



National Livestock
Identification System

Your guide to the use of NLIS approved Rumen Boluses

The State of Victoria,
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www.dpi.vic.gov.au

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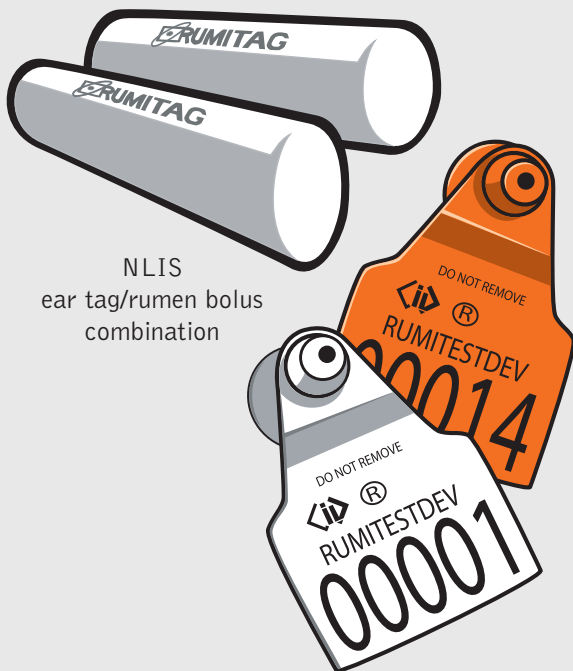
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National Livestock
Identification System



NLIS ear tags



NLIS
ear tag/rumen bolus
combination

Identification options

NLIS devices are available in the form of an ear tag, or an ear tag/rumen bolus combination.

With ear tag/rumen bolus combinations, the bolus contains the microchip (transponder). The visually readable NLIS number is printed on a large ear tag (white for NLIS Breeder Tags and orange for NLIS Post-breeder Tags) along with the letter 'R' or word 'RUMEN'. The ear tag signals that a bolus has been administered to the animal. Because of its large size, this ear tag can also function as an on-farm management tag.

Under Victorian law, producers have the option of using NLIS approved ear tag/rumen bolus combinations instead of NLIS approved ear tags if they wish. To correctly NLIS identify an animal to which a bolus has been administered, the associated ear tag must also be attached.

Rumen boluses have excellent retention characteristics, making them an attractive option for bulls and breeding and milking cows that are likely to be in a herd for many years. It is virtually impossible to remove a bolus from a living animal.

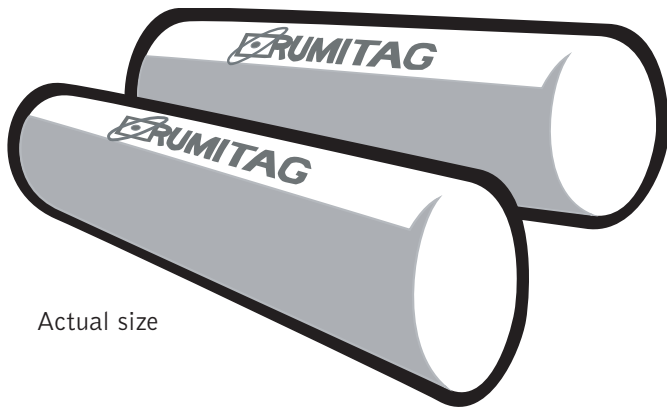
NLIS approved ear tag/rumen bolus combinations are currently available for \$2.60 each (plus \$10 per order for postage and handling) through the Department of Primary Industries' (DPI) contracted supplier, Rumitag Australasia Pty Ltd.

Call DPI's toll-free NLIS Helpline during business hours on 1800 678 779 for an application form if you are interested in identifying your cattle using an NLIS approved ear tag/rumen bolus combination. Please note that vendors must disclose that the cattle they are selling are identified with boluses (see page 11).

What are rumen boluses?

A rumen bolus is a ceramic capsule approximately 6cm in length and 2cm in diameter that is administered orally to cattle using a special applicator. This capsule which contains the microchip is permanently retained in the reticulum of cattle and does not affect the animal's health and welfare. The reticulum is one of the stomach compartments of all ruminant species and is located on an animal's left side near its heart.

Each NLIS approved bolus contains a microchip encoded with a unique unalterable number. The microchips used in NLIS approved rumen boluses are the same technology as present in NLIS approved ear tags. The microchips within boluses can be easily read in saleyards, abattoirs and on-farm using most hand-held and fixed reading equipment.



Actual size

What age do cattle need to be before a bolus can be administered?

It is preferable that cattle be at least 12 weeks of age before a bolus is administered. Trials are underway to determine whether boluses can be successfully administered to younger cattle. If you would like to administer boluses to younger animals, contact the supplier.





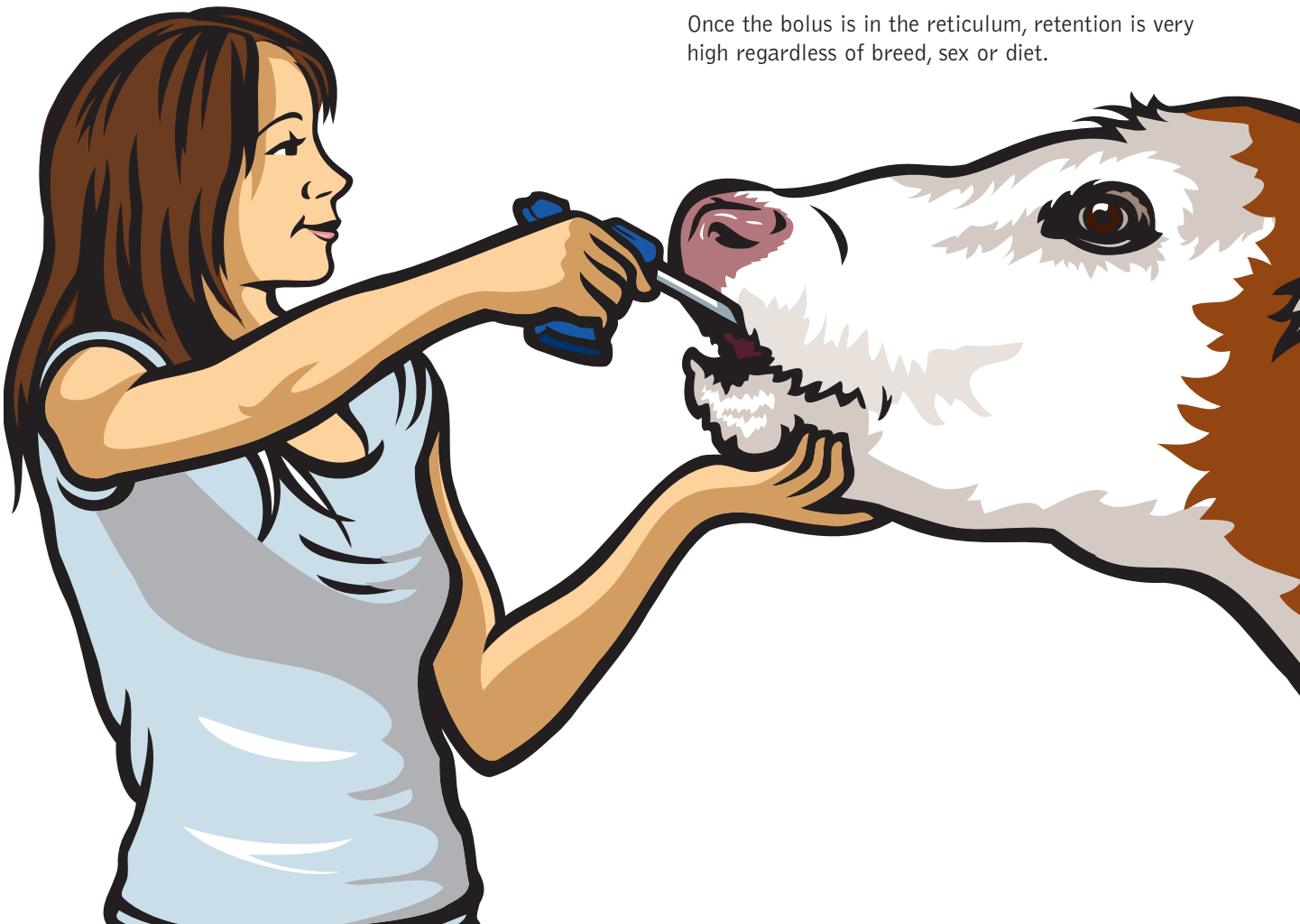
Correct identification technique

Bolus application is an easy process once the animal is appropriately restrained. When properly performed, the application of boluses is fast, safe and convenient, both for the operator and the cattle.

The bolus is released from the applicator at the end of the oral cavity and after it is swallowed it descends through the oesophagus and into the reticulum or into the rumen.

Once the bolus is applied, the animal must be given sufficient time to allow it to swallow the bolus and where applicable for the bolus to make its way from the rumen into the reticulum. In the case of adult cattle on a diet of coarse dry fodder, the arrival of the bolus into the reticulum may take several minutes.

Once the bolus is in the reticulum, retention is very high regardless of breed, sex or diet.

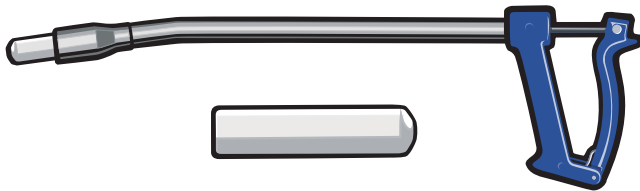




The recommended procedure for administering boluses is as follows:

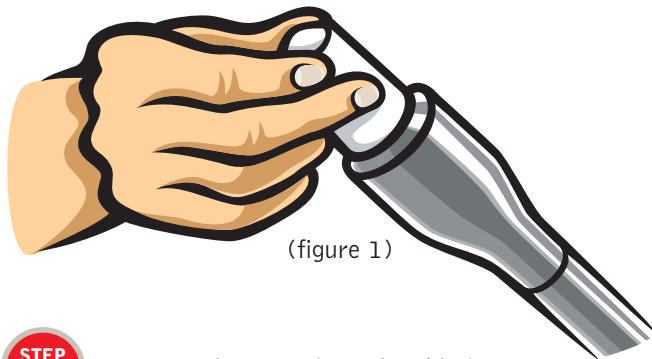
STEP 1

Remove the bolus from the packet and if a reader is available, check that the microchip can be read.



STEP 2

Load the bolus into the applicator (figure 1)



(figure 1)

STEP 3

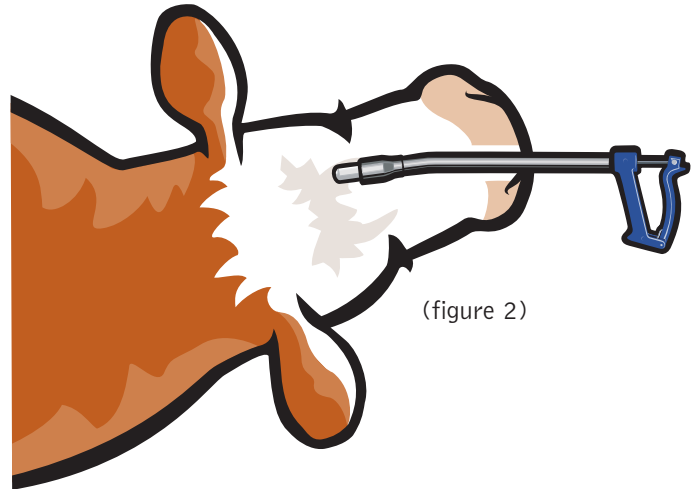
Restrain the animal in a head bale.

STEP 4

Standing to the side of the animal's head, open its mouth, holding its tongue against the lower palate (young or small cattle) or out of the side of its mouth between its molars (large cattle).

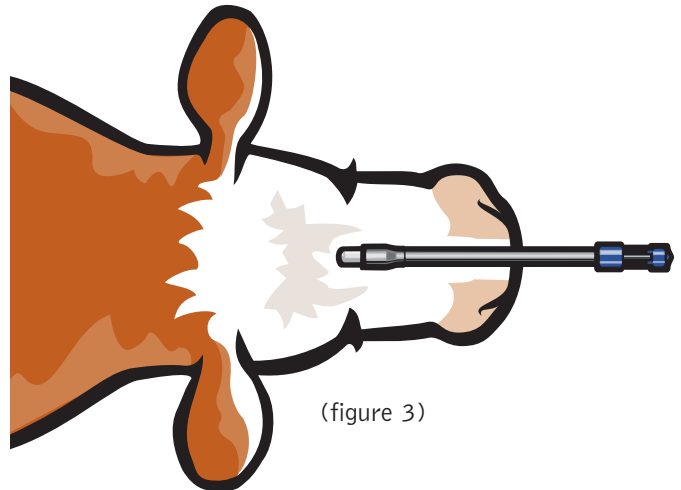
STEP 5

Insert the end of the applicator into the space between the incisors and the premolars (figure 2),



(figure 2)

and then rotate it until it is situated in the centre of the palate, pushing down on the tongue (figure 3).

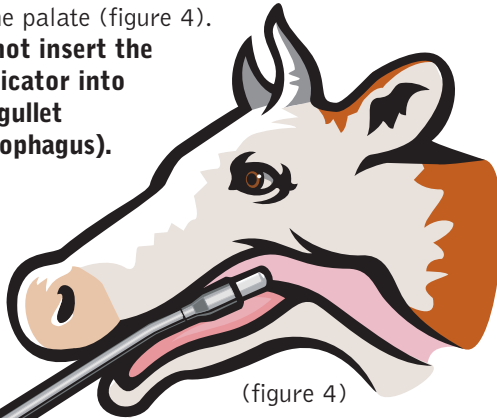


(figure 3)

STEP
6

Continue to insert the applicator smoothly but firmly deeper into the mouth until it reaches the base of the tongue and you feel the applicator touching the back of the palate (figure 4).

Do not insert the applicator into the gullet (oesophagus).



(figure 4)

STEP
7

Push smoothly on the applicator trigger to release the bolus while at the same time withdrawing the applicator slightly.

STEP
8

Once the applicator is out of the mouth, release the animal's jaw and head. Releasing the animal's head allows it to swallow the bolus more easily.

STEP
9

Check whether the animal swallows the bolus. If it stays in the animal's mouth it will eventually be spat out after the animal chews it noisily. Pick up the bolus and repeat the process.

STEP
10

If the animal does not spit out the bolus, check that it is swallowed completely and descends the gullet into the reticulum or rumen.

STEP
11

Once the initial swallowing process is over (the involuntary phase), a hand held reader can be used to follow the progress of the bolus as it descends the gullet. If the bolus has not been completely swallowed, it will be located in the mouth or the start of the gullet. In these cases, massaging the animal's throat in a downward motion may encourage it to swallow.

STEP
12

The application process is complete when the reader indicates that the bolus is present in the region of the reticulum, which is located on the animal's left side near the heart.

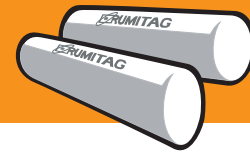


STEP
13

Attach the ear tag contained in the packet with the bolus to the right (off-side) ear with the NLIS number facing the front of the ear. Dunking the tag and applicator in disinfectant prior to application will improve ear tag retention.

STEP
14

If a hand held reader is available, check that the bolus is in the animal's reticulum or the ventral sack of its rumen. Alternatively hold identified animals in a small yard for a few hours so that regurgitated boluses can be easily located and re-administered.



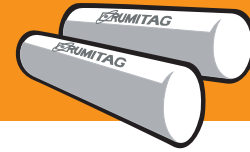
To enable regurgitated boluses to be re-administered producers need to be able to accurately establish the correct animal. The NLIS number on the corresponding ear tag is printed on each bolus. If the number on the bolus can not be read, producers who have a reader can read the bolus. The microchip number can then be used to establish the NLIS number on the associated ear tag by checking the 'association file' supplied with bolus orders, or by obtaining this 'file' through their producer account on the NLIS database.

In the unlikely event that a bolus remains lodged in the gullet of a young or small animal, several techniques can be used to help the animal swallow it or eject it. If the bolus is lodged in the gullet or at the entrance to the thorax at the level of the first rib, it can be pushed using an oesophageal probe (normally used in cases of bloat in ruminants and to extract samples of ruminant liquid) or with a hard, flexible tube (e.g., rubber tubing as used in milking machines). In these cases, the use of vegetable oil or another lubricating substance is advised to avoid harm to the gullet. The use of water or other liquids to wash the bolus down is not recommended, due to the high risk of pneumonia if the liquid enters the lungs.

Disclosure of the use of boluses

The National Vendor Declaration (NVD) includes a question about whether cattle in the consignment are NLIS identified, and if 'yes', whether an NLIS approved bolus or NLIS ear tag has been used.

Some processors are currently apprehensive about the use of boluses for the identification of cattle. If this is of concern, contact the processors who are likely to purchase your cattle and seek their views.



Bolus recovery

Rumen boluses are mainly retained in the reticulum making recovery of boluses in abattoirs feasible.

Bolus recovery units are currently being trialed in Australian abattoirs. Recovered boluses can only be reused as part of DPI approved recycling programs.

Replacement ear tags

If the ear tag associated with a bolus is lost, a replacement ear tag can be ordered by phoning DPI's toll-free NLIS Helpline on 1800 678 779. Use a reader to establish the microchip number of the bolus present in the animal that has lost its ear tag. Once the microchip number is known, you can determine from the 'association file' the NLIS number on the tag that has been lost. Alternatively call DPI's Helpline on 1800 678 779 and staff will be able to establish the correct NLIS number from the microchip number.

Under no circumstances is it permissible to attach an NLIS ear tag to an animal that has previously been identified with an NLIS approved rumen bolus.

Meat and Livestock Australia (MLA) has initiated a review of procedures for replacing ear tags that are lost from bolus identified cattle. As a consequence, procedures for replacing lost ear tags may change in the future. Call DPI's Helpline on 1800 678 779 to discuss your options.

To order NLIS approved boluses

You can now order NLIS approved ear tag/boluses on-line using a credit card by going to the DPI web site at www.dpi.vic.gov.au and following the prompts to Livestock Tags On-line. You will need to enter your Property Identification Code (PIC) to be able to place an order.

To obtain an application form for NLIS approved ear tag/boluses, visit a DPI office or call DPI's toll-free Helpline on 1800 678 779.

To open an NLIS database account

To open a database account, visit www.mla.com.au.

For further information on the operation of the NLIS database, contact MLA's NLIS Database Helpline on 1800 654 743 or send an email to nlis.support@mla.com.au

