

Pregnancy diagnosis of cattle for live export

Submission from the Australian Veterinary Association and Australian Cattle Veterinarians to Queensland Department of Agriculture and Fisheries

Summary

Under the *Statutory Instruments Act 1992*, if a proposed Regulation is likely to impose appreciable costs on the community or part of the community, a regulatory impact statement (RIS) must be prepared which must include the most efficient and effective way of achieving desired policy objectives and present an evaluation of the likely costs and benefits that would flow from its adoption in comparison with other options explored - in this case of pregnancy testing of cattle destined for live export.

The most efficient and effective way of achieving pregnancy diagnosis of cattle in Queensland is by veterinarians providing the service. A decade ago there may have been undersupply of Queensland veterinarians available to carry out pregnancy diagnosis and other cattle services. However, the landscape of veterinary services and graduate supply has changed significantly during this period. Three additional veterinary schools have been established, including two (Charles Stuart University in Wagga Wagga NSW and James Cook University in Townsville) focusing on meeting the demands of rural Australia. Graduates from both Charles Sturt University and James Cook University are now working in Queensland rural practices alongside graduates from the four older veterinary schools.

At the same time, the number of government-employed veterinarians (including in Queensland) has significantly decreased. In most regions, private practitioners are helping to fulfil the disease surveillance and biosecurity needs of the state of Queensland as well as providing animal health and welfare services to the Queensland cattle industry. Any moves that will impact on veterinarians practising in rural communities should be seriously considered.

The costs of any scheme allowing non-veterinarians to test export cattle would likely significantly outweigh any benefits. While we are not aware of the detail of the AgForce proposal under consideration, we anticipate that its adoption is likely to be uneconomic as well as potentially dangerous. Apart from the animal welfare risks, such a scheme will potentially damage the Queensland cattle industry, rural communities, and export markets.

Pregnancy diagnosis is an invasive technique that carries a risk of rectal perforation for the animal with possible complications including peritonitis and death. Ultrasound is an excellent tool (in the hands of a skilled operator who has the ability to confirm negative pregnancies manually). Ultrasound is only useful to assist in the diagnosis of bovine pregnancies within a certain window of pregnancy and requires the insertion of a probe into the heifer's or cow's rectum. It has a high false negative rate unless it is followed up by manual palpation. The prime reason for pregnancy diagnosis to be carried out by a veterinarian is to protect the welfare of the animal being examined.

Pregnancy diagnosis needs to remain an act of veterinary science in Queensland for the long-term benefit of the live export industry. In addition to maintaining high levels of accuracy and accountability with results, veterinarians also provide many value-added services while on farm providing pregnancy diagnosis. These include conversations about animal health

and production, disease and biosecurity-related matters, and a *de facto* passive disease surveillance system.

If the cattle industry wishes to have access to rural veterinarians for emergency and other routine work, it is necessary to maintain a viable veterinary industry. Removing pregnancy diagnosis as an act of veterinary science and establishing a non-veterinary pregnancy testing process will undermine this. In turn this risks animal health and welfare, surveillance and potentially the access to export markets which Northern Queensland relies on.

While the proposal under consideration relates specifically to pregnancy testing for live export, we note that AgForce's State Election Agriculture Policy Outline 2015 suggests the scheme might also apply to cattle for sale domestically.

ISSUE: TRADE AND MARKET ACCESS (DAFFQ)
Market opportunities currently before Queensland agriculture are abounding as demand for high quality food and fibre from Asia, particularly China, and other key markets soars. However, for these opportunities to be realised, and for producers and the state to benefit, there must be policy and frameworks conducive to industry productivity and prosperity. There must also be adequate investment in ensuring increased market access and the protection of product integrity.

What we need

- Live export trade to be supported as much as practicable where relevant to the Queensland Government;
- *Queensland Veterinary Surgeons Act (1936) Qld* to be amended to be brought in line with the Northern Territory and Western Australia. Accredited laypersons to receive 'fee for service' for pregnancy diagnosis (for export or sale);
- \$1 million allocated to the establishment and implementation of an accredited layperson scheme (with a view for it to eventually become cost recoverable);
- Hormone Growth Promotant controls to be retained and strengthened as directed by industry.

ISSUE: STOCK ROUTE NETWORK
Stock routes are embedded in Queensland's landscape and are a pioneering form of transport by drovers and shepherds.

Figure 1. AgForce Queensland Election Platform 2015 Source:
<http://www.agforceqld.org.au/file.php?id=3803&open=yes>

Our discussions with AgForce have indicated between 10 and 40 Queenslanders may embrace such a scheme if it was offered. It is unreasonable to expect the Queensland tax payer to pay for the cost of setting up a pregnancy testing scheme for such a small number of service providers when the market is already sufficiently served by highly-qualified and regulated veterinarians. If the cost, as indicated by the election platform document, is \$1 million to set up such a scheme, then the minimum cost per tester is at least \$25,000. This compares to veterinarians funding their own training and registration board, and leaving university with a personal debt in excess of \$100,000

Clearly, the most efficient and effective way of achieving pregnancy diagnosis of cattle in Queensland is by veterinarians providing the service to meet market demand as is currently the case. ACV has a publicly-available list of current accredited pregnancy testers who have agreed to have their contacts included. Our office has never received a call from a producer unable to find a veterinarian to test their cows and heifers. This is supported by discussions with exporters who state that they are not aware of any shipments that have been unfilled due to a shortage of ACV-accredited testers in Queensland.

Specific information requested by DAF

1. *Data on supply of veterinarians in Queensland available for live cattle pregnancy testing*

The Australian veterinary workforce has grown from 7941 to 10,954 in the period 2000 to 2015 (Figure 2). Of these there are currently 2,555 in Queensland (up from 1830 in 2000). There are currently 1095 veterinarians working in large animal or mixed practice in Queensland¹ – however due to current low demand by producers some do not do cattle work. Over the last seven years, the number of veterinarians registered in Queensland has increased annually at an average rate of approximately 5% and this trend is set to continue for several years.

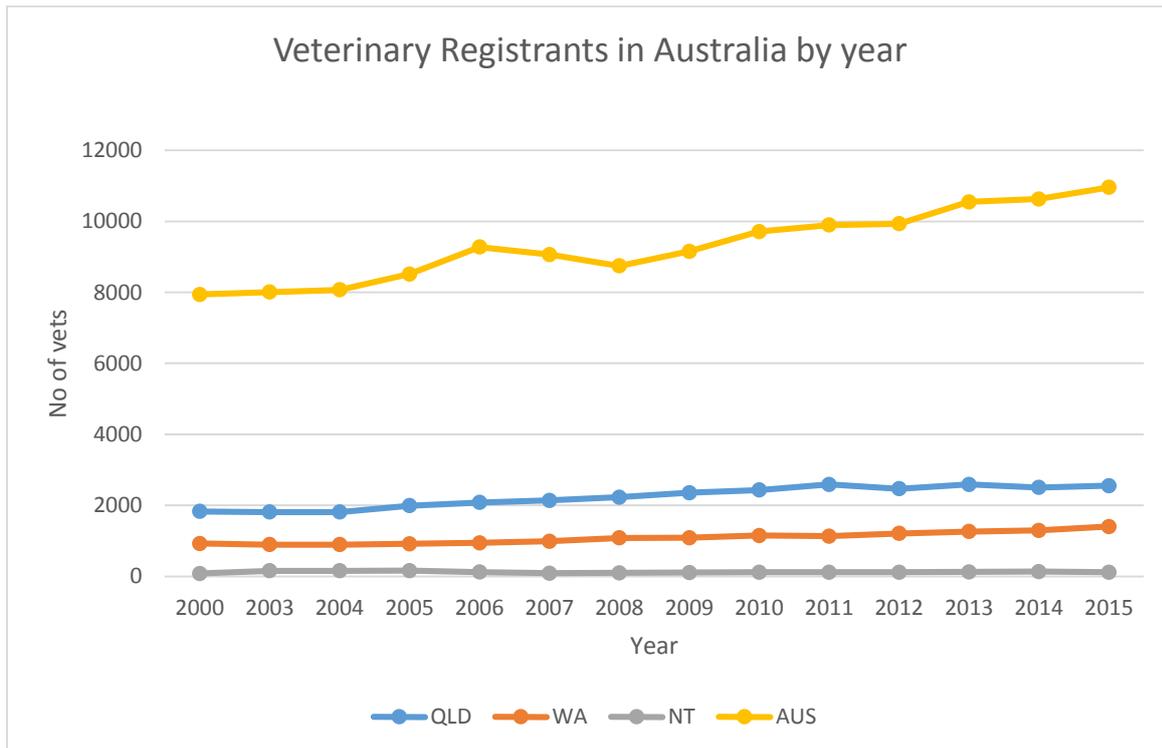


Figure 2. Veterinary registrants in Australia by year

Source: State and territory veterinary board figures collated by the Australian Veterinary Association

Nationally 612 veterinarians have attained PREGCHECK™ accreditation, and 142 of them have Queensland addresses. It should be remembered that veterinarians often have dual and national registrations, so there may be more accredited veterinarians performing services in Queensland. Despite the severe drought conditions, the average number of pregnancy diagnosis performed by each PREGCHECK™ veterinarian in Queensland in 2014 was 16,064. While all accredited members have the opportunity to be listed on the publically available producer site www.mycattlevet.com.au, a number choose not to for privacy and other reasons.

It is estimated that 79.3% of Queensland female cattle have their pregnancy diagnosed in Queensland (whether for live export or management reasons) by veterinarians² (currently producers are able to test their own cattle for purposes other than fee or reward and a number of lay testers are reported to be operating illegally in the state). In 2013, Queensland had 43% of the national 29.3 million beef herd which included 13.4 million beef cows and heifers. Given the severe drought conditions experienced in Queensland since then, these figures would have reduced as the national cattle herd has dropped to circa 26 million.³

2. *Numbers of rural veterinarians who are likely to be impacted – how much of their time is devoted to pregnancy testing v small animals*

The recent survey of Australian Cattle Veterinarian members performing pregnancy diagnosis in Queensland indicated that in Queensland currently, an average of 64.8 % of their time is spent on cattle work and 43.3% of their total work time was spent on cattle pregnancy diagnosis. The size of practices ranged from single person practices to 8 FTE practices with the average being 2.4 FTE veterinarians per practice. As well as veterinarians, there was an average of 1.5 FTE support staff per veterinarian in these rural practices.²¹

To lose this income would result in many rural practices becoming financially unviable. Losing these practices will ultimately result in substantially diminished disease surveillance, biosecurity, food safety and animal health and welfare services within the state of Queensland, as well as having a negative social impact on rural communities.

3. *% of vet graduates who go into rural practice*

Veterinary graduate numbers increase annually, despite this being one of the most difficult university courses to gain entry to, course fees being among the highest charged and veterinary graduates being comparatively poorly paid (Table 1and).

University	2007	2008	2009	2010	2011	2012	2013	Var. 1	% Annual Var. 1	% Var. 2007-2013
USyd	127	123	118	140	124	132	142	15	2.0%	
UQ	103	135	117	124	118	123	146	43	7.0%	
UMelb	106	120	120	125	88	74	129	23	3.6%	
MurdU	95	43	30	39	36	34	53	-42	-7.4%	
JCU		78	79	64	60	65	87	9	2.3%	
UAdel					44	53	54	10	11.4%	
CSU						70	83	13	18.6%	
Total Commencements	431	499	464	492	470	551	694			
Total change								263	10%	61.0%

Table 1. University commencements by year, Veterinary courses 2007-2013

Source: <http://highereducationstatistics.education.gov.au>

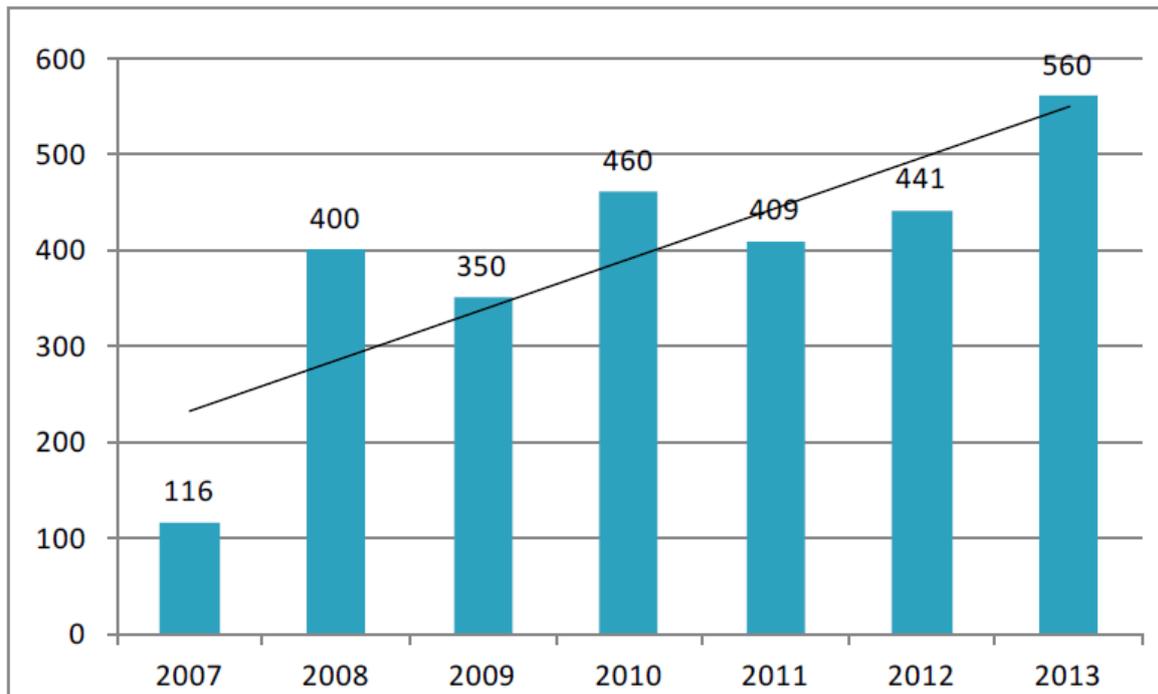


Figure 3. University graduations by year, Veterinary courses 2007-2013

Source: <http://highereducationstatistics.education.gov.au>

There has been an increase of 40% in veterinary graduates since 2008 (Figure 3). Australian Veterinary Association commissioned research in 2015 indicates that in 2013, 560 students graduated from veterinary science courses nationally. Of these, 168 found their way into rural practice, with 40 of these in Queensland. In 2014, 185 veterinary graduates found employment in Australian practices providing cattle services, an increase of 10% compared to 2013.⁴

Since 2013, James Cook University graduates have been entering the workforce. In 2015, Queensland universities graduated approximately 28% of the national graduates⁴.

4. Current prices for pregnancy testing services or pricing models

Veterinary practices use a number of different models for pregnancy testing. Some are based on a per head basis, some on an hourly rate and some on a combination of these and a rate per kilometre travelled to the testing property. 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.

5. Any data from NT or WA that compares vet and lay person adverse welfare impacts (false negatives and complications during process)

The Northern Territory (NT) and Western Australian (WA) lay pregnancy testing schemes predated ESCAS, however, the greater scrutiny of the industry resulting from ESCAS may initiate change to these schemes. Currently NT is reviewing its requirements.

The Australian cattle export markets do not tolerate pregnancies on export vessels. The use of ultrasounds to prevent pregnancy cattle from boarding export boats is an inappropriate use of this technology.

Ultrasounds are an excellent tool for the diagnosis of pregnancy, but when reasonable throughput is the goal, their use to assure empty status is absolutely inappropriate. To prove this point, a group of PREGCheck accredited examiners, using the ultrasound in the course of their usual pregnancy testing logged the results from 40 management groups amounting to 4,143 cows. They kept track of the number of animals misdiagnosed by ultrasonography alone, backed up by the gold standard of manual palpation. The ultrasound's sensitivity for positive pregnancy status varied from 78.5% to 100% with a mean of 95.6%. Translated, this data set showed that up to 21.5% of pregnancies could have been missed, with an average of 4.4% missed pregnancies if the animals diagnosed as empty by ultrasonography had not been manually confirmed. The specificity for empty status was much worse, varying from 0 to 100% with a mean of 79.3% meaning that on average only 79.3% of the animals where a pregnancy was not visualized were actually empty. Overall, from 4,143 animals tested by rigid ultrasound, 181 pregnancies were missed by the ultrasound.⁵

Northern Territory

The NT situation is far from acceptable. ESCAS does not allow misdiagnosed "empty" feeder heifers to exit the Indonesian supply chain as cow-calf pairs any longer. This has resulted in importers fining exporters for non-compliant animals. In one mob of approximately 1360 females audited for pregnancy status at the Darwin export depot, lay testers had incorrectly diagnosed (as not pregnant) 95 pregnancies up to seven months of gestation – a 7% error rate.

AVA has been in direct contact with exporters who have stated with certainty that they do not want the deregulation of pregnancy diagnosis services in Queensland as it has occurred in the Northern Territory. One exporter has asked us to do whatever we can to ensure that "Queensland does not become like the Northern Territory".

Some exporters are getting lines of heifers retested at the Darwin depot and are consistently finding in the order of 5% of heifers submitted from the lay testers are non-compliant to required pregnancy status. When asked whether this is the case with Queensland vet-tested cattle, they reported that they don't see the same issues. Furthermore, the exporters claim that they have never had a problem sourcing feeder heifers for export from Queensland due to lack of access to a veterinarian.

Pregnancy testing prior to export is a business cost that confers much greater value to northern heifers than other supply chain options. Compromising Queensland's ability to export heifers is a real risk to this value chain.

Western Australia

Section 26(4)(b) of the *WA Veterinary Surgeons Act 1960* allows for the authorisation of a person who is not a registered veterinary surgeon to carry out, under the direction of a registered veterinary surgeon, an act of veterinary surgery that is specified by regulation.

The WA Veterinary Surgeons' Board authorises non-veterinary testers to test cattle for pregnancy by ultrasound or manual palpation under specific conditions set out in the Board's accreditation guideline documents.⁶

The legislation is quite clear about both the scope and the intention of the legislation to deregulate pregnancy diagnosis. The true situation in Western Australia is quite different. Producers now employ lay pregnancy testers in Western Australia without abiding by the required restrictions and there has been little enforcement activity to increase compliance with the requirements of the scheme.

In Western Australia, this scheme has:

- reduced the number of vets in rural areas
- reduced opportunities for newly-graduated veterinarians to work in rural areas
- impaired surveillance for exotic and zoonotic disease
- reduced access to vets with the necessary skills to support livestock producers
- diminished welfare outcomes for livestock, and
- increased issues of food safety by reducing veterinary oversight in the procurement and administration of scheduled and unscheduled medications.⁷

Surveys undertaken in 2011 by veterinarian Zoe Chatfield (nee Bagshaw) found that the bovine case load of rural veterinary practices in WA had declined from 90 per cent to 19 per cent over the previous 30 years. Veterinary practices surveyed stated that businesses could increase their cattle veterinary staffing levels by an additional 80% if pregnancy diagnosis were only able to be undertaken by a veterinarian. Noting that in veterinary clinics there is a ratio of 1 to 1.4 support staff per veterinarian employed, there is a considerable flow on employment effect for local rural communities based on the number of veterinarians employed.⁷

In WA prior to deregulation, practices were able to employ additional staff, were better able to respond to production animal emergencies, and were in a better position to adjust their production animal emergency service fees to reflect the value of the animal and the profitability of their client.⁷

The trend in WA has been for rural veterinary practices to offer fewer services, at a higher price. Deregulation of cattle pregnancy diagnosis services is largely to blame.

It would be a great pity if Queensland chose to likewise endanger the future of its cattle industries by not considering the impact of deregulation on critical rural veterinary services.

References

- ¹ Baguley, J 2011, 'An analysis of the demand for and revenue from companion veterinary service between 1996 and 2026 using industry revenue data and household census and pet ownership data and forecasts', *Australian Veterinary Journal*, vol. 89, no. 2, p. 352.
- ² Australian Cattle Veterinarians. 2016. Member survey. Unpublished. Australian Veterinary Association, Australia.
- ³ Meat and Livestock Australia. 2015. 'Fast facts. Australia's beef industry'. Available: http://www.mla.com.au/files/83f011bc-c8f5-4ff1-9003-a5390112fed/MLA_Beef-Fast-Facts-2015.pdf.
- ⁴ Australian Veterinary Association. 2015. *Australian veterinary workforce modelling*. Available: http://www.ava.com.au/sites/default/files/AVA_website/pdfs/Australian%20veterinary%20workforce%20modelling%20report.pdf
- ⁵ Bergman, E. 2014 'Best practice and return on investment from pregnancy diagnosis", *Proceedings of the Australian Veterinary Association 2014 Annual Conference*, Perth WA.
- ⁶ WA Veterinary Surgeons' Board. 2014. 'Authorisation of a lay person to carry out pregnancy testing of cattle by rectal palpation'. Available: <http://www.vsbwa.org.au/wp-content/uploads/2013/07/Pregnancy-testing-rectal-Jan2014.pdf>
- ⁷ Chatfield, Z. 2011. in Bergman, E. *The Implications of the Deregulation of Pregnancy Diagnosis in WA* (unpublished)