email dated 2 February 2016

<sup>37</sup> Ibid

in the supply chain unequivocal identification of the point in the supply chain, responsible for the presence of animals without the desired pregnancy status, is problematic.

In Queensland, the accuracy of pregnancy testing by veterinary surgeons is not the subject of discrete investigation by the Veterinary Surgeons Board. Many veterinarians, particularly those in an urban environment, would not be maintaining cattle pregnancy skills learnt during their degree. Maintenance of skills would be an essential element of any accreditation scheme.

## 4 The market for pregnancy testing of cattle

### 4.1 Size of market

Table 1 shows total cattle numbers by Queensland region.

**Table 3 - Cattle numbers by Queensland regions 2016**

Region	Cows & Heifers >1 yo	Total	Region	Cows & Heifers >1yo	Total
Border Rivers Maranoa-Balonne	523,117	1,206,058	Mackay Whitsunday	63,242	115,607
Burdekin	648,744	1,300,370	Northern Gulf	518,972	833,925
Burnett Mary	424,984	799,859	Southern Gulf	660,866	1,068,859
Cape York	46,186	68,272	South-East Queensland	166,311	298,660
Condamine	179,284	440,685	South West Queensland	258,825	495,936
Desert Channels	557,442	1,111,362	Wet Tropics	84,868	161,799
Fitzroy	1,234,371	2,643,572	<b>TOTAL</b>	<b>5,367,211</b>	<b>10,544,965</b>

Source: ABS Cat 7121.0, *Agricultural Commodities, Australia, 2015-16*, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/7121.0>

### 4.2 Live export statistics

In 2014/15, Queensland was estimated to have 41% of the cattle population of Australia. A total of 218,087 cattle were exported out of Queensland in the 2017 calendar year. Of those 215,444 were exported as feeders or for slaughter, with only 2,643 intended for productive or breeder purposes. The vast majority of export occurred through Townsville, including 201,219 feeder/slaughter cattle and 2,643 productive/breeder cattle. A total of 1,850 cattle passed through Karumba and another 12,735 passed through Brisbane. Of the total exported 63,328 were destined for Vietnam, 3,116 for the Philippines and 12,375 for Japan. Indonesia accounted for 139,268 head, with only 2,430 classified as being for productive purposes<sup>38</sup>.

It is important to note that ASEL only requires the services of PREgCHECK™ providers for the breeder/productive market for air or sea journeys over 10 days. In Queensland, testing of breeder/productive cattle for transport by air, or sea journeys under 10 days, only a veterinary surgeon with demonstrable experience and the feeder/slaughter only requires a registered veterinary surgeon. Travel times to Indonesia, which is our largest market, generally range from seven to nine days.

<sup>38</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/live-animal-export-statistics/livestock-exports-by-market> - accessed 6 March 2018

Indonesia has introduced a requirement that 20% of live cattle imports be productive. Logically this will cement a portion of demand for pregnancy testing services by either PREgCHECK™ accredited providers or veterinary surgeons with demonstrable experience. In theory this amounts to at least 27,000 PREgCHECK™ or “demonstrable experience” pregnancy tests each year.<sup>39</sup>

Some additional demand for PREgCHECK™ or “demonstrable experience” testing will also arise from export of breeders to other markets.

Further demand for pregnancy testing arises for female feeder/slaughter cattle, which must be tested as empty in the 30 days before departure. Hard data on the ratio of male to female feeder/slaughter cattle is not available. However as a rough guide, industry sources suggest that for export purposes, an average ratio close to one female to every male is appropriate. In order to satisfy ASEL requirements, in Queensland, this means that on average 50% of the export herd (less testing required for breeder/productive cattle) will require pregnancy testing by a veterinary surgeon.

Even if we assume that the sea journeys out of Queensland are all longer than 10 days, then the legislative demand for PREgCHECK™ provider services in the last four calendar years has ranged from only 213 to 10,374 export breeders<sup>40</sup> per year. Nonetheless it is likely that in many cases, if a PREgCHECK™ provider has travelled to a property for breeder/productive checking purposes for journeys by air or sea of over 10 days, they will also complete any testing necessary on females intended for slaughter/feeding.

### 4.3 General demand

In September 2017 the AVA advised that there are 156 accredited PREgCHECK™ providers in Queensland. Despite the low rate of legislative demand, the AVA estimates that for Queensland in 2014, PREgCHECK™ providers performed 16,064 pregnancy diagnoses each on average or 2.5 million tests for the year. The AVA furthers estimate that 79.3% of pregnancy testing in Queensland is provided by veterinary surgeons though the percentage performed by non-PREgCHECK™ providers is unclear. For veterinary surgeons specialising in cattle work, it is estimated that 43.3% of their time is spent doing pregnancy testing. Practices range from one to eight full time equivalent veterinarians, each supported by 1.5 staff.

If the average number of tests undertaken by PREgCHECK™ providers is extrapolated, then at least 2.5 million pregnancy tests were performed in 2014. Based on Australian Bureau of Statistics for 2014, this suggests that, if each animal was tested once in the year, around at least 38% of all female cattle were tested for some purpose within the year.

Using data from the DAWR<sup>41</sup>, data gathered during the Department's contingency planning for foot and mouth and a count of postcodes for registered veterinary surgeons in Queensland, the availability of veterinary surgeons to conduct testing is:

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<sup>39</sup> However, current indications are that the 20% quota will not be achieved this year or in the near future. See <http://www.abc.net.au/news/rural/2018-05-22/indonesian-cattle-importers-unlikely-to-comply-with-breeder-rule/9782172>

<sup>40</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/live-animal-export-statistics/livestock-exports-by-market> - accessed 6 March 2018

<sup>41</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/live-animal-export-statistics/livestock-exports-by-market> - accessed 6 March 2018

**Table 4 - Potential demand for pregnancy testing services**

Potential demand in short term	Legislative requirement	No. of cattle	No. of providers Qld	Tests per provider
Export breeders/ productive by air or sea greater than 10 days	PREgCHECK™ accredited only	Say 15,000	156	96
Export breeders/ productive by sea less than 10 days	Registered veterinarian surgeons with demonstrable experience	Say 15,000	743*	20
Export feeder/ slaughter by air	Registered veterinarian surgeon	Say 2	3,064	n/a
Export feeder/ slaughter by sea	Registered veterinarian surgeon (or accredited layperson elsewhere)	Say 80,000	3,064 or 743	26 per vet or 108 per large animal vet
Potential herd management/other	Registered veterinarian surgeon (or accredited layperson elsewhere)	5,367,211	3,064 or 743	1,751 per vet or 7,224 per large animal vet

\* Note: This figure is based on those veterinarians identifying themselves as large animal practitioners for the purpose of foot and mouth disease contingency planning. It may well overstate the number of practitioners who can “attest to demonstrable current experience” in cattle pregnancy testing and include equine specialists.

These figures suggest that there are ample veterinary surgeons available to meet the majority of demand. The AVA advice that PREgCHECK™ providers are conducting in excess of 16,000 tests each a year suggests that PREgCHECK™ providers are capturing the bulk of the market. This may be because:

- these practitioners generally make themselves available in the highest demand regions;
- purchasers of pregnancy testing services value the PREgCHECK™ scheme as a premium service;
- testing of other animals may be undertaken by PREgCHECK™ providers while they are on premises for the purpose of export breeders or productive cattle to be transported by air or sea greater than 10 days; or
- any combination of these and other factors.

Despite the apparent availability of providers, the availability of PREgCHECK™ providers, large animal veterinary providers and general veterinary providers, the data above becomes more telling when broken into natural resource management areas<sup>42</sup>:

<sup>42</sup> Like the map included at Paragraph 15, the data contained is indicative and will not accurately reconcile to the previous table e.g. visually location is at centre of postcode, postcodes can span more than one NRM area, overlapping NRM management arrangements and veterinary practices operating out of multiple postcodes to name a few.

**Table 5 Indicative number of veterinary providers by natural resource management region**

Region	Square km (000s)	Human Pop.	Head of Female Cattle > 1 year (2016)	PREg CHECK vets	Large animal vets	Vets	Large vets per 1000 km <sup>2</sup>	Tests req'd per large vet
Desert Channels	499	10,653	557,442	3	3	16	0.01	185,814
Southern Gulf	206	27,000	660,866	9	9	10	0.04	66,086
Northern Gulf <sup>43</sup>	160	7,200	518,972	8	8	22	0.05	64,871
South-West Queensland	191	7,524	258,825	5	5	9	0.03	51,765
Burdekin	295	239,695	648,744	16	18	222	0.06	36,041
Fitzroy	158	235,513	1,234,371	28	54	143	0.34	22,859
Border Rivers Maranoa-Balonne	107	43,943	523,117	22	39	57	0.36	13,413
Burnett Mary	56	316,812	424,984	20	73	264	1.30	5,822
Condamine	24	196,257	179,284	17	51	84	2.13	3,515
Mackay Whitsunday	9	136,654	63,242	0	24	49	2.67	2,635
Wet Tropics	21	253,256	84,868	5	40	158	1.90	2,122
South-East Queensland	23	3,197,730	166,311	18	397	2,168	17.26	419
Cape York	102	15,416	46,186	0	0	2	0	-

Generally, veterinary services are available near Brisbane and Townsville however the ports at both Karumba and Weipa (where small numbers of livestock are exported from) are poorly serviced. Certainly, veterinary services are not necessarily located near properties requiring the service. Testing on farm is usually preferred, rather than risking the transport of animals later found to be pregnant.

The AVA reports that it is not aware of any claims that producers have had specific difficulties in accessing pregnancy testing services. They further advise that veterinary surgeons numbers have been increasing by around 5% per annum in Queensland. The distribution of the new registrants is not known.

The number of people involved in non-commercial testing, or the “black” or “grey” markets for testing services is unknown. Based on the AVA assertions that 21% of testing is conducted by laypersons, and the minimum number of tests conducted each year by PREgCHECK™ providers is 2.5 million, then there may be over 650,000 non-professional tests annually. The split between paid tests and those performed without reward is unknown. However, it appears likely a small number of lay testers are performing testing for a large proportion of their time and that significant numbers of people are involved.

<sup>43</sup> It appears reasonable that a number of veterinary surgeons from the Wet Tropics and Burdekin might serve this area to some extent.

AgForce have asserted that as many as 100 additional pregnancy testers may be available to the market if lay pregnancy testing was no longer an offence, although it estimates that uptake of a formal accreditation scheme would likely limit uptake to perhaps 20 or 30 pregnancy testing technicians<sup>44</sup>. This would represent a resource to industry of additional skilled laypersons who do not wish to operate illegally for herd management, yield, reproductive status verification and scientific research purposes.

#### 4.4 Direct and indirect cost to producers

In relation to pricing for professional pregnancy testing services, AVA advises:

*While some practices charge in \$4.50 plus travel, an indicative average cost of \$3 per head is likely to be accurate for some areas of Queensland, however the price varies considerably depending on locality, herd size and other factors.*

The AVA has further advised that, in south-west Western Australia, lay testers charge \$3.40 per animal compared with \$3.20 by veterinary surgeons. This supports anecdotal evidence (see below) that there is little difference between the direct fee charged by a veterinary surgeon to that charged by a lay tester.

However, as noted above, layperson testing can often come bundled with other services, and there are also indirect costs.

The pregnancy test for export is undertaken before the cattle are consigned from the property of origin, which may be remote, to the export holding. The following scenario was provided by Mr Markus Curr of Yelvertoft Station in north Queensland:

*“..... there are often times when 10 000 to 20 000 head ship out of both Townsville and Darwin in the same week, often with a percentage of the Darwin shipment being sourced from Queensland, with the Qld cattle requiring pregnancy testing by a vet and the NT cattle by an accredited person. It is at these times that many properties in Northern Queensland, over a large geographical area require a vet in the same week. It is at these peak times that there are not enough vets to cover the area, which in turn leads to production cost and welfare issues.*

*The increase in production costs does not come from the pregnancy testing cost but the travel cost. Along with cattle having to be held in yards or holding paddocks until a Vet is available. An example of my own personal situation is the following:*

*To send 6 decks on a boat from Wensley at Julia Creek both the lay pregnancy tester and vet will charge the same amount, but the lay pregnancy testers is based within 40km and does not charge travel. The vet if I am extremely lucky will need to come from Cloncurry 200km away, charging a minimum of \$2 per Km each way or an additional \$800. And I may or may not be able to get someone out of Cloncurry so will need to use a vet from Mt Isa adding an additional 260km or \$520. Adding an additional cost of between \$3.70 to \$6.00 per head. Often this travel amount is equal to the trucking bill. This is just an example of travel cost not the additional weight loss of cattle having to be yarded twice or held in holding paddocks, to meet both vet availability and the pregnancy testing timeframe of 30 days, with boat dates often changing”.*

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<sup>44</sup> J. Nason, *National review of cattle preg testing could lead to Australia-wide standard*, Beef Central, <https://www.beefcentral.com/news/national-review-of-cattle-pregnancy-testing-could-lead-to-australia-wide-standard/>, accessed 27 October 2017

Retesting may be required before loading if the land portion of transit is delayed, with consequential costs and animal welfare risks.

## **4.5 AgForce proposal**

AgForce Queensland is a peak organisation representing the interests of Queensland's rural producers. It is leading industry's contribution to development of a scheme to underpin pregnancy testing services provided by lay practitioners.

Assisted by forums chaired by the Department, AgForce is working on behalf of, or with, industry groups such as the Queensland Live Export Association, the Cattle Council of Australia (CCA), Australian Lot Feeders Association (ALFA) and the ACV.

There is general consensus that, no matter the professional status of the provider, there is a need for an accreditation system to ensure pregnancy testing activities meet animal welfare standards and competency.

AgForce has proposed an industry delivered accreditation scheme. The accreditation scheme has been modelled on the PREgCHECK scheme and has three key steps:

1. Completion of a unit of competency/certificate of attainment
2. Access to the accreditation tool to record a period of practice and repetition to develop reliable testing skills
3. Examination and certification.

Named *TestRight* the scheme aims to provide transparency of practice and skills through a data capture tool. Customers will be able to see the level of experience and accuracy of participants in the scheme.

The proposal includes a process for acquiring skills through repetition and maintains an active log of these activities in the data capture tool. The proposal is also supported by provision for other aspects such as examiner qualifications, maintenance of ongoing skills, reporting, trace forward and back of tested animals, certification of animals, an independent oversight committee, independent manager of the scheme, complaints, appeals and investigation capacity, and proportionate sanctions.

## **5 Acts performed by Laypersons undertaking ovarian scanning for scientific research**

Generally, research can include government initiated, or industry commissioned, research conducted by academic bodies, government departments, industry research arms or agents appointed by any of these bodies to assist with the research.

Non-veterinarians have an important role in the conduct of academic research and bring a complimentary set of skills that are essential to the full spectrum of scientific knowledge. A part of the research process, acts that are considered to be acts of veterinary science can become required. Under the current legislative environment, conduct of these acts must be referred to veterinary surgeons.

## **6 The Problem in relation to laypersons undertaking ovarian scanning for scientific research purposes**

The VS Regulation does not provide for research activities to be exempted from acts of veterinary science. Therefore any institution undertaking animal research must comply with the provisions of both the VS Act and the ACP Act.

**Due to the location of research facilities, availability of veterinarians can be problematic and, in addition to timing, the use of multiple providers can produce inconsistency in interpretive results.**

**Researchers consider it is highly desirable to have the same tester, or cadre of testers, conduct all testing so that the results are as timely, consistent and reliable as possible. To achieve this, it is argued there is merit in having competently trained laypersons conduct the scanning under an AEC approved arrangement.**

## 6.1 Legislation

The *Animal Care and Protection Act 2001* (ACP Act) requires a person using animals for scientific purposes to register as a scientific user, comply with the scientific use code and conduct the activities with the approval and under the supervision of an animal ethics committee (AEC) established by the research institution.

AECs must include a veterinarian who is generally not an employee of the research institution. AECs are constituted in accordance with the requirements of the Australian code for the care and use of animals for scientific purposes (known as the scientific use code) and must:

- ethically review and decide on applications and other activities associated with the use and care of animals for scientific purposes, including research and teaching
- monitor the care and use of animals for scientific purposes
- conduct follow-up review of approved projects and activities
- approve guidelines for the care and use of animals
- take actions regarding unexpected adverse events and non-compliance
- report to the relevant institution
- provide advice and recommendations to the relevant institution.

Institutions that use animals for scientific purposes must implement processes so that the governing body of the institution or its delegate (a senior member of the institution) is assured of compliance with the code and any relevant legislation. These processes must at least include establishing one or more AECs directly responsible to the governing body of the institution or its delegate.

Where there is minimal use of animals for scientific purposes, institutions may access another institution's AEC (external AEC) or jointly establish an AEC with another institution.

Before using animals, each investigator or teacher must ensure they or their institution are registered with Biosecurity Queensland and have AEC approval for the particular activity/project.

## 6.2 Reproduction genomics - *Repronomics*<sup>TM</sup>

Established in 2013, the *Repronomics* project is a five year collaborative project looking to improve genetic fertility traits in Brahman dominated herds in northern Australia. Co-funded by Meat & Livestock Australia, it is co-delivered by the Department of Agriculture and Fisheries' Agri-Science Queensland, University of New England's Animal Genetics and Breeding Unit (AGBU) and the Northern Territory Department of Primary Industry and Fisheries (NTDPIF).

Agri-Science Queensland's research contribution is conducted at its Brian Pastures (Gayndah) and Spyglass (Charters Towers) research facilities. Part of the project requires ultrasound scanning to

visualise ovaries in beef cattle to ascertain the reproductive phases of cows and heifers. Consistency of measurement is critical in the context of controlled scientific study.

### 6.3 AVA Position

The AVA contends that there are enough veterinary surgeons located within a suitable distance of research facilities to meet ovarian scanning needs of the *Repronomics* Project.

### 6.4 Application of the practice restriction to scientific users in other jurisdictions

Veterinarian legislation in most other Australian jurisdictions exempts procedures performed during research from the practice restriction. For example:

- In New South Wales, veterinary legislation exempts from the practice restriction a person who holds an authority to carry out animal research under the Animal Research Act 1985 (NSW) and acts in accordance with that authority.
- In the Australian Capital Territory, the practice restriction does not apply to a procedure for which animal ethics approval has been given.
- In South Australia, the practice restriction does not apply to the treatment of an animal pursuant to a licence to carry out research under the Animal Welfare Act 1995 (SA).
- In Western Australia, veterinary legislation allows any person to perform vivisection and other experiments or operations on animals (including giving any necessary anaesthetic) if authorised under, and acting in accordance with, the Animal Welfare Act 2002 (WA).
- In Tasmania, since December 2012, non-veterinarians have been able to render a veterinary service in teaching or research (approved by an animal ethics committee) if the non-veterinarian has either been assessed as competent in that technique in the last 12 months by a veterinarian nominated by the institution and is acting under the veterinarian's authority or, is being supervised by and is in the presence of the veterinarian.
- In Victoria, there is no practice restriction in veterinary registration legislation.

In New Zealand, significant surgical procedures are restricted to veterinarians under the Animal Welfare Act 1999 (NZ) and there is no specific exemption for scientific users. Because 'significant surgical procedures' is not expressly defined, it is uncertain which procedures are restricted. It appears that at least some non-veterinarians are performing surgical procedures as part of their research. Each animal ethics committee in New Zealand has a role in ensuring all reasonable steps are taken to alleviate unreasonable or unnecessary pain or distress.

In Canada, the practice restriction does not apply to acts performed in the course of scientific research.

In the United Kingdom, establishments, persons and projects are licensed to undertake research under the Animals (Scientific Procedures) Act 1986 (UK). A licensed establishment is required to employ an animal care and welfare officer, veterinary surgeon, and training and competency officer to assist in the management of the use, and care, of animals. Assessment of the competency of personal licence holders is the responsibility of the named training and competency officer. A researcher with a non-veterinary background can obtain categories of personal licence that may allow them to administer anaesthetics, sedation and analgesia and perform surgical procedures on anaesthetised animals, provided they have completed the necessary formal training modules (developed and accessed through the Home Office—a ministerial department of the Government of the United Kingdom) and have been deemed competent to perform the procedures they wish to be licensed for. They also require a project licence for their program of work.

In the United States of America, there is no restriction on who can perform procedures involving surgery and the administration of anaesthetics in a research situation under the Animal Welfare Act 1966. However, the research facility must ensure personnel are appropriately qualified and trained. Each research facility is also required to have an attending veterinarian whose role is to ensure adequate veterinary care is provided to the facility's animals. They are also required to provide guidance to the principal investigator and other personnel who are involved in the care and use of animals, specifically with regard to handling, immobilisation, anaesthesia, analgesia, tranquillisation and euthanasia.

## **6.5 Supervision of laypersons in Queensland**

Some large, scientific users of animals are concerned that requiring veterinary oversight of all procedures would be costly and impractical to administer, impede progress in delivering socially and economically important research outcomes, and be at odds with the ACP Act.

In 2013, the National Health and Medical Research Council (NHMRC) released the 8<sup>th</sup> edition of the Australian code for the care and use of animals for scientific purposes. Clause 1.29 of the revised code provides that:

*People who care for and use animals must ensure that procedures are performed competently, and*

*(i) be competent for the procedure they perform, or*

*(ii) be under the direct supervision of a person who is competent to perform the procedure.*

It does not require direct veterinary involvement in the performance of all procedures.

## **6.6 Department proposal**

It is proposed that laypersons be authorised to perform ovarian scanning under an AEC approval.

# **7 Regulatory Assessment Context**

## **7.1 Better regulation - Queensland**

The Queensland Government recognises that small business are likely to feel the burden of regulation more than other businesses, and is committed to reducing unnecessary regulation that hinders business growth.

In 2016 the Red Tape Reduction Advisory Council (RTRAC) released its first report which reviewed the regulatory environment of the agriculture (fruit growing), manufacturing (light metals) and hospitality (cafes and restaurants) industries. While the report was industry specific, its recommendations also applied more broadly to general business activities across all industry sectors.

A key finding of the report was that government needs to reduce regulatory creep and the regulatory burden on businesses, particularly for low-risk activities. Specifically, it should adopt regulatory strategies based on risk management and responsive regulation, which will reduce the impact of small business regulation, as well as benefit regulators.

## **7.2 Australian Productivity Commission Report**

In March 2017, the Australian Government released the Productivity Commission's final report into Regulation of Agriculture in Australia. The report observes:

*There are three main areas where farm animal welfare regulations could be improved (nationally):*

- *The objective of the national standards and guidelines needs to be clearer.*
- *Standards and guidelines should be more evidence-based, drawing on the existing body of evidence on animal welfare science and research on community views of animal welfare. Such evidence should also be used in RIA processes.*
- *There should be more independence in the standards development process so that outcomes are not overly influenced by the views of any one group, either industry or animal welfare groups. Judgments made to balance conflicting views should be transparent and apply rigorous scientific principles. Surveys of community values for animal welfare should be statistically robust and transparent<sup>45</sup>.*

The report goes on to make a number of recommendations including:

- *To facilitate greater rigour in the process for developing national farm animal welfare standards, the Australian Government should take responsibility for ensuring that scientific principles guide the development of farm animal welfare standards.*
- *State and territory governments should (also) consider recognising industry quality assurance schemes as a means of demonstrating compliance with farm animal welfare standards, provided that the scheme complies (at a minimum) with standards in law, and involves independent and transparent auditing arrangements.*
- *The Australian Government should appoint an independent expert or committee to publicly inquire and report on the efficiency and effectiveness of the livestock export regulatory system. The review should include an assessment and make recommendations for reform on industry-developed initiatives, such as quality assurance programs, as a means of compliance with livestock export regulations.....<sup>46</sup>.*

### 7.3 Economic considerations

Using the mid-point of the cost range estimated by Mr Curr, of additional costs of approximately \$5 per head, across 80,000 feeder/slaughter tests for live export purposes per year this implies a maximum cost to the industry of \$400,000 per year from using veterinary surgeons rather than lay testers. This represents around 0.15% of the total value of live cattle exports from Queensland.

Pregnancy testing for herd management purposes may not face the same peak demand problem as that for live export identified by Mr Curr. Illustratively, if the cost differential of using a veterinary surgeon was \$1 per head, and removal of the practice restriction resulted in half of the AVA estimate of at least 3.16 million tests per year moving to lay testers, then the saving to industry from removal of the practice restriction would be \$1.58 million per year. This represents around 0.03% of the total value of cattle production in Queensland.

This “guesstimate” of \$1 per head is a small fraction of the AVA PREGCHECK™ Accreditation Scheme estimate that inaccurately diagnosed pregnancy can cost producers on average at least \$300 per animal.<sup>47</sup> At that rate, a reduction in accuracy of testing of less than one percentage point would eliminate all the cost reduction benefit. These figures would however vary from property to property and over time. As these costs and benefits are incurred privately by cattle owners this is legitimately a matter for individuals to decide.

Any net cost impact, while not large, would represent:

- input cost advantage for graziers in those jurisdictions with lay testing providers (such as the Northern Territory and Western Australia);

<sup>45</sup> <http://www.pc.gov.au/inquiries/completed/agriculture/report/agriculture-overview.pdf> page 21

<sup>46</sup> Ibid, pp 38-39.

<sup>47</sup> [http://www.ava.com.au/sites/default/files/ACV\\_website/ACV\\_A4FACT-PREG.pdf](http://www.ava.com.au/sites/default/files/ACV_website/ACV_A4FACT-PREG.pdf)

- mileage charges by veterinarians, estimated by AgForce at between \$2 to \$4 a kilometre;
- diminishing returns on mileage cost, when the number of animals to be tested is small;
- operational inefficiencies when stock movements are delayed pending veterinary availability, such as mustering time frames, contract staff and holding costs in yards;
- inefficiency/inconsistency of requirements for producers and exporters, where cattle are sourced from multiple jurisdictions for a single consignment.

From a societal point of view, the practice restriction is worthwhile if any net cost to producers is exceeded by benefits from:

- any (net) beneficial impact on animal welfare; and/or
- any (net) indirect benefits from increased exposure to veterinary services.

The reality of whether animal welfare effects (relating to pregnancy status) actually eventuate, depends on whether testing by veterinary surgeons actually results in fewer incorrect diagnoses (particularly fewer false negatives) than testing by laypersons. The AVA claims that Northern Territory experience shows that lay testers have typical false negative rates of around 5% of tests conducted, which they claim is significantly higher than error rates by veterinary surgeons.

Unfortunately, it is not possible to quantify the resulting animal welfare benefit nor the value society places on this benefit. Similarly, it is not possible to meaningfully quantify the reduction in biosecurity or other animal health risks that may be derived from increasing exposure to professional veterinary services. So it is not possible to provide a meaningful cost-benefit analysis.

The licence restriction undoubtedly contributes to employment levels in veterinary practices around the State, although to what extent is unclear. Equally, it detracts from employment levels in other potential service providers. The net employment effect is unclear and unlikely to be significant; on balance any restriction which reduces the availability of a service must reduce demand for that service and therefore employment in its provision.

## 7.4 Social Licence

The term social licence, or social licence to operate, refers to the privilege of operating with minimal formalised restrictions based on maintaining public trust by doing what is right<sup>48</sup>. The SLO is seen as a flexible, responsive and self-regulated tool for industry to use to achieve the social expectations, ethics and values upheld by stakeholders, consumers and the wider community.

### 7.4.1 Exporter Supply Chain Assurance System

The live export industry has had a recent and public dissection of its social licence<sup>49 50</sup>. The industry has been seen to be failing community and government expectations on animal welfare. In 2011, the fallout was a 5 week suspension of live exports to Indonesia by the then Federal Government.

Industry's response to the live export ban provides an example of industry taking steps to establish or renew its SLO. In this case, industry and government initiated the Exporter Supply Chain Assurance System (ESCAS) which was rolled out to all Australian export markets in 2012. ESCAS was designed to ensure that Australian livestock exported for feeder and slaughter purposes are handled in accordance with international animal welfare standards, providing a mechanism to deal with any

<sup>48</sup> Center for food integrity- Charlie Arnot presentation, 2011

<sup>49</sup> See "A Bloody Business"- ABC 4 Corners program, 2011

<sup>50</sup> <https://www.theaustralian.com.au/national-affairs/foreign-affairs/sheep-deaths-spark-probe-into-live-exports-in-hot-months/news-story/d20633fb992b0e10dc4ac88834d76255>

animal welfare issues when they occur<sup>51</sup>. ESCAS is an assurance system based on four main principles:

1. Animal welfare: animal handling and slaughter in the importing country conforms to World Organisation for Animal Health (OIE) animal welfare recommendations;
2. Control through the supply chain: the exporter has control of all supply chain arrangements for livestock transport, management and slaughter. All livestock remain in the supply chain;
3. Traceability through the supply chain: the exporter can trace all livestock through the supply chain;
4. Independent audit: the supply chain in the importing country is independently audited<sup>52</sup>.

ESCAS is unique to Australia, with no other country with live export providing the same level of animal welfare protection beyond country limits. It does this by requiring exporters to account for how livestock are treated upon arrival in the importing country.

### 7.4.2 Livestock Production Assurance

The LPA scheme seeks to underpin industry's social licence, by a system of rules and standards, training, accreditation, audits, record keeping, quality assurance and vendor declarations<sup>53</sup>. There are approximately 220,000 LPA accredited producers in Australia and approximately 3,000 producers are audited each year at random by qualified auditors from AUS-MEAT.

The training modules include property risk assessments, safe and responsible Agvet chemical usage, feed contaminants and residues, transport, livestock movements, biosecurity and animal welfare.

The animal welfare module<sup>54</sup> provides a checklist to producers<sup>55</sup> to assist them in managing animal welfare. The standard includes requirements that:

- A person performing artificial breeding procedures on cattle must have the relevant knowledge, experience and skills, or be under the direct supervision of a person who has the relevant knowledge, experience and skills.
- A person performing artificial breeding procedures on cattle must take reasonable actions to minimise pain, distress or injury<sup>56</sup>.

No specific guidance is provided within the LPA in relation to pregnancy testing of cattle.

### 7.4.3 Willis dropped ovary technique

To underpin the social licence of lay administration of the Willis dropped ovary technique, with the cooperation of MLA, the ACV has produced a training guide for *The Dropped Ovary Technique for*

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<sup>51</sup> See Exporter Supply Chain Assurance System report, 2015 available <http://www.agriculture.gov.au/SiteCollectionDocuments/biosecurity/export/live-animals/livestock/escas/escas-report.pdf>

<sup>52</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/livestock/information-exporters-industry/escas>

<sup>53</sup> <https://www.mla.com.au/meat-safety-and-traceability/red-meat-integrity-system/about-the-livestock-production-assurance-program/>

<sup>54</sup> <https://www.mla.com.au/meat-safety-and-traceability/red-meat-integrity-system/about-the-livestock-production-assurance-program/seven-lpa-requirements/animal-welfare/>

<sup>55</sup> [https://www.mla.com.au/globalassets/mla-corporate/meat-safety-and-traceability/documents/livestock-production-assurance/factsheets/22422-lpa-fact-sheet-7\\_animal-welfare\\_web.pdf](https://www.mla.com.au/globalassets/mla-corporate/meat-safety-and-traceability/documents/livestock-production-assurance/factsheets/22422-lpa-fact-sheet-7_animal-welfare_web.pdf)

<sup>56</sup> Clauses S7.1 and S7.2 of the Australian Animal Welfare Standards and Guidelines for Cattle <http://www.animalwelfarestandards.net.au/files/2016/02/Cattle-Standards-and-Guidelines-Endorsed-Jan-2016-250116.pdf>

*Spaying Cattle*<sup>57</sup>. Within the foreword, the ACV states that it “has developed this training manual with the aim of recommending the Dropped Ovary Technique as the preferred surgical procedure for controlling fertility in beef cattle, and encouraging operators to be appropriately trained in the process”. Like pregnancy testing, there is a nationally recognised training course that is delivered through various registered training organisations and titled “Conduct dropped ovary technique procedures for spaying cattle”<sup>58</sup>.

## 7.5 Social Licence and pregnancy testing

While ASEL and ESCAS deal with some aspects of export, any proposal to expand the authority to pregnancy test cattle to non-veterinarians must be developed with a view to establishing the social licence for laypersons to operate.

Whether the testing is provided to dairy operators, cattle breeders and finishers, feed lot operators or live exporters the same minimum elements of animal welfare, control throughout the supply chain, traceability and independent audit must be achievable and credible. And in the context of a newly established scheme, the criteria for entry, maintenance of authority, sanctions and the capacity to conduct investigations must also be addressed.

It is also in the best interest of industry that animal welfare is maintained as part of pregnancy testing because:

- stress levels of cattle is recognised as a factor in achieving the top Meat Standards Australia (MSA)<sup>59</sup> index bands;
- while temperament is a contributor to stress behaviours, producers are increasingly recognising the impact of an animal’s association with humans and the need to avoid adverse associations to maximise meat quality<sup>60</sup>;
- while the production of one extra weaner per 100 females is equal to an additional 1.5 kilograms per adult equivalent, keeping mortality rates below one per 100 females offers an even higher productivity outcome, returning an additional 2.28 kilograms per adult equivalent<sup>61</sup>;
- events such as those leading up to the establishment of ESCAS mean industry needs to actively mitigate the potential for similar adverse outcomes.

## 7.6 Social Licence and ovarian scanning

Some community members argue that the number of procedures that constitute acts of veterinary science and the cost of compliance with the VS Act has been overstated and that animals used in research deserve the same protection from inexpert providers as other animals.

The Scientific Use Code requires that provisions are made for the education, training and supervision of people nominated on a research approval application. The scientific use code also states that research institutions should consider appointing veterinary officers to oversee such projects.

The requirements under the scientific use code act as a demonstration of the social licence for laypersons to conduct ovarian scanning.

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<sup>57</sup> <http://www.ava.com.au/sites/default/files/private/ACVDroppedOvary.pdf>

<sup>58</sup> <https://training.gov.au/Training/Details/AHCLSK335A#>

<sup>59</sup> <https://www.mla.com.au/research-and-development/feeding-finishing-nutrition/eating-quality/>

<sup>60</sup> <https://www.mla.com.au/news-and-events/industry-news/nutrition-and-temperament-key-to-msa-success/>

<sup>61</sup> <https://futurebeef.com.au/wp-content/uploads/Improving-the-performance-of-northern-beef-enterprises.pdf>

## 8 Consultation with peak stakeholders

Consultation with peak stakeholders was undertaken via a series of forums held between November 2016 and February 2018. Initial participants included AgForce, CCA, RSPCA, AVA, ACV, Australian Live Export Council, DAWS, the Veterinary Surgeons Board and DAF. Since that time participation has extended to the Australian Lot Feeders' Association, Queensland Live Export Association, AUSTREX and South East Asian Livestock Services.

### 8.1 Australian Veterinary Association

The AVA holds a number of concerns in relation to any change in the status quo:

- Any lay model established must ensure there are only competent lay testers, operating within an accountable, accurate system. They are of the view that unless testing is tied to a licensing system, where licences can be withdrawn, a compliance regime can have no “teeth”.
- A code of practice under the Animal Care and Protection is considered less than ideal because it is a reactive activity where the animal has to suffer, rather than preventing injury by requiring standards for qualification first. If a code was adopted, the AVA considers that at a minimum it would need to be compulsory.
- If a particular training course is identified as necessary to practice, there still needs to be a mechanism to stop unsuitable testers from continuing to operate.
- Without a feedback system, such as the trace forward/trace back proposal, being operational, there is not even any value in discussing lay pregnancy testing. To do otherwise could undermine the quality assurance provided to exporters;
- The existing PREgCHECK™ scheme provides accountability and accuracy which will ensure markets and animal welfare is optimised. If a vet does the wrong thing, they are answerable to the Veterinary Surgeon's Board and the ultimate sanction from this is to lose the legal right to practice. The system is funded entirely by practitioner fees.
- The PREgCHECK™ system also value adds by providing access to veterinarians in rural areas and passive biosecurity surveillance in remote areas.
- For some rural practices, pregnancy testing of cattle is a crucial source of income. Loss of that income could threaten the viability of these practices and could also result in the loss of other veterinary services in particular areas. Refer to Appendix E for a survey conducted by the AVA in that regard.
- A case for change, driven by market failure, has not been demonstrated.

### 8.2 Australian Cattle Veterinarians

The ACV is a subset of the AVA. It is the position of some practitioners that, if lay pregnancy testing is legalised at any point, they will not accept any model that makes a supervising veterinarian accountable for the accuracy of lay pregnancy testers. This concern is based on the premise that a supervising veterinary surgeon can only assume this responsibility by “double checking” and that this practice would be unacceptable on welfare grounds.

### 8.3 Royal Society for the Prevention of Cruelty to Animals Queensland

The RSPCA Queensland's position is that as long as the training of any lay pregnancy testers is sufficient to ensure pregnancy testing is carried out without compromising the welfare of the animals, and the results are accurate, they are not opposed to lay testers being permitted to undertake pregnancy testing.

## 8.4 No opinion

The Australian Live Export Council, CCA and ALFA have not expressed an opinion about the layperson or veterinary surgeon divide. While supportive of the standards set by PREGCHECK™ they are focused on the quality of outcomes in terms of both animal welfare, market access and productivity, regardless of the provider.

## 9 Policy Objectives

This RIS focuses on whether:

- pregnancy testing of cattle by laypersons for fee or reward should be made legal within Queensland and, if so, the selection of a regulatory model to achieve that; and
- laypersons working in animal research technical roles, where the activity has been approved by an Animal Ethics Committee under the Scientific Use Code, should be allowed to use transrectal ultrasound scanning to visualise ovaries in beef cattle.

The Queensland Government recognises that small business are likely to feel the burden of regulation more than other businesses, and is committed to reducing unnecessary regulation that hinders business growth.

In 2016 the Red Tape Reduction Advisory Council (RTRAC) released its first report which included a review of the regulatory environment of small business, including agriculture. A key finding of the report was that government needs to reduce regulatory creep and the regulatory burden on businesses, particularly for low-risk activities. Specifically, it should adopt regulatory strategies based on risk management and responsive regulation, which will reduce the impact of small business regulation, as well as benefit regulators.

This review's primary aims are to identify a solution that:

- supports the agricultural sector's viability in an increasingly competitive international and domestic market;
- supports the integrity of pregnancy testing and scientific research results;
- incorporates the importance of animal welfare as part of the social licence of providers, of pregnancy testing services, to operate; and
- imposes the lowest responsible regulatory burden.

After consultation with peak industry bodies, the RIS seeks to engage with stakeholders and the broader community about the merits of enabling laypersons to conduct pregnancy testing of cattle and ultrasound scanning of ovaries under AEC approval.

The preferred option will be the option that best achieves the policy objectives and provides the greatest net benefit to the community.

## 10 Options to achieve the objectives

This section of the RIS discusses options to address the policy objectives.

Drawing on information provided during consultations with peak industry bodies, the department has developed options in relation to lay pregnancy testers and research technicians operating under AEC approval. The RIS considers three options:

- Option 1: Status Quo – continue to restrict performance of pregnancy testing and use of transrectal ultrasound scanning to veterinary surgeons.

- Option 2: Removal of the practice restriction – include pregnancy testing and use of transrectal ultrasound ovarian scanning in the list of acts that are not veterinary science in Section 3 of the Veterinary Surgeons Regulation 2016.
- Option 3: Authorise laypersons to:
  - conduct pregnancy testing of cattle under an approved accreditation scheme; and
  - perform transrectal ovarian scanning under an AEC approval.

While the following sections are based on a narrative of the features of the options, a table comparing each of the options can be found at Appendix D.

## 10.1 Option 1: Status Quo/Retaining the practice restriction

Under this option, no regulatory change would be made. It would continue to be an offence for laypersons to conduct either pregnancy testing of cattle or transrectal ovarian scanning for fee or reward.

### **Objective: Support the agricultural sector's viability**

Pregnancy testing of cattle is beneficial to the agricultural sector for the purposes of herd management, managed calving intervals, yield of finished cattle and producers requiring certification of pregnancy status for the purposes of export cattle.

For the feeder export market, ASEL stipulates that testers must be either accredited or veterinary surgeons. Accreditation of laypersons is not available under the status quo. There is anecdotal evidence that at times there is difficulties in accessing pregnancy testers and that this creates material logistical problems, travel cost, holding cost and opportunity cost burdens affecting the efficiency in the whole export supply chain.

It may be physically feasible for owners of cattle herds to pregnancy test their own cattle for herd management purposes however laypersons cannot test for fee or reward.

Accreditation schemes recognise that the development and maintenance of reliable testing skills require repetition and consistent practice. For example, the Western Australian scheme requires a rolling three year average of 500 per year<sup>62</sup>, as does the Northern Territory<sup>63</sup>. The PREgCHECK™ scheme stipulates at least 1,000 tests per year<sup>64</sup>.

For those without the opportunity for repetition, where the herd is too large for the activity to be personally conducted or where a buyer (such as a feedlot or exporter) requires assurance that a cow or heifer is not pregnant, the services of a professional pregnancy tester are desirable.

There is anecdotal evidence that unauthorised laypersons are operating for herd management purposes and may be meeting demand for herd management testing in areas where veterinary surgeons are not readily available.

Retaining the practice restriction:

- would not provide additional support to the agriculture sector to access export markets during peak demand;

<sup>62</sup> <http://www.vsbwa.org.au/wp-content/uploads/2013/07/Form-3.7-Pregnancy-Testing-of-Cattle-Authorised-Person-01112016.pdf>.

<sup>63</sup> [https://nt.gov.au/\\_\\_data/assets/pdf\\_file/0003/373629/guidelines-accreditation-non-veterinary-preg-testing-cattle-export.pdf](https://nt.gov.au/__data/assets/pdf_file/0003/373629/guidelines-accreditation-non-veterinary-preg-testing-cattle-export.pdf)

<sup>64</sup> Pregnancy Diagnosis in Cattle, 3<sup>rd</sup> ed., Australian Cattle Veterinarians, 2014 pp. 75-76.

- would support the continued presence of expert veterinary services in regional areas, including passive animal welfare, biosecurity surveillance, locally deployable biosecurity emergency veterinarians and other veterinary services;
- may deprive industry of additional skilled laypersons who do not wish to operate illegally for herd management, yield, reproductive status verification and scientific research purposes.

**Objective: Support the integrity of pregnancy testing and scientific research results**

It is arguable that by continuing to restrict the delivery of pregnancy testing to veterinary surgeons, the integrity of pregnancy diagnostics will be better maintained due to the possession of a five to six year veterinary sciences degree. However, there are some factors that argue against this.

Firstly, it is characteristic of PREgCHECK™ and the Northern Territory and Western Australian accreditation schemes that the testing skill set be maintained by demonstrating ongoing use of the skill set. While veterinary students are required to complete both the theory and practice of pregnancy testing of cattle, it is a skill that is unlikely to be maintained in an urban setting and will not necessarily form a material component of regional practitioners' daily work.

Further as discussed earlier, the accuracy of testing can become irrelevant where cattle handling facilities are not secure, errors in certificates or animal identification are made, or where producers do not maintain effective segregation of tested, positive or negative animals. Regardless of the qualifications of the tester, anecdotally both lay testers and veterinarians have been the subject of investigation where the practices of the producer come into question.

In Queensland, the accuracy of pregnancy testing diagnosis by veterinary surgeons is not the subject of discrete investigation for the Veterinary Surgeons Board. The ACV has sought to meet market need in this regard by establishing PregCHECK™ and then maintaining a complaints management program for the accuracy of PREgCHECK™ providers which actively addresses the issue of producer practices.

In a research context, consistency of measurement is critical to the success of research into increasing the productivity of the northern beef herd. Where the same veterinarian cannot be relied upon to be available within critical research timeframes, consistency of interpretation can be lost.

Retaining the practice restriction will not necessarily provide assurance that the services of a veterinary surgeon are superior to the skills of an experienced layperson.

**Objective: Animal welfare as part of the social licence to operate**

There are different aspects to animal welfare:

- impact to the animal's welfare of handling prior to, and restraint during, testing
- poorly performed or inappropriate testing; and
- implications of pregnancy status on subsequent decisions such as transport or paddock allocation.

In addition, observation of herd health and on-farm welfare practices offer opportunities for veterinary surgeons to add value in the animal welfare arena.

Veterinary surgeons maintain that their more comprehensive training equips them to observe disease and welfare issues in a herd. Their qualifications and registration status underpin their social licence to operate. They are supported by a regulatory network that provides professional authenticity where they feel ethically bound to act upon concerns. Further, veterinary surgeons maintain that where injury

or trauma is sustained by an animal, they are equipped with the skills and drugs to treat animals immediately.

Laypersons operating illegally have no such social licence, recognition. While it is arguable that laypersons may not have the same diagnostic skills it does not necessarily follow that they are unable to recognise injury, ill thrift, signs of disease or inappropriate animal treatment. However, they have no capacity to provide immediate veterinary treatment.

However, in the absence of an authorising environment, illegal operators with concerns about animal welfare are compromised as they themselves become exposed if they report concerns to authorities.

Retaining the practice restriction:

- preserves more opportunities, for the more broadly based diagnostic skills of veterinary surgeons, to operate in passive animal health and welfare surveillance on farm;
- will support the ongoing viability of regional veterinary practices and therefore access to local veterinary services for other purposes;
- may discourage reporting of alternate sources of disease and welfare surveillance by laypersons, albeit against a less qualified yardstick.

#### **Objective: Lowest responsible regulatory burden**

The current regulatory model imposes legislatively based restrictions on the provision of pregnancy testing services and, unlike most other Australian jurisdictions, precludes lay pregnancy testing for or reward under any circumstances. Consequently, there is no legislative mechanism for lay testers to operate in any part of the market. Industry maintains that this imposes an unnecessary restriction on laypersons wishing to enter the market and an unnecessary burden on producers wishing to use those low risk services.

In the research sphere, technicians assisting in ovarian scanning would be unable to conduct repetitive, comparative activity, despite the strict requirements of an AEC approval that ensure that ovarian scanning being undertaken is performed safely.

Queensland's Red Tape Reduction Advisory Council recommends that government needs to reduce the regulatory burden on business, particularly for low risk activities. The Australian Productivity Commission suggests that governments should consider recognising industry quality assurance schemes to demonstrate compliance with animal welfare standards.

Retaining the practice restriction:

- would not reduce the burden imposed on producers that rely upon, at times, scarce veterinary surgeons for feeder cattle export testing services;
- excludes producers from access to additional competent (fee for service) technicians for herd management purposes; and
- excludes aspiring technicians willing to meet industry needs.

**In summary Option 1:**

- **would not support supply of more pregnancy testing services, and continue supply shortages perceived to be experienced by producers;**
- **would support ongoing veterinary practice viability and availability of veterinary surgeons for other purposes;**
- **may perpetuate existence of a black market, reducing intended productivity outcomes and risking adverse animal welfare outcomes;**
- **would not provide any mechanism to address supply concerns for the live export market.**

## **10.2 Option 2: Lifting of the practice restriction**

Under this option:

- amendments would be made to the VS Act to lift the practice restriction in relation to pregnancy testing of cattle by laypersons
- an accreditation scheme for the purposes of meeting ASEL requirements would not be established; and
- amendments would be made to provide that it is not an offence to conduct ovarian scanning via transrectal ultrasound, where the activity complies with the scientific use code and conducts the activity with the approval and under supervision of an animal ethics committee.

### **Objective: Support the agricultural sector's viability**

Again, pregnancy testing of cattle can support cattle producers with herd management, calving intervals, yield of finished cattle and certification of pregnancy status for the purposes of export cattle. Ovarian scanning is a pivotal aspect of research into improving the productivity of northern beef herds.

For the feeder/slaughter export market, ASEL stipulates that testers must be either accredited or veterinary surgeons. Given that this option does not provide for accreditation, it would not support exporters and producers to meet uneven demand in live exports. Industry would remain reliant on the availability and proximity of veterinary surgeons.

However, lay pregnancy testers could legally operate in the area of herd management and may fill demand gaps and/or promote healthy competition of supply.

Lifting of the practice restriction alone:

- would not assist with industry's original concerns in relation to the availability of pregnancy status certification for cattle intended for live export;
- may legitimise the entrance of an unclear number of lay pregnancy testers to assist industry with herd management objectives such as culling, calving intervals, safe transport and herd yields;
- may threaten the viability of some rural veterinary practices and in turn lead to loss of local veterinary surgeons for other veterinary purposes.

### **Objective: Support the integrity of pregnancy testing and scientific research results**

In the absence of regulation, it is possible that lower quality providers of pregnancy testing services would enter the market, with adverse consequences for productivity and animal welfare. The extent of

this decline is difficult to gauge. In the normal course, cattle owners may demand a level of quality service, with unreliable testing providers removed from the market.

Greater availability of commercial testing services, using experienced testers, may reduce the number of pregnancy tests conducted by owners who do not have a high level of skill and experience themselves.

The Northern Territory maintains a complaints management program for lay pregnancy testers that addresses concerns in relation to pregnancy status. The Western Australian accreditation scheme is administered under WA's Veterinary Surgeons Board in the same way as veterinary surgeons.

As discussed under Option 1, in Queensland, the Veterinary Surgeons Board administers complaints about veterinary surgeons in a general sense however no specific compliance or complaints mechanism is in place for the accuracy of pregnancy testing. In that regard, the ACV has sought to meet market requirements for accuracy by the establishment of PREGCHECK™.

It is conceivable that, in time, a similar initiative may evolve for lay pregnancy testers if the practice restriction was lifted. Similarly, word of mouth may already be seeing unreliable testing providers removed from the market. It is possible that in jurisdictions where lay pregnancy testing is not regulated, the market may be going some way to addressing this issue.

Nonetheless, feedback provided by the Australian Lot Feeders Association is that inaccurate pregnancy testing is of significant concern to the industry and that they would feel better supported by the establishment of a formal recognition mechanism.

The quality of pregnancy testing for the live export trade would be unaffected as, in the absence of an accreditation arrangement, testing for this purpose would remain restricted to veterinary surgeons.

For research, consistent access to technicians with task specific experience is essential. Removing the application of offence provisions will support consistency of scientific research observations.

Lifting of the practice restriction:

- would not, on its own, support the integrity of pregnancy testing diagnostic results;
- may, on its own, reduce the integrity of pregnancy testing diagnostic results;
- would support consistency of scientific research observations.

#### **Objective: Animal welfare as part of the social licence to operate**

If it is to be assumed that lifting the practice restriction would result in a reduction in the quality of testing services, there would be an adverse impact on animal welfare. This may be offset to some extent by a reduction in the current disincentive for lay pregnancy testers who are operating illegally to report animal health and welfare concerns. However, it would not address the issue of immediate veterinary attention where injuries occur due to the procedure.

Unrestricted authorisation to practise does little to demonstrate either lay testers' skills or commitment to animal welfare as part of the social licence to operate. Without visible professional backing, such as that derived from by veterinary surgeons via registration or lay testers via accreditation, their social licence to operate is obscure.

Lifting of the practice restriction:

- may increase reporting of possible animal welfare or disease concerns and provide valuable surveillance intelligence;

- decreases the options for immediate veterinary care for animals injured in the process of testing;
- would not, on its own, demonstrate that lay testers are competent and committed to animal welfare as part of the social licence to operate.

**Objective: Lowest responsible regulatory burden**

The benefits of pregnancy testing services primarily accrue to variety of private stakeholders including producers and their supply chain, testing service providers and testing equipment manufacturers and distributors.

While lifting of the practice restriction would reduce the regulatory burden, government’s role in addressing public interest in relation to animal welfare is relevant. This does not necessarily require direct regulatory intervention by government. Rather it may take the form of creating standards to veterinary acts must be performed, such as a code of practice or demonstration by private beneficiaries of how they intend to address animal welfare in circumstances where the practice restriction is lifted.

Lifting the practice restriction would reduce the regulatory burden but, on its own, may also reduce some the community benefits from the current regulations, particularly in relation to animal welfare.

**In summary Option 2:**

- may support supply of more pregnancy testing services, particularly where veterinary surgeons are sparsely located;
- may reduce work undertaken by veterinary surgeons and thereby threaten practice viability and availability of veterinary surgeons for other purposes;
- may undermine the accuracy of pregnancy testing outcomes, reducing intended productivity outcomes and exacerbating the risk adverse animal welfare outcomes;
- would support consistency of observations in scientific research;
- would not provide any mechanism to address supply concerns for the live export market.

**10.3 Option 3: Laypersons authorised to performs acts under an accreditation scheme or Animal Ethics Committee approval**

Under this option:

- amendments would be made to the VS Act to lift the practice restriction in relation to pregnancy testing of cattle by laypersons
- amendments would be made to make provision for accreditation schemes for particular acts
- amendments would provide that it is an offence for a layperson to conduct pregnancy testing of cattle unless they are accredited under an accreditation scheme; and
- amendments would provide that it is not an offence for a layperson to conduct transrectal ovarian ultrasound scanning provided the activity complies with the scientific use code and conducts the activity with the approval and under supervision of an animal ethics committee.

**Objective: Support the agricultural sector’s viability**

This approach would support the entry of commercial lay pregnancy testers on a legal basis. Provided suitable standards and controls are in place via an accreditation scheme, this would provide additional herd management services to benefit producers and opportunities for legal employment for testers.

This option may, or may not, immediately meet ASEL requirements depending on the legislative model used for implementation of the accreditation scheme and the acceptability of the chosen method to the Australian Government. Currently, ASEL will permit testing of livestock intended for slaughter to be undertaken by a “competent pregnancy tester”. It further states that such a person is accredited by the relevant agency of a jurisdiction to conduct pregnancy tests.

Lifting of the practice restriction and establishing an accreditation scheme:

- would legitimise the entrance of an unclear number of lay pregnancy testers to assist industry with herd management objectives such as culling, calving intervals, safe transport and herd yields;
- may threaten the viability of some rural veterinary practices and in turn lead to loss of local veterinary surgeons for other veterinary purposes.
- if government administered, would assist with industry’s original concerns in relation to the availability of pregnancy status certification for feeder cattle intended for live export; and
- if industry administered, may assist with industry’s original concerns in relation to the availability of pregnancy status certification for feeder cattle intended for live export.

Lifting the practice restriction and allowing for testing under AEC approval would support consistency of scientific research observations.

**Objective: Support the integrity of pregnancy testing and scientific research results**

The primary purpose of an accreditation scheme for pregnancy testers, whether veterinary surgeon or layperson, is to ensure the integrity of pregnancy diagnostics. The AVA’s observations in relation to apparent misdiagnosis by laypersons in the Northern Territory, suggests that an accreditation scheme must, as part of its integrity processes, address not just the skills of the tester but also the integrity of the entire supply chain.

An accreditation scheme would accredit people to issue pregnancy status certificates and provide for:

- the terms and conditions for accreditation
- auditing of accredited persons
- accountable levels of acceptable performance
- noncompliance procedures and sanctions
- reviewing decisions and resolving disputes
- operational procedures under the scheme
- investigation of, and data gathering for the purpose of animal tracing from the property of origin to loading.

The primary purpose of an AEC approval is animal welfare. Lifting of the practice restriction and establishing an accreditation scheme or requiring AEC approval:

- would provide a system to support the integrity of pregnancy testing diagnosis; and
- will support consistency of scientific research observations.

**Objective: Animal welfare as part of the social licence to practice**

A well-designed accreditation scheme should be able to maintain the quality of pregnancy testing and meet animal welfare concerns. As noted above, animal welfare, animal health and biosecurity responsiveness may be improved through the removal of the current disincentive for lay pregnancy testers who are operating illegally to report animal health and welfare concerns.

Establishment of an accreditation scheme would assist laypersons to demonstrate the legitimacy of their skills as it applies to welfare aspects of herd management and suitability for travel. Animal welfare considerations, including welfare issues such as handling and restraint for testing are issues that are clearly important aspects of initial training and accreditation.

An accreditation scheme and qualification could also formally incorporate units to assist identification of ill thrift, injury, signs of disease and good biosecurity practices.

With these components incorporated into the scheme, the commitment to animal welfare as part of the social licence to operate can be supported. Visible professional backing, such as that derived from by veterinary surgeons via registration, would be available to laypersons to legitimise their expectations of producers in relation to animal welfare.

Lifting of the practice restriction in combination with a mandatory accreditation scheme or AEC approval:

- may increase reporting of possible animal welfare or disease concerns and provide valuable surveillance intelligence;
- may assist to achieve optimal animal welfare outcomes during testing however, in the case of injury, will decrease the options for immediate veterinary care for animals injured in the process of testing;
- would assist lay testers to demonstrate they are competent and committed to animal welfare as part of the social licence to operate; and
- would allow lay technicians to responsibly assist with consistent scientific outcomes.

#### **Objective: Lowest responsible regulatory burden**

For lay pregnancy testers seeking to enter the market, there will be costs associated with compliance (such application costs and recording keeping) and initial training and testing. Dependent on the terms of approval for the accreditation scheme, the ongoing regulatory burden imposed on lay pregnancy testers would be similar to that voluntarily accepted by members of the ACV who have become accredited under the PREgCHECK™ scheme.

The PREgCHECK™ scheme is national, with more than 600 accredited veterinarians Australia-wide. Approximately 150 of these are in Queensland. With a national base, the scheme has the benefit of the economies of scale for the administrative and management information systems necessary to achieve cost effective registration, monitoring and enforcement of the standards of the scheme.

Queensland Treasury's Principles for Fees and Charges<sup>65</sup> requires full cost recovery to be achieved where the activity the fee relates to is regulatory. Full cost recovery requires that labour, operating and indirect costs must all be recouped within the fee structure for the service. This means that wages, operating costs such as office supplies and a portion of indirect costs such as information and technology costs and IT support are eligible for inclusion.

AgForce has advised that within Queensland, they anticipate only 20 to 30 lay pregnancy testers will seek accreditation. In combination with Queensland Treasury's Principles for Fees and Charges, the small scale of the proposed accreditation scheme works against government's ability to establish a fee regime that will be palatable to potential lay testers. In other words, the small scale of such an accreditation scheme means that overhead costs, such as management information systems to

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<sup>65</sup> <http://treasury.govnet.qld.gov.au/office/knowledge/docs/fees-and-charges/principles-for-fees-and-charges.pdf>

handing and interpret tracing data, cannot be spread across a sufficient number of applicants to make the cost of entry to the market acceptable.

To date, the Commonwealth has not indicated any appetite for accepting responsibility for a national accreditation scheme for live export. This reluctance to accept this regulatory burden is consistent with the Australian Productivity Commission's (APC) recommendation that "the Australian Government should appoint an independent expert or committee to ..... make recommendations for reform on industry-developed initiatives, such as quality assurance programs, as a means of compliance with livestock export regulations"

ASEL is currently under review. While the review is expected to be completed in a number of modules over two years, the concurrent review of lay pregnancy testing within Queensland offers a valuable opportunity to influence the outcomes of the ASEL review. Development of a new accreditation scheme, focussed on supporting both herd management and the live export market would offer an opportunity for lay pregnancy testers to enter the market and support agricultural viability.

The review of ASEL, APC's interest in industry-developed assurance programs and the small scale of a Queensland scheme are converging to make it more conducive to the long term success of any accreditation scheme to be delivered through a nationally administered industry scheme.

Enabling an industry accreditation scheme within Queensland would likely be achieved by amendments to the VS Act to enable testing by laypersons and amendments to the ACP Act to enable authorisation of suitable industry based accreditation schemes.

This model would require suitable entities to make application to the department for accreditation. The department would be responsible for assessing the suitability of the proposed scheme, including the entity proposed to administer the scheme. Auditing of the scheme would be required on a periodic basis. Both application assessment and auditing would be subject to full cost recovery fees. Therefore, from the point of view of use of public resources to oversee accreditation, the government's burden of administering the scheme is reduced to the assessment of a scheme, rather than each tester.

Day to day responsibility for supporting the accreditation of individuals, monitoring and compliance activities would vest in the scheme administrator. It is anticipated that the administrative onus placed on persons seeking accreditation under an industry based scheme would be similar to a government administered scheme. However, with the benefit of a national scheme, overhead costs to be absorbed into the cost of application and administration can be reduced to a more sustainable level.

Within the context of scientific research, activities carried out are all subject to AEC approval regardless of the person conducting the activity. No change in regulatory burden would eventuate by authorising lay technicians to use transrectal ultrasound scanning to visualise ovaries in beef cattle.

Lifting of the practice restriction and establishing an accreditation scheme or requiring AEC approval:

- would provide opportunity for new providers of pregnancy testing services in Queensland – currently estimated at 20 to 30 new entrants;
- if purely state based, is unlikely to be achievable at a price point that is acceptable to new entrants to the market;
- if nationally based, would require acceptance of an industry based scheme and therefore industry action to establish a scheme;
- if nationally based, may be more achievable at a price point that is not prohibitive to new entrants;
- would enable the entry of lay pregnancy testers at the lowest possible burden to government;

- may result changes in unit cost, associated with reduced travel times, reduced holding costs or incidental price competition;
- would, depending on the requirements of any accreditation scheme established, be likely to impose similar administrative burdens on lay testers whether the scheme is government or industry administered, but impose less application and monitoring costs if delivered under a national industry based scheme;
- may threaten the viability of some rural veterinary practices and lead to loss of local veterinary surgeons for other veterinary purposes
- alternatively, if the number of new entrants does not pose a threat to viability, access to lay providers could be regarded as introduction of choice to producers, in relation to their perception of value added by veterinary surgeons;
- would maintain animal welfare standards as they apply to the testing process, however noting that producers would be exercising choice in relation to the availability of veterinary intervention in the case adverse events.

#### In summary Option 3:

- **may support supply of more pregnancy testing services, particularly where veterinary surgeons are sparsely located – current estimates 20 to 30 new entrants;**
- **may reduce work undertaken by veterinary surgeons and thereby threaten practice viability and availability of veterinary surgeons for other purposes;**
- **provides points of influence over pregnancy testing integrity, supporting productivity outcomes and reducing the risk of adverse animal welfare outcomes;**
- **would support consistency of observations in scientific research;**
- **would provide a platform for industry to seek to address supply concerns for the live export market.**

## 11 Preferred option

The preferred option is Option 3 which entails:

- amendments to the ACP Act to make provision for third party accreditation schemes for particular acts
- amendments to the VS Act providing that it is not an offence for a layperson to conduct pregnancy testing of cattle where they are accredited under an accreditation scheme under the ACP Act; and
- amendments to the VS Act providing that it is not an offence for a layperson to conduct transrectal ovarian ultrasound scanning provided the activity complies with the scientific use code and conducts the activity with the approval and under supervision of an animal ethics committee.

Domestically, improved herd and pasture management is increasingly being recognised an essential to the future of the northern Australia beef herd. Optimising reproductive rates is seen as a key driver, with the production of one extra weaner per 100 females equalling an additional 1.5 kilogram per adult equivalent. Knowledge of pregnancy status and earlier breeding capacity are pivotal to achieving these goals.

A 2003 report by Peter Frawley notes that for rural veterinary practices<sup>66</sup>, 50% or more of income was generated from companion animals. It further notes ABARES advice that the average expenditure by

<sup>66</sup> Frawley P T, 2003 Review of Rural Veterinary Services Report. Available on line at: <https://www.ava.com.au/sites/default/files/documents/Other/Frawley%20report.pdf>

farms on veterinary services at that time was \$200 a year. Even here, the highest users of veterinary services were dairy farms. As dairy farms are not located remotely, the demand for “other purposes” on remote beef operations must be very low indeed and so it difficult to accept that producers would suffer from the absence of veterinary surgeons for purposes for other than specialist reproductive services.

Testing rates by PREgCHECK™ veterinary surgeons demonstrates that they have penetrated a significant portion of the discretionary pregnancy testing market and are therefore highly competitive without legislative protectionism. Yet current coverage of remote beef herds by veterinary surgeons is sparse and there are grounds to believe that the gap in this market is currently being met by illegal operators.

While producers are the primary beneficiaries of improved productivity, the community retains an interest in the welfare of the animals being tested. Neither a regulatory environment that encourages protection of a black market, nor complete deregulation of the market, will demonstrate that animal welfare is protected. A degree of intervention is appropriate.

There are insufficient economies of scale for the establishment of a financially viable Queensland based scheme. With this in mind, and with broad industry interest in improving pregnancy testing services and animal welfare in general, AgForce is proposing to establish an industry based accreditation pilot. With a view to a national industry based accreditation scheme, it would adopt similar principles to that employed within the PREgCHECK™ scheme.

Such a solution is consistent with Queensland’s “Better Regulation” objectives and APC recommendations that State and territory governments should consider recognising industry quality assurance schemes as a means of demonstrating compliance with farm animal welfare standards.

An ancillary benefit of an industry based scheme, that removes incentives to operate on the black market, may also be better compliance intelligence in relation to illegal operators and animal welfare.

It should be noted that adoption of Option 3 will not meet ASEL requirements in relation to government based accreditation of laypersons for pregnancy testing of cattle for live export. The Australian government’s appetite for a third party, industry based accreditation scheme is untested at this point.

The recommendations of APC and the review of ASEL are converging to provide industry with an unprecedented platform on which to pursue acceptance of such a scheme. It would be up to industry to progress recognition of a national industry scheme to the Australian government and potential accrediting state and territory governments.

**Option 3 is recommended because it:**

- **supports the agricultural sector’s viability in an increasingly competitive international and domestic market by:**
  - **enabling an increase in supply of herd management pregnancy testing services in sparsely serviced areas, while at the same time providing a level of intervention to support animal welfare and accuracy that is not present in Option 2;**
  - **providing a platform for industry to address supply of pregnancy testing services for export purposes in poorly serviced areas;**
  - **increasing the likelihood of success of herd productivity research.**

- **supports the integrity of pregnancy testing and scientific research results by:**
  - **providing points of influence in training and accuracy of laypersons;**
  - **enabling a monitoring and compliance regime to support maintenance of appropriate skills sets; and**
  - **enabling timely and consistent interpretation of scientific observations.**
- **incorporates the importance of animal welfare as part of the social licence of providers, of pregnancy testing services, to operate by:**
  - **maintaining animal welfare objectives while enabling a reduction in some barriers to entry;**
  - **influencing the achievement of the level of competency required to provide an accurate diagnosis; and**
  - **introducing a proactive opportunity to protect animal welfare, rather than relying on public reporting of harms already inflicted (unlike Option 2 which presents a higher risk).**
- **imposes the lowest responsible regulatory burden by:**
  - **acknowledging that a state based scheme could not be delivered at a viable price point;**
  - **enabling a platform administered by industry that avoids regulatory costs being subsidised by taxpayers; and**
  - **recognising that industry has a vested interest in the success of such a scheme.**

## 12 Consistency with other policies and regulation

### 12.1 Competition principles agreement

The proposed Regulation is generally consistent with Clause 5 of the Competition Principles agreement.

### 12.2 Fundamental legislative principles

The fundamental legislative principles (FLPs) under the Legislative Standards Act 1992 have been considered in the policy development amendments and are consistent with the proposed approach.

### 12.3 Financial accountability

Section 18 of the Financial and Performance Management Standard 2009 (under the Financial Accountability Act 2009) provides that when setting charges for services, the full cost of providing the services must be considered. The proposed fees will reflect the cost to the government of accrediting and monitoring each scheme and are likely to align with similar fees imposed under the *Biosecurity Act 2014* and Biosecurity Regulation 2016 in relation to biosecurity accreditation schemes.

## 13 Implementation, evaluation and compliance strategy

As previously discussed, it is proposed that implementation of the preferred option would require amendments to the ACP Act and the VS Act. AgForce would drive the establishment of a pilot industry based accreditation scheme for the consideration of the Queensland Government.

Interjurisdictional negotiations for expansion of the scheme for national adoption and export purposes would be required to be driven by industry.

Legislative enablement of a Queensland scheme, industry establishment of the scheme and Australian Government acceptance of the scheme for export purposes would be a long term proposition. The consolidation of each player's position is unlikely to align at all stages.

The administrative burden associated with the scheme is expected to be minimal, with only one scheme proposed at this point. Accreditation schemes are already operating under the *Biosecurity Act 2014*. This provides the benefit of legislative, documentation and administrative precedents. Management information needs are simple and do not require bespoke solutions. Human resource requirements would be met from within existing resources.

Assessment guidelines would be developed for potential accreditation scheme operators for the purpose of establishing minimum requirements and managing expectations. Issues such as training, recognition of prior learning, acceptable diagnostic techniques, equipment standards, animal handling and welfare, tester and scheme reporting, complaints handling, sanctions, traceability and audit requirements would need to be addressed.

Scheme approvals are likely to be for three years with compliance audits conducted yearly. Approvals would attract an application fee and audits would be conducted on an hourly fee for service basis. Full cost recovery would apply.

Feedback from audits will assist in evaluating the integrity of diagnostic outcomes. Provision for show cause proceedings, internal and external review, will provide the opportunity to respond where concerns arise and allow for discontinuation to be considered or systemic improvements to be made for future success.

## Appendix A - Types of Pregnancy Testing

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### **Rectal Palpation**

For this method, the tester inserts the hand and forearm into the rectum of the cow feeling, through the thickness of the wall of the rectum, for anatomical structures of reproductive organs. Accuracy of diagnosis is particularly influenced by the skill of the tester, the adequacy of handling facilities for humanely restraining the animal and the management of cattle before testing.

Experienced testers, with well-developed skills, can detect a pregnancy as early as 28 to 35 days after fertilisation. Foetal aging is also possible via manual (rectal) palpation and is at its most reliable between 35 and 65 days. A reliable tester can be expected to diagnose the stage of pregnancy, between six and 16 weeks, to within plus or minus two weeks. In herds where insemination is managed, accuracy is further increased<sup>67</sup>.

It is a relatively cheap means of testing. While the Australian Cattle Veterinarians (ACV) make a number of practical recommendations for a pregnancy testing kit, including protective clothing measures, long armed gloves and lubricant are generally the only “must haves” in a manual palpation tester’s kit.

The Australian Cattle Veterinarians observe that rectal examination also carries risks to the tester, including exposure to zoonotic disease and repetitive strain injuries, particularly if inappropriate technique is used for a period of time<sup>68</sup>. The adequacy and lay out of the testing facilities have further implications for the wellbeing of both tester and animal. Facilities layout (e.g. Herringbone dairies and left or right crush) may influence the technique that the tester should use to protect both themselves and the animals being tested<sup>69</sup>.

There are concerns that rectal palpation can be associated with loss of the pregnancy, however there is considerable debate about the issue<sup>70</sup>. However repeated and/or inexpert performance of rectal palpation can cause severe straining, ballooning, bleeding or thickening of the rectum.

In a standard operating procedure produced by the Department of Primary Industries in New South Wales<sup>71</sup> for teaching of the technique, parameters are set on the maximum number of times a single animal should be examined by novices, with maximums also imposed for more experienced students. Other standards are set in terms of subsequent days, rest intervals and adverse indications requiring removal of an animal from the teaching program until veterinary clearance is given.

### **“B-mode” Ultrasound Scanning**

Brightness mode (B-mode) ultrasonography is conducted via the rectum. The most commonly used scanners are sector scanners which are introduced via a rigid pole and linear scanners which are generally introduced via the hand.

The usefulness of ultrasound scanning is influenced by the number of crystals in the probe and the frequency of the scanner, with high frequency probes (5 to 10 MHz) able to visualise very small

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<sup>67</sup> Pregnancy Diagnosis in Cattle, 3<sup>rd</sup> ed., Australian Cattle Veterinarians, 2014

<sup>68</sup> Ibid

<sup>69</sup> Ibid

<sup>70</sup> <http://articles.extension.org/pages/15689/when-to-pregnancy-check-dairy-cattle-and-why>

<sup>71</sup> <http://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare/general/general-welfare-of-livestock/sop/cattle/fertility/pregnancy-testing>

anatomical features. Unlike rectal palpation, fit for purpose ultrasound testing requires an upfront investment of \$6,000 and upwards<sup>72 73</sup>.

The embryo can be seen in heifers as early as 20 days, though accuracy decreases in aging cows. Sexing of the foetus becomes possible between 55 and 80 days with a 7-10 MHz scanner and, 70 to 120 days with 5 MHz scanners. Scanning using an introducer is considered to be most accurate between 6 and 14 weeks. Beyond 16 weeks, visibility of the foetus becomes limited.

The ACV recognises that the use of B-mode real time ultrasonography has become “commonplace” and notes that “As with manual pregnancy diagnosis, the accuracy and efficiency of ultrasound depends on the experience of the operator, the stage of the pregnancy being examined and the available facilities. It must be understood that ultrasound has limitations and these should be explained to the client before pregnancy diagnosis is undertaken<sup>74</sup>”. It suggests that if an animal is tested either empty or unknown, and an introducer was used, follow up diagnosis via manual palpation should be undertaken<sup>75</sup>.

One risk associated with pregnancy testing via ultrasound is rectal perforation, possibly resulting in peritonitis and death. In particular, this can be related to the length of the introducer/probe, the tester failing to wait out rectal contractions if an animal defecates during testing, handling facilities that allow excessive movement of animals and over-conditioned cows which tempt the operator to push deeper past fat<sup>76</sup>.

There has been speculation that that higher rates of pregnancy loss can be caused using ultrasound though in expert skill of the operator has also been blamed rather than the technology itself<sup>77</sup>. Merck Animal Health, through its Partners in Reproduction pages, argues that that this position could be mistakenly reached given that the foetus can be detected in the earlier stages of pregnancy and therefore fall within the most likely window for spontaneous abortion<sup>78</sup>.

Overall the ACV considers that ultrasonography, in the hands of a competent operator, reduces the risk of injury to the foetus and tester, improves the reliability of diagnosis, assists identification of non-viable foetuses and also identification of disorders of the reproductive system such as infection.

Ultrasonography offers further workplace health and safety advantage to some testers when an introducer/probe is used.

There are some arguments that ultrasound has a time advantage over palpation, however whether that advantage can be realised depends of factors such as facilities, cow condition, rates of pregnancy and term of pregnancy<sup>79</sup>.

### ***“A-mode” Ultrasound Scanning***

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<sup>72</sup> <http://www.catagra.com/repro-scan/return-investment.aspx> retrieved 14/9/2017

<sup>73</sup> Email exchange 17/8/17 M. Ricardo, Department of Agriculture and Fisheries and Q. Demont, Australian Medical Systems

<sup>74</sup> Pregnancy Diagnosis in Cattle, 3<sup>rd</sup> ed., Australian Cattle Veterinarians, 2014 p. 40.

<sup>75</sup> Ibid p. 42

<sup>76</sup> <http://www.sciquest.org.nz/node/108224>

<sup>77</sup> <http://articles.extension.org/pages/15689/when-to-pregnancy-check-dairy-cattle-and-why>

<sup>78</sup> <http://www.partners-in-reproduction.com/reproduction-cattle/pregnancy-diagnosis.asp#ultrasound> retrieved 27 September 2017

<sup>79</sup>

<http://www.tablelandvet.com.au/Services/CattleServices/PregnancyDiagnosis/tabid/28115/Default.aspx> retrieved 25 September 2017

Unlike B-mode ultrasound, which allows movement to be seen, A-mode ultrasonography (depth analyser) is one dimensional. Sales and marketing of these devices is generally targeted at the lay sector. It allows diagnosis from 40 days on, however sensitivity at this time is estimated at between 85-90%. The ACV does not consider this technology as adequate to meet the need for accurate diagnosis in modern dairy and beef management.

### ***Doppler Ultrasonography***

Doppler ultrasonography is used to detect heartbeat of the foetus or blood flow in the vessels of the placenta. While it can be 85% accurate in detecting pregnant animals it is only 63% accurate in detecting non-pregnant animals. This failure rate is not considered economically tolerable.

### ***Other methods***

The ACV observes that while rectal palpation and B-mode are the most commonly used diagnostic techniques, sometimes other techniques are required. Drivers for using other techniques can include testing of miniature breeds, poor facilities and animals that are too wild to safely restrain. Each technique has its own limitations that need to be understood by the tester and shared with the entity commissioning the testing:

**Return to Oestrus:** A return to oestrus is a broad indicator that the animal is not pregnant. Where animals can be observed twice daily for behavioural signs of oestrus, accuracy can be improved but it is not generally considered sufficiently accurate. This is partly because some cattle do not show signs of oestrus when cycling while some others show signs while pregnant.

**Udder Development:** Udder development can occur in heifers from 4 months into the pregnancy. However in cows, previous development of the udder obscures any signs of a new pregnancy. It is also common for non-pregnant heifers exported by sea to show udder development.

**Ballottement of the Abdomen:** Generally ballottement only becomes feasible five months into the pregnancy, when palpation via the right flank makes it possible to detect the foetus. Generally it is only appropriate in mature, thin animals.

**Blood and Milk Testing:** Various factors can be tested for in either or both blood or milk. The complexity of sampling, reliability of results, windows of opportunity, rates of adoption and sometimes cost mean that rectal palpation and B-mode ultrasound remain preferred.

**Faeces and urine:** Reliable testing has been achieved in bison, with 100% accuracy achieved with two testing techniques.

**Elimination of dry cows:** For the purposes of herd management, elimination of dry cows after a controlled mating window, can also contribute to increased reproductive capacity.

## **Appendix B - National Regulation of Pregnancy Testing of Cattle**

### ***National legislation***

National animal welfare standards for cattle<sup>80</sup> require that pregnancy testing must be performed by a person with relevant knowledge, experience and skills or a person who is under the direct supervision of someone with relevant knowledge, experience and skills.

While the national standards do not require the person to be a veterinary surgeon, nor to be accredited, in Queensland the requirement to be a veterinarian or a student supervised by a veterinary surgeon remains under the VS Act.

### ***Live export***

The Australian Government regulates the export of livestock under the *Export Control Act 1982*, the *Australian Meat and Livestock Industry Act 1997* and associated orders, regulations and standards. This includes the 'Australian Standards for the Export of Livestock (ASEL)'.

Exporters of livestock must show how they will comply with both the Australian Government's regulations and the importing country requirements. For cattle exported for slaughter or fattening the Exporter Supply Chain Assurance System (ESCAS) also operates once cattle have arrived at their destination.

### ***The Australian Standard for the Export of Livestock generally***

ASEL captures the live export process through a number of phases including:

- Planning the consignment
- Sourcing and on farm preparation of livestock
- Land transport
- Pre-embarkation and assembly
- Vessel preparation and loading
- Type of voyage (sea/air)
- Disembarkation
- Post disembarkation.

Pregnancy testing comes into play during the sourcing and farm preparation of livestock along with matters such as body condition score, injury status, health status, food safety requirements, identification and nursing status<sup>81</sup>.

### ***Pregnancy testing under ASEL***

ASEL s1.9, s1.10 and s6.6 require that cattle must be pregnancy tested during the 30-day period prior to export. The pregnancy testing standards applicable under ASEL from the Department of Agriculture and Water Resources state:<sup>82</sup>

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<sup>80</sup> Despite the current requirements of the *Veterinary Surgeons Act*, the national standards were recently adopted under Queensland's *Animal Care and Protection Act 2001*. Both veterinarians and persons conducting pregnancy testing without fee or reward must comply with these standards.

<sup>81</sup> <http://www.agriculture.gov.au/SiteCollectionDocuments/animal-plant/animal-welfare/standards/version2-3/australian-standards-v2.3.pdf>

<sup>82</sup> <http://www.agriculture.gov.au/export/controlled-goods/live-animals/advisory-notice/2016/2016-22>

### **For feeder/slaughter cattle**

*ASEL standard s1.9 requires that pregnancy tests for feeder/slaughter cattle to be exported by sea can only be completed by a registered veterinarian or competent pregnancy tester.*

*Competent pregnancy testers may only be used in Northern Territory and Western Australia and must be accredited by the relevant agencies. Competent pregnancy testers may only diagnose pregnancy for feeder/slaughter cattle by manual palpation and are not approved to use ultrasound diagnoses or the IDEXX (blood) pregnancy test.*

*ASEL standard s6.6A requires that pregnancy tests for feeder/slaughter cattle to be exported by air can only be completed by a registered veterinarian”.*

### **For breeder/productive cattle**

*“ASEL standard s1.10 requires that pregnancy tests for breeder/productive cattle can only be completed by:*

- *For sea journeys of less than 10 days: a registered veterinarian who can attest to demonstrable current experience.*
- *For sea journeys of 10 days or more: a veterinarian who is both a member of the Australian Cattle Veterinarians and an accredited tester under the National Cattle Pregnancy Diagnosis (NCPD) Scheme.*
- *For air journeys: a veterinarian who is both a member of the Australian Cattle Veterinarians and an accredited tester under the National Cattle Pregnancy Diagnosis (NCPD) Scheme.*

*For consignments where an accredited NCPD tester is required, the exporter must ensure the name of the accredited tester, their accreditation number and a statement of their accreditation is provided on the pregnancy declaration for the consignment.*

*Competent pregnancy testers (approved in Western Australia and Northern Territory) cannot complete pregnancy testing of breeder or productive cattle consignments for any market.”*

### **Standards required under ASEL to accredit a lay pregnancy tester**

ASEL does not provide specific guidance in relation to accreditation for lay pregnancy testing.

However the Australian Position Statement on the Export of Livestock (APSEL), which is co-published with the ASEL, states that its purpose is to provide:

- an Australian Government statement of guiding principles and minimum recommended animal health and welfare outcomes for animals in the livestock export industry
- a basis for the development of the Australian Standards for the Export of Livestock
- an Australian approach that is consistent with that taken by international bodies, such as the World Organisation for Animal Health (OIE), involved in determining criteria for the health and welfare of livestock.

Therefore by implication, the purpose of state and territory based accreditation schemes is to ensure that harmful or inaccurate diagnosis does not result in adverse animal welfare outcomes.

## ***Review of ASEL***

In January 2018, the Department of Agriculture and Water Resources (DAWR) appointed a Technical Advisory Committee to review ASEL<sup>83</sup>. With public consultation expected to commence in early 2018, the review will not necessarily see immediate outcomes in the area of pregnancy testing of cattle.

The Technical Advisory Committee has been appointed for a period of two years and progression of the review is anticipated to be undertaken, with public consultation, on a modular basis. The number of modules and the order in which they will be addressed order is not yet known. However, it is the intention that the modules be reviewed in priority order in alignment with projected research outcomes<sup>84</sup>.

## ***States and Territories***

The power to legislate in relation to the authority to conduct acts of veterinary science vests in the states and territories.

Section 51(i) of the Australian Constitution gives the Australian Government power to make laws for the peace, order, and good government of the Commonwealth with respect to trade and commerce with other countries. While the Australian government has exercised these powers in relation to export standards, it relies upon the states and territories to regulate the veterinary profession in general and has developed export standards that rely on this jurisdictional split.

It is generally understood that the Commonwealth has no appetite for becoming the recognising body for either veterinary or lay practitioners and has elected to accept qualification or accreditation given by states and territories at face value.

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<sup>83</sup> <http://www.agriculture.gov.au/about/media-centre/media-releases/committee-appointed-lead-asel-review>

<sup>84</sup> <http://www.agriculture.gov.au/animal/welfare/export-trade/review-asel>

## **Appendix C - Regulatory arrangements in other jurisdictions**

### **Western Australia**

Pregnancy testing by laypersons is permitted in Western Australia.

Initial training of lay pregnancy testers involves a pregnancy testing unit delivered via a university or registered training organisation. Applicants must provide evidence that they are able to detect pregnancies of eight weeks or more in 100% of 20 animals and achieve 80% in a theory based exam<sup>85</sup>.

For state government accreditation purposes, applicants must pay a \$400 initial application fee and an annual renewal fee of \$200. Authorisation lasts for one year. To remain accredited, they must provide evidence that they have tested an average of 500 cattle or more over a rolling three year period. Authorisation is granted for a period of no more than 1 year at a time. Records must be kept of all animals they have tested<sup>86</sup>.

Western Australia's lay pregnancy testing scheme includes a requirement that lay testers operate under the direct supervision of a veterinarian.

There are unconfirmed reports that only three lay testers operate in WA (down from 6 in 2011).

### **Northern Territory**

Pregnancy testing by laypersons is permitted in the Northern Territory. The initial qualifications required in the Northern Territory are understood to be similar to Western Australia.

While testing of 500 animals on a three year rolling average basis is also required to retain accreditation, accreditation lasts for a period of three years in the Northern Territory. Testing summary activity reports are required to be submitted to the Department of Primary Industry and Fisheries by 31 December each year. Detailed records must be retained by the tester<sup>87</sup>. Compliance investigations are required to be initiated upon exporter complaint.<sup>88</sup>

Lay pregnancy testers in the NT are not under the supervision of a veterinarian. Provision for non-vets to pregnancy test for export commenced 10 years ago on the basis that property owners, in remote areas, could pregnancy test small numbers of their own cattle or cattle on adjoining properties for export. It is understood there are 76 accredited testers in the NT with only two offering contract pregnancy testing for exporters.<sup>89</sup>

A review of live export cattle pregnancy testing rules for non-veterinarians has been underway since at least September 2015 but remains on foot pending the outcome of the review of the Australian Standards for the Export of Livestock.<sup>90</sup>

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<sup>85</sup> <http://www.vsbwa.org.au/wp-content/uploads/2013/07/Pregnancy-testing-rectal-Jan2014.pdf> and <http://www.vsbwa.org.au/wp-content/uploads/2013/07/Pregnancy-testing-Ultrasound-rectal-probe-Jan2014.pdf>

<sup>86</sup> <http://www.vsbwa.org.au/wp-content/uploads/2013/07/Form-3.7-Pregnancy-Testing-of-Cattle-Authorised-Person-01112016.pdf>.

<sup>87</sup> [https://nt.gov.au/\\_\\_data/assets/pdf\\_file/0003/373629/guidelines-accreditation-non-veterinary-preg-testing-cattle-export.pdf](https://nt.gov.au/__data/assets/pdf_file/0003/373629/guidelines-accreditation-non-veterinary-preg-testing-cattle-export.pdf)

<sup>88</sup> [https://nt.gov.au/\\_\\_data/assets/pdf\\_file/0010/238618/process-of-investigation-accredited-pregnancy-tester-non-compliance-fact-sheet.pdf](https://nt.gov.au/__data/assets/pdf_file/0010/238618/process-of-investigation-accredited-pregnancy-tester-non-compliance-fact-sheet.pdf)

<sup>89</sup> Personal correspondence 17 August 2017, Dept. of Primary Industries and Resources (NT) and Dept. of Agriculture and Fisheries (Qld)

<sup>90</sup> <http://www.abc.net.au/news/2015-09-28/pregnancy-testing-review-cattle-live-exports/6809232>

### ***Other Australian Jurisdictions***

There are no practice restrictions in relation to pregnancy testing by manual palpation in Victoria and New South Wales though each of these jurisdictions is in the process of progressing to adoption of national animal welfare standards.

Non-veterinary testing is permitted by ultrasound in South Australia.

As recently as 2011, Tasmania amended the definition of veterinary services to include pregnancy testing<sup>91</sup>, with an exception permitted only for examination for pregnancy by the external ultrasound scanning<sup>92</sup>.

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<sup>91</sup> *Veterinary Surgeons Amendment Act 2011*

<sup>92</sup> *Veterinary Surgeons Regulations 2012*

## Appendix D - Comparison of Options under consideration

Supports the agricultural sector's viability in an increasingly competitive international and domestic market			
Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
Export market testing	<ul style="list-style-type: none"> <li>Producers would not gain any greater access to testers for export services</li> </ul>	<ul style="list-style-type: none"> <li>Producers would not gain any greater access to testers for export services</li> </ul>	<ul style="list-style-type: none"> <li>Producers would not gain any greater access to testers for export services, unless industry moves to secure accreditation from the scheme under ASEL</li> </ul>
Productivity testing	<ul style="list-style-type: none"> <li>Producers would not gain any greater access top testers for herd management purposes</li> </ul>	<ul style="list-style-type: none"> <li>Producers would gain legal access to testers for herd management purposes</li> <li>The number of lay testers entering the market may increase.</li> </ul>	<ul style="list-style-type: none"> <li>Producers would gain legal access to testers for herd management purposes</li> <li>The number of lay testers entering the market may increase</li> </ul>
Unit cost	<ul style="list-style-type: none"> <li>Unit cost (per head tested) is unlikely to change. An indicative price in WA for vets is \$3.20.</li> </ul>	<ul style="list-style-type: none"> <li>Unit cost (per head tested) may reduce, partly due to lower overheads of lay testers. An indicative price in WA for laypersons is \$3.40.</li> </ul>	<ul style="list-style-type: none"> <li>Unit cost (per head tested) may reduce, partly due to lower overheads of lay testers. An indicative price in WA for laypersons is \$3.40.</li> </ul>
Travel cost	<ul style="list-style-type: none"> <li>Travel distances, and related costs, would remain a significant contributor to costs in remote areas</li> </ul>	<ul style="list-style-type: none"> <li>Travel distances, and related costs, may reduce due to the presence of testers that are more geographically dispersed or who don't charge travel fees (or include them in the unit cost).</li> </ul>	<ul style="list-style-type: none"> <li>Travel distances, and related costs, may reduce due to the presence of testers that are more geographically dispersed or who don't charge travel fees (or include them in the unit cost).</li> </ul>
Timeliness/opportunity cost	<ul style="list-style-type: none"> <li>There are times where the availability of testers does not align with need and result in missed opportunities or increased holding or handling costs to align with availability.</li> </ul>	<ul style="list-style-type: none"> <li>There would be no change for export consignments.</li> <li>There may be gains in timeliness in relation to domestic purposes, say for sales to feed lots.</li> </ul>	<ul style="list-style-type: none"> <li>There would be no change for export consignments unless industry secures ASEL endorsement</li> <li>There may be gains in timeliness in relation to domestic purposes, say for sales to feed lots.</li> </ul>

## Supports the agricultural sector's viability in an increasingly competitive international and domestic market

Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
Research consistency	<ul style="list-style-type: none"> <li>Research projects would need to rely on access to local veterinarians who may not be available for critical timeframes or have repetitive interpretive skills.</li> </ul>	<ul style="list-style-type: none"> <li>Consistency of productivity research interpretation for would be supported.</li> </ul>	<ul style="list-style-type: none"> <li>Consistency of research interpretation would be supported.</li> </ul>
Veterinary practice viability	<ul style="list-style-type: none"> <li>The influences of veterinary practice viability would remain partially at risk from black market operators.</li> </ul>	<p>Veterinary practices may come under threat due to a flood of new entrants if:</p> <ul style="list-style-type: none"> <li>laypersons establish a credible market reputation; and/or</li> <li>veterinary surgeons may not fully promote the value they add.</li> </ul>	<ul style="list-style-type: none"> <li>Veterinary practices may come under threat due a number of demonstrably qualified entrants;</li> <li>veterinary surgeons may not fully promote the value they add.</li> </ul>
Biosecurity	<ul style="list-style-type: none"> <li>Veterinary presence in rural and remote areas should remain constant in the event of a response and incidental surveillance of biosecurity risks may occur.</li> </ul>	<ul style="list-style-type: none"> <li>If veterinary surgeons have reduced opportunities to go on farm, there will be less passive surveillance</li> <li>If practitioners leave the area, there will be less local vets to assist with responses.</li> </ul>	<ul style="list-style-type: none"> <li>If veterinary surgeons have reduced opportunities to go on farm, there will be less passive surveillance</li> <li>If practitioners leave the area, there will be less local vets to assist with responses.</li> </ul>
Incidental services	<ul style="list-style-type: none"> <li>Advice regarding recommended treatments and management, including for other animals on farm while present for testing.</li> </ul>	<ul style="list-style-type: none"> <li>Practitioners will not get the benefit of the full range of veterinary skills and observations on an incidental basis. However, it is arguable producers may still receive these benefits if they choose to continue to use veterinary surgeons for pregnancy testing of cattle.</li> </ul>	<ul style="list-style-type: none"> <li>Practitioners will not get the benefit of the full range of veterinary skills and observations on an incidental basis. However, it is arguable producers may still receive these benefits if they choose to continue to use veterinary surgeons for pregnancy testing of cattle.</li> </ul>
Other veterinary services	<ul style="list-style-type: none"> <li>If pregnancy testing revenue is not diminished, they are more able to remain in the area served and provide services for other purposes.</li> </ul>	<ul style="list-style-type: none"> <li>If veterinary surgeons no longer practice in the area, other production and companion animal services will also leave the area.</li> </ul>	<ul style="list-style-type: none"> <li>If veterinary surgeons no longer practice in the area, other production and companion animal services will also leave the area.</li> </ul>

## Supports the integrity of pregnancy testing and scientific research results

Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
<b>Accuracy of both pregnancy testing and ovarian scanning</b>	<ul style="list-style-type: none"> <li>will not necessarily provide assurance that the services of a veterinary surgeon are superior to the skills of an experienced layperson.</li> </ul>	<ul style="list-style-type: none"> <li>would not, on its own, support the integrity of pregnancy testing diagnostic results;</li> <li>may, on its own, reduce the integrity of pregnancy testing diagnostic results;</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>would provide a system to support the integrity of pregnancy testing diagnosis; and</li> <li>will support consistency of scientific research observations.</li> </ul>
<b>Demonstrated skill set</b>	<ul style="list-style-type: none"> <li>No formal qualification or RPO necessarily required to conduct testing.</li> <li>No demonstration that skill set maintained.</li> </ul>	<ul style="list-style-type: none"> <li>No formal qualification or RPO necessarily required to conduct testing.</li> <li>No demonstration that skill set maintained.</li> </ul>	<ul style="list-style-type: none"> <li>Formal qualification and accreditation system.</li> <li>Monitoring system to confirm currency of testing skill set</li> <li>Opportunity to regulate methods and equipment standards.</li> </ul>
<b>Traceability of tester results</b>	<ul style="list-style-type: none"> <li>No requirement that animals be traceable in order to identify vulnerable points in supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>No requirement that animals be traceable in order to identify vulnerable points in supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement that animals be traceable in order to identify vulnerable points in supply chain and assist with compliance activity and opportunities for improvement.</li> </ul>
<b>Complaints management of testers</b>	<ul style="list-style-type: none"> <li>Only veterinarians have the support of a professional body to demonstrate accountability in the way they perform their roles.</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons have no formal way to demonstrate their skills or accountabilities.</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons would have the support of a professional body to demonstrate accountability in the way they perform their roles.</li> </ul>
<b>Consistency of research interpretation</b>	<ul style="list-style-type: none"> <li>Would not support the consistency of scientific research observations</li> </ul>	<ul style="list-style-type: none"> <li>would support consistency of scientific research observations.</li> </ul>	<ul style="list-style-type: none"> <li>would support consistency of scientific research observations.</li> </ul>

## Incorporates the importance of animal welfare as part of the social licence of providers, of pregnancy testing services or ovarian scanning, to operate

Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
Immediate treatment	<ul style="list-style-type: none"> <li>Vets can administer medication without further referral or delay</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons cannot administer medication without referral and delay</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons cannot administer medication without referral and delay</li> </ul>
Recognition of illness	<ul style="list-style-type: none"> <li>While on farm, vets can recognise advise on illness and treatment and animal welfare issues</li> </ul>	<ul style="list-style-type: none"> <li>Vets will not be on farm to incidentally identify illness and advise on treatment</li> </ul>	<ul style="list-style-type: none"> <li>Vets will not be on farm to incidentally identify illness and advise on treatment</li> </ul>
Reporting of animal welfare	<ul style="list-style-type: none"> <li>Illegal operators may feel unable to report animal welfare concerns</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons may feel there is less risk in reporting animal welfare</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons may feel there is less risk in reporting animal welfare</li> </ul>
Risk of handling	<ul style="list-style-type: none"> <li>It is presumed veterinarians are all skilled and committed to animal welfare.</li> </ul>	<ul style="list-style-type: none"> <li>Poorly trained laypersons may risk injury to self and animals by poor technique.</li> </ul>	<ul style="list-style-type: none"> <li>It would be a requirement of accreditation that testers are skilled and committed to animal welfare.</li> </ul>
Risk of procedure	<ul style="list-style-type: none"> <li>It is presumed veterinarians are all skilled and committed to animal welfare.</li> </ul>	<ul style="list-style-type: none"> <li>Poorly trained laypersons may risk injury to self and animals by poor technique.</li> </ul>	<ul style="list-style-type: none"> <li>It would be a requirement of accreditation that testers are skilled and committed to animal welfare.</li> </ul>
Risk of transport	<ul style="list-style-type: none"> <li>Provided the veterinarian maintains testing skills, risk of road or sea transport should be minimised.</li> </ul>	<ul style="list-style-type: none"> <li>Provided the layperson holds and maintains testing skills, risk of road transport should be diminished.</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons will be required to demonstrate maintenance of testing skills, therefore reducing the risk of road transport.</li> </ul>
Poor management decision	<ul style="list-style-type: none"> <li>Provided the veterinarian maintains testing skills, risk of ill-informed management decisions reduced.</li> <li>VSB underpins professional integrity.</li> </ul>	<ul style="list-style-type: none"> <li>Provided the layperson holds and maintains testing skills, risk of ill-informed management decisions reduced, but no system to monitor.</li> </ul>	<ul style="list-style-type: none"> <li>Layperson will be required to demonstrate maintenance of testing skills, therefore reducing the risk of ill-informed management decisions.</li> </ul>
Professional support	<ul style="list-style-type: none"> <li>Veterinarians have the support of a professional body to demonstrate accountability in the way they perform their roles.</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons have no formal way to demonstrate their skills or accountabilities.</li> </ul>	<ul style="list-style-type: none"> <li>Laypersons would have the support of a professional body to demonstrate accountability in the way they perform their roles.</li> </ul>

## Incorporates the importance of animal welfare as part of the social licence of providers, of pregnancy testing services or ovarian scanning, to operate

Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
Presence of veterinarians	<ul style="list-style-type: none"> <li>will support the ongoing viability of regional veterinary practices and therefore access to local veterinary services for other purposes.</li> </ul>	<ul style="list-style-type: none"> <li>May undermine the ongoing viability of veterinary practices and therefore access to veterinary services for other purposes.</li> </ul>	<ul style="list-style-type: none"> <li>May undermine the ongoing viability of veterinary practices and therefore access to veterinary services for other purposes.</li> </ul>
Education	<ul style="list-style-type: none"> <li>Animal welfare component of existing training is largely targeted at handling and process.</li> <li>No broader animal welfare aspects are included.</li> </ul>	<ul style="list-style-type: none"> <li>Animal welfare component of existing training is largely targeted at handling and process.</li> <li>No broader animal welfare aspects are included.</li> </ul>	<ul style="list-style-type: none"> <li>Animal welfare training component could be expanded to include some preliminary sign for testers to observe.</li> <li>Responsibilities for reporting of animal welfare concerns would also be incorporated.</li> </ul>

## Imposes the lowest responsible regulatory burden

Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
<b>Export market</b>	<ul style="list-style-type: none"> <li>would not reduce the burden imposed on producers that rely upon, at times, scarce veterinary surgeons for feeder cattle export testing services.</li> </ul>	<ul style="list-style-type: none"> <li>would not reduce the burden imposed on producers that rely upon, at times, scarce veterinary surgeons for feeder cattle export testing services.</li> </ul>	<ul style="list-style-type: none"> <li>would not reduce the burden imposed on producers that rely upon, at times, scarce veterinary surgeons for feeder cattle export testing services.</li> </ul>
<b>Herd Management</b>	<ul style="list-style-type: none"> <li>excludes producers from access to additional competent (fee for service) technicians for herd management purposes</li> </ul>	<ul style="list-style-type: none"> <li>gives producers from access some additional (fee for service) technicians for herd management purposes</li> </ul>	<ul style="list-style-type: none"> <li>gives producers from access some additional recognised (fee for service) technicians for herd management purposes</li> </ul>
<b>Laypersons</b>	<ul style="list-style-type: none"> <li>excludes recognition of aspiring technicians willing to meet industry needs.</li> </ul>	<ul style="list-style-type: none"> <li>Removes all barriers to entry for aspiring technicians.</li> </ul>	<ul style="list-style-type: none"> <li>Creates some barriers to entry for aspiring pregnancy testing technicians, though does not require a degree.</li> </ul>
<b>Entry requirements</b>	<ul style="list-style-type: none"> <li>Illegal operators continue to operate, with no formal qualifications or recognition of prior learning required.</li> </ul>	<ul style="list-style-type: none"> <li>Operators continue to operate with no formal qualifications or recognition of prior learning required.</li> </ul>	<ul style="list-style-type: none"> <li>Higher standards of initial training and/or traineeships could be introduced.</li> <li>Longer courses would attract more costs and initial accreditation testing likely to attract application costs and annual fees.</li> </ul>
<b>Compliance costs for entrants</b>	<ul style="list-style-type: none"> <li>No change – new entrants may or may not undertake existing 2 day training course at costs of around \$450.</li> </ul>	<ul style="list-style-type: none"> <li>No change – new entrants may or may not undertake existing 2 day training course at costs of around \$450.</li> </ul>	<ul style="list-style-type: none"> <li>Cost for accredited testers unlikely to be at an acceptable level if operating only at a state level.</li> <li>If pilot expands to national scheme, economies of scale available.</li> <li>Annual fees and reporting burden will be influenced by the monitoring mechanism established under the industry scheme.</li> </ul>
<b>Burden to government</b>	<ul style="list-style-type: none"> <li>Burden to government of compliance with VS Act is thwarted by industry protection culture, coupled with poor</li> </ul>	<ul style="list-style-type: none"> <li>Lower burden to government as no regulation under the VS Act.</li> </ul>	<ul style="list-style-type: none"> <li>Low burden to government as no regulation under the VS Act and regulation under ACP Act targeted at</li> </ul>

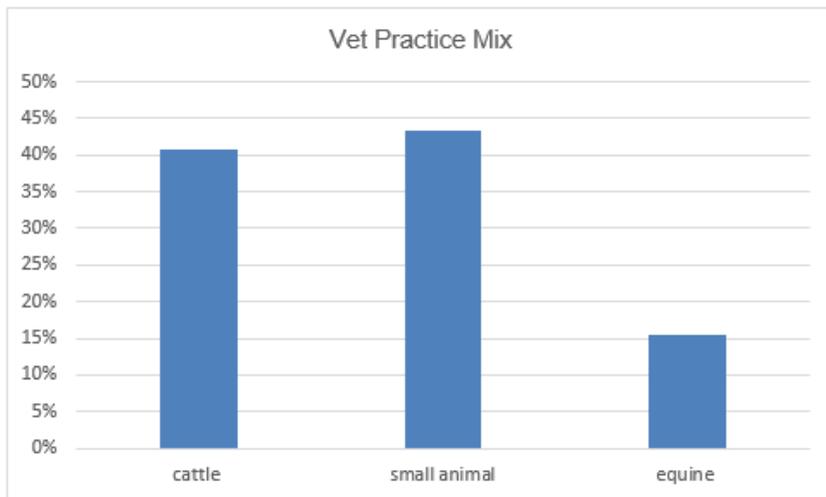
## Imposes the lowest responsible regulatory burden

Assessment criteria	Option 1 – status quo	Option 2 – deregulate entirely	Option 3 – accreditation arrangement
	return on investment of compliance alternatives.		scheme level rather than individual operator level. <ul style="list-style-type: none"> <li>• Number of schemes operating may be as low as one.</li> </ul>

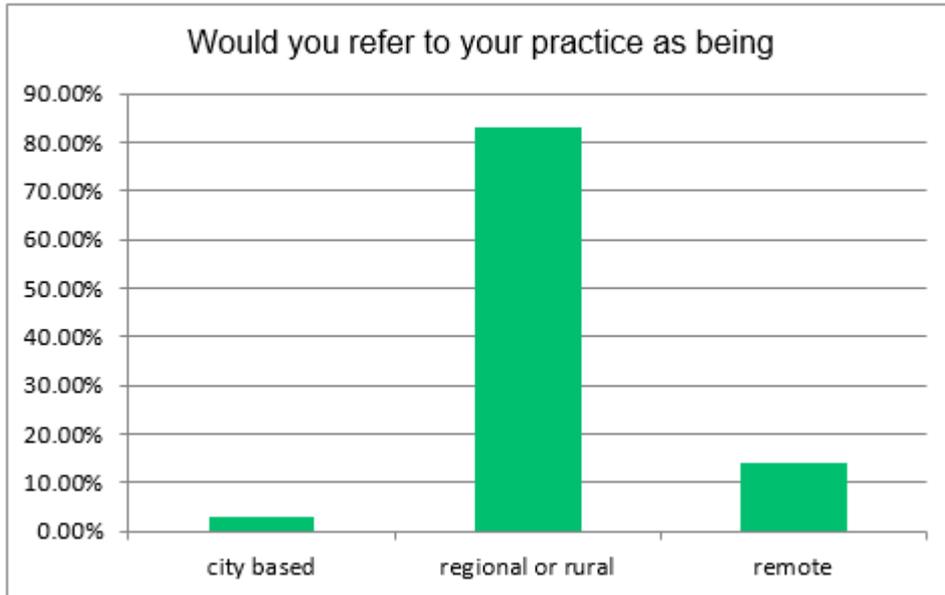
## Appendix E - Australian Cattle Veterinarians survey

### ACV Survey of Qld members – provided by email from AVA on 23 March 2018

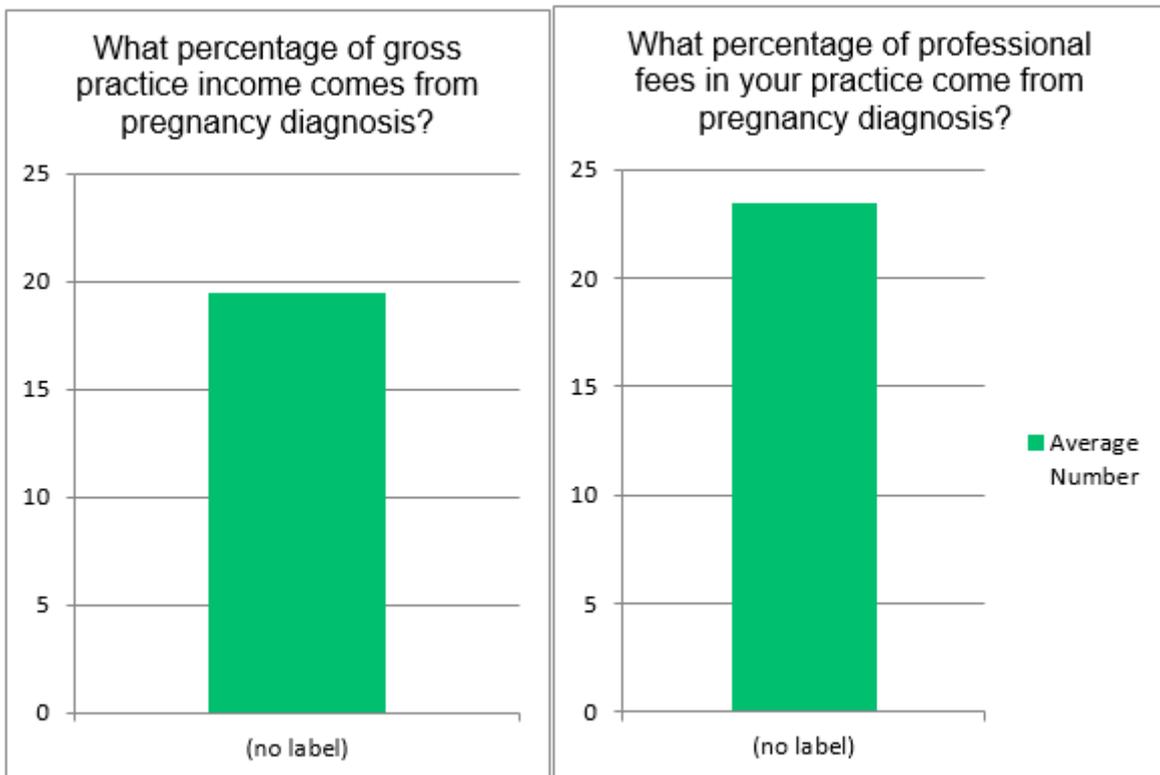
The ACV in March 2018 has undertaken a survey of Queensland Cattle Vet members. Currently vet practices surveyed (n=72 as of March 22) are just over 40% cattle, with 43% small animals. The results are discussed in more detail below, however in summary there will be large changes to practices, and practice incomes with the introduction of lay pregnancy testing, and practices will have to reduce their vet workforce. The total vet numbers from the practices who responded to the survey is 332 vets, with additional supporting clinic staff of 462.



These vets rated how they categorized their practice locality and over 90% were regional, rural or remote practices.



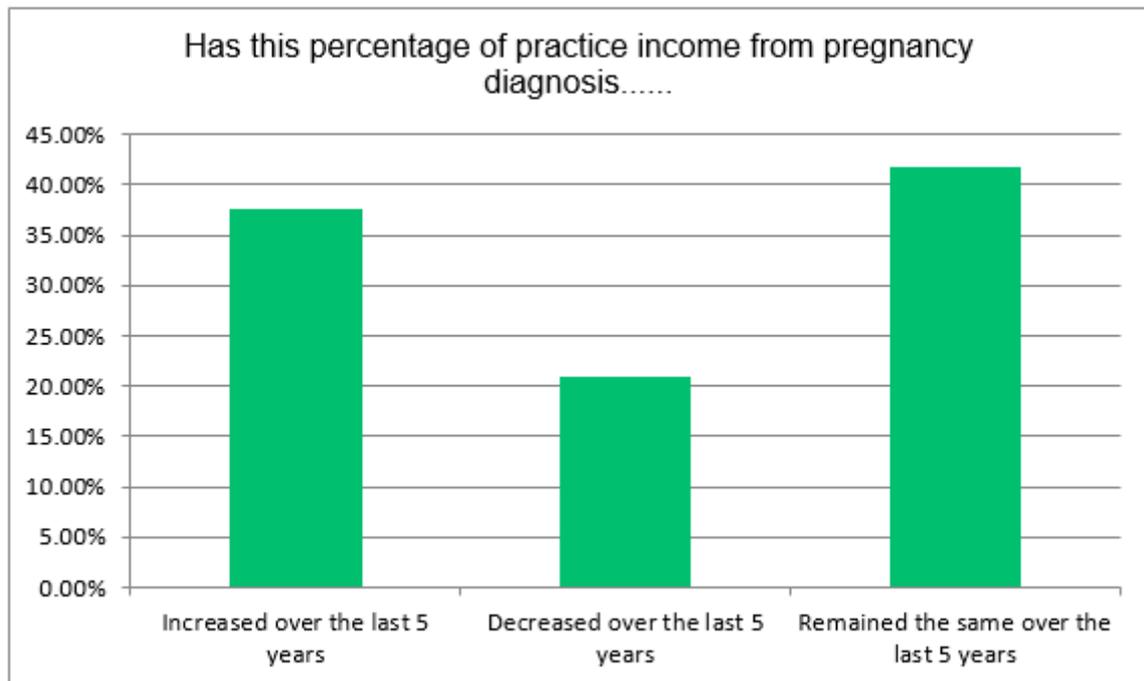
The percentage of gross practice income from pregnancy diagnosis is just under 20%, and the percentage of professional fees are 23.5%. There was a wide variation on these figures though from individual practices, ranging from 1% to 75% of professional fees.



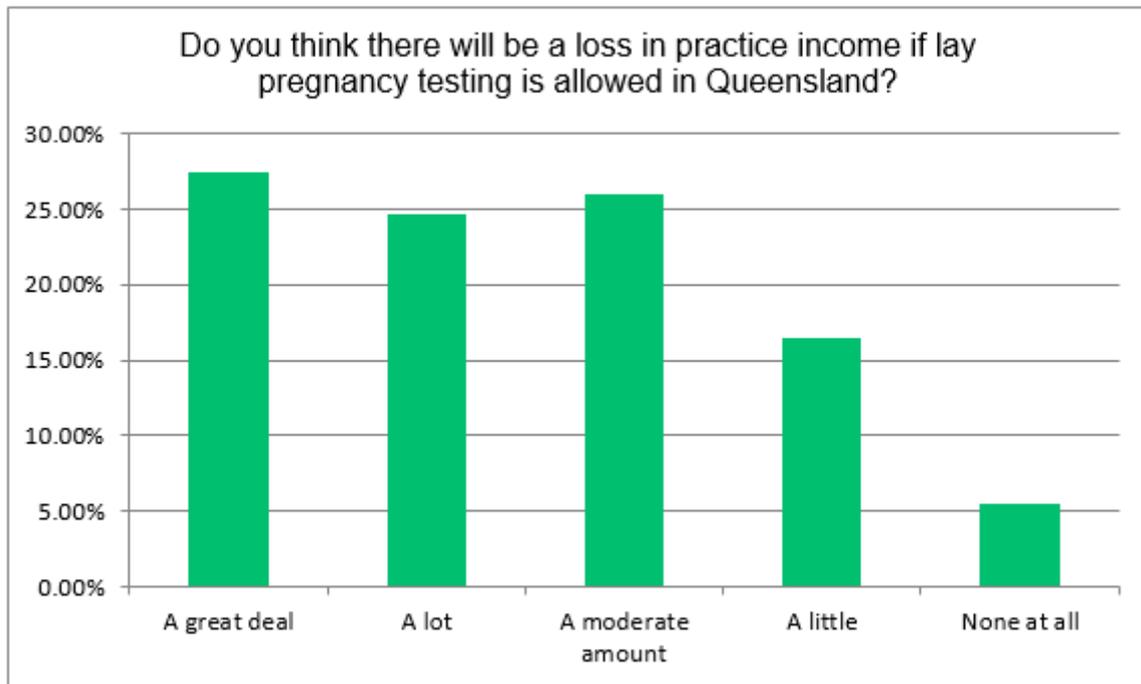
**Trends**

Cattle pregnancy testing and ovarian scanning, for commercial purposes and scientific research, by laypersons  
 Consultation Regulatory Impact Statement, Department of Agriculture and Fisheries,  
 2018

Over 35% of practices reported an increase in practice income from pregnancy diagnosis over the last 5 years, just over 40% said it remained the same, with 20% reporting a decline in that period.



Importantly, for practice sustainability, when asked the question do you think there will be a loss in practice income if lay pregnancy testing is allowed, 94% of vets said there would be an impact, and 50% of these said a great deal or a lot.



**A selection of other comments from vets were:**

*"I believe it would be a detriment to the efficiency and progression of the Qld beef industry to allow lay pretesting."*

*"As animal welfare and biosecurity concerns become more of a focus for consumers I fail to see how it is a remotely good idea to shut out the people who the general public see as experts and advocates in these areas. It is a backwards step and very disappointing considering the awesome job Agforce does advocating for the ag sector"*

*"Pregnancy testing often forms the basis for many other conversations while on farm ranging from the "while your here" to the conversation around reduced pregnancy rates etc. There would be a significant loss in expertise, not just in pregnancy testing skill, but the knowledge that comes from being a vet"*

*"I believe PD for trade/export still needs to be done by veterinarians. Can understand lay PD will enable farmers to process cattle quicker and prob cheaper and perhaps that's fair enough as long as they understand that pathologies (endometritis/COD/etc) won't necessarily be diagnosed and treated appropriately, potential disease investigations won't be initiated/pre-empted based on obs at PD, and the instinctive on-farm Biosecurity screening vets do secondary to the primary call-out job just won't occur".*

*"Biosecurity surveillance, optimizing production and herd health are key components to have a vet preg test. Reducing vets preg testing will come at a major cost to the cattle industry".*

*"I have previously been in mixed practice with significant amounts of cattle preg testing. One concern is misinformation that can arise when preg test rates are abnormally low. Lay preg testers may assume they know the causes and therefore diseases, including zoonosis such as lepto, may not be*

Cattle pregnancy testing and ovarian scanning, for commercial purposes and scientific research, by laypersons  
 Consultation Regulatory Impact Statement, Department of Agriculture and Fisheries,  
 2018

*accurately identified or addressed. Further economic losses and work place health and safety issues may continue without further investigation”.*

*“Yes, there are certainly major animal welfare concerns associated with lay pregnancy testing. I have witnessed cattle having been preg tested by layman that have been deemed empty only to calve in saleyards, feedlots and abattoirs. In addition to this, occasional rectal tears too (in particular when I worked in the NT on Cattle stations). Lay man preg testers have no accountability whereas us Vets know there will be consequences with the public and VSB if something goes wrong. Additionally, from a biosecurity and herd health point of view, layman don't necessarily have the knowledge or communication skills to be able to help producers which will long term be costing them. We work hard to build our clients trust in us and strengthen our relationships with them, but if lay man preg testers become 'available' it will seem as though us ACVs credibility may be lost? Long term, Cattle Vets might be extinct!”*

*“Loss of farm access, no biosecurity surveillance, loss of communication with producers, We will have to put off 2 vets”*

*“Preg testing is just a away for us to get on Farm. The onflow effects from discussions while preg testing are really important. Discussions about herd health, bull selection, and even working dogs are all had at this time and are important sources of info for the property owners and are important in generating income for the practice that is not directly related to preg testing”.*