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To: Committee Secretary
Senate Rural and Regional Affairs and Transport References Committee
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

Submission re National Horse Register

Please find below some considerations in response to your call for submissions relating to a possible National Horse Register.

The submission focuses on the benefits of, and feasibility of, establishing a national register and discusses some related technical issues.

Yours faithfully

R D Paskin

Some Considerations regarding the proposed establishment of a National Horse Register for Australia

1. Introduction

Since the introduction of a Horse Registration system in Europe, the idea of establishing something similar in Australia has become popular in some quarters.

This is not an issue to be taken lightly, and the matters set out here will need thorough consideration before any decisions can be made.

The European system uses a system of microchipping to register animals against owners; in addition, each registered horse is issued with a passport which must accompany it; changes of ownership must be recorded on the horse/owner database and on the passport.

It must be noted that food safety is a major driver for horse identification in Europe; horses are slaughtered and consumed in many European countries, and there are concerns about keeping various drug residues out of the food chain; being able to trace food safety problems back to their origins; and preventing the adulteration of other meat products with horse meat. Horse identification in Europe is implemented under EU Food Safety legislation.

Such a system does not currently exist in Australia, although the main racing codes have very effective horse identification and traceability systems in place.

Australia does have an effective individual identification and traceability system in place for cattle; a brief examination of the factors contributing to the success of this system is pertinent here.

2. Cattle Traceability in Australia: lessons of relevance

Cattle traceability in Australia relies on a number of elements:

- *Property identification* – a database identifying all properties where livestock may legally be held, including geographic location and contact details of owners/managers. In Australia, these databases (PIC databases for Property Identification Code) are held at State or Territory level.
- *Animal identification* – a means of conferring unique identification upon an animal (RFID/electronic tags in the case of cattle) or upon a flock (mob-based visual ear tagging in the case of sheep and goats).
- *A transaction database* – a means of recording movements of animals – giving date of movement, identification of animals, and properties (PICs) of origin and destination.
- *Legal enforcement* – the necessity for all of the above must be described in regulation so that enforcement action can be taken where necessary to ensure that the provisions of the system are complied with.

While not perfect, it is generally acknowledged that Australia's cattle traceability system is seen as effective, and probably as good as many similar systems elsewhere in the world.

There are a number of factors that contribute to the success of the cattle traceability system:

An economic driver – a credible traceability system is required for market access in general, and particularly for export purposes. The primary needs are to support tracing of diseases and for food safety purposes (especially related to diseases such as BSE, as well as the ability to trace origins of drug, heavy metal or other toxic residues). Without the system, cattle producers would have no market for their animals.

Ease of operation – animals are identified using mass-produced microchipped ear tags (the rumen bolus is far less popular). The tags are relatively cheap due to the sheer size of the cattle population, and in some instances, are moderately subsidised (Victoria). The tags are easily applied to the ears of cattle by farmers using easy-to-operate applicators. Data are uploaded *en masse* to the national database when animals are moved, and the upload process is relatively easy. Tag readers are widely available and in regular use at saleyards and abattoirs.

Public good element – the fact that traceability supports food safety and the export industry means that there is a very strong public good element in the system. Governments have legislated to support the system and are often involved in compliance actions to ensure that the system functions as well as possible.

Industry unanimity – following a number of problems in the past, relating to insecticide contamination of feed leading to meat residues, as well as the European BSE scandal and subsequent detection of BSE outside of Europe, the Australian industry agreed that a national traceability system was necessary. This enjoyed the support of all peak bodies – producers, agents and processors – at both national and State/Territory level. Industry realised that having such a system was imperative if the sector was to survive.

3. The Drivers for a Horse Register in Australia (ToR (b))

Economic drivers for a register exist in the racing industry where the need for precise individual identification is well understood. Unidentified and untraceable animals would not be able to race or be involved in breeding programs; the major racing codes have well-established and well-policed systems for this purpose.

However, within the recreational sector, no such economic driver exists.

There is a welfare driver, seen by many as being of importance: the need to know where horses are, particularly during bushfires. This knowledge enables a stronger, more focussed response where horses are concerned. Another facet of this is the ability to trace straying horses and return them to their owners.

Another potential driver would be that of being able to trace animals originating from areas affected by Hendra virus. However, given the relatively small number of horses involved (in the national context, that is), the limited geographic area in question, the seasonality of the disease and its short incubation period, there appears to be limited concern over this. Certainly no cases of Hendra virus have yet occurred outside of the "Hendra belt" over the two decades of experience with this disease, thus, there has not been a need for tracing Hendra-infected animals. Disease was always dealt with *in situ*, except for an incident at a veterinary clinic.

Horsemeat is very rarely consumed in Australia; a small amount is produced for export. There is thus no compelling public good element involved.

As to industry unanimity, this has not been tested – suffice it to say that the two major racing codes run two different registry systems and in other parts of the industry, very little is done at all. There could be widely divergent views on the necessity for, and the shape of, a national system.

In summary, economic drivers exist within horse racing, and there is a real welfare driver across the country – but no other strong drivers are readily apparent.

4. Technology and costs (ToR (e))

Current technology for horse identification involves the use of a microchip implanted into the nuchal ligament (the large ligament running along the top of the horse's neck).

Although the underlying electronic technology is the same as that used in cattle, the costs involved are far higher.

Equine microchips are encased in hypoallergenic capsules and are produced in much smaller quantities than the tag-based chips used in cattle. An encapsulated electronic microchip costs several times more than an ear tag.

The fact that implantation rather than simple tag attachment is used, drives the cost up even further: a trained person – often a veterinarian – is needed to implant the chip, involving professional fees and travel costs. This means that in rural areas, microchipping an animal may cost a few hundred dollars.

Costs involved with current technology may well put equine identification well outside the reach of many horse and pony owners, especially in the recreational sector.

An alternative means of identification which deserves further examination is that of biometric imaging – in simpler terms, facial recognition technology. The development of such technology for cattle is already far advanced and experimental use has proved promising. Using a mobile-phone based application to photograph a horse and upload the photo and related information to a national database/register would provide a low-cost alternative to microchipping that would be well within reach of most horse owners.

There are two caveats here – firstly, such technology is yet to be developed for horses, and the development will need to be financed. The second is that the racing sector may be unwilling to adopt such technology given their already tried-and-tested systems. (There is probably no reason why the various systems could not exist in parallel).

A database would need to be developed and trialled – lessons learned from the cattle traceability system and racing sector systems would be of value here. Industry would need to find a way of financing the development of the means of identification, a mobile application and a database.

5. Summary

1. An Australian horse registry would be desirable, mainly for animal welfare reasons.
2. Economic and public good drivers for such a system are lacking in Australia.
3. Technological options for easy and economical horse identification need further exploration given the high cost of microchipping.
4. All sectors of the industry at State/Territory and national level would need to reach agreement on a common approach to this issue.
5. Once general agreement is reached on the approach, attention will have to be given to the development of an appropriate database to accommodate the system, and detailed trials will have to be undertaken.

References

Australian Cattle Traceability https://www.nlis.com.au/

EU horse registration https://ec.europa.eu/food/animals/identification/equine_en

Facial recognition cattle https://www.beefmagazine.com/beef/emerging-technology-could-identity-cattle-through-facial-recognition

Curriculum vitae of author

Roger Paskin is a veterinarian with many years' experience in the livestock sector, having worked on livestock disease surveillance, emergency responses and traceability in numerous countries. He has served as Deputy Chief Veterinary Officer in Namibia, and as Chief Veterinary Officer in both Victoria and South Australia.