GUIDELINE 1:
MICROCHIP TECHNOLOGY FOR RADIO FREQUENCY IDENTIFICATION OF ANIMALS

Policy

The New Zealand Veterinary Association (NZVA) recognises the benefit of a humane, permanent, electronic animal identification system for use in animals. Microchips can be encapsulated into sterile injectable devices, or used in ear tags and ruminal boli.

The microchip used must comply with the International Animal Identification Standards ISO 11784 and ISO 11785 and have been tested for ISO compliance by an independent test organisation authorised by ICAR/ISO to issue microchip manufacturers their official Manufacturer Code.

Microchips used in New Zealand must also conform with NZS/ISO 11784:2001 and NZS/ISO 11785:2001. Microchips used in dogs in New Zealand must be used in compliance with the Dog Control (Microchip Transponder) Regulations 2005.

Microchip readers (scanners) used to identify animals must be able to read devices conforming to both the above standards and should be also capable of at least detecting the presence of non-ISO standard microchips. (See Guideline No.3)

This identification system should be used in conjunction with an independent and secure database facility(ies). This database facility will be able to be accessed by veterinarians and other suitably authorised users via an 0800 toll free number or an secure internet service 24 hours per day, seven days a week. If there is more than one database provider, such databases should be interlinked in such a way that authorised users can access any information stored therein.

NZVA believes that any non-veterinarians implanting microchips should be registered and should work under specified guidelines. They should be appropriately trained and under veterinary supervision or with veterinary approval, because of the requirement to "assess the need for local anaesthesia or sedation prior to implantation."

Explanation

Microchip technology provides a permanent identification of an animal and a link with its owner. It assists in the retrieval of lost animals, facilitates the identification of breeding animals and fulfils the legal identification requirements of cats and dogs being exported from New Zealand, and being imported from specified countries. In the event of the outbreak of a serious zoonotic disease such as rabies, it provides access to animals and owners thereby facilitating the implementation of a compulsory vaccination programme. It also presents local government with an effective management tool for the implementation of its legal requirements such as registration and the identification of
dangerous animals.

The ISO standard comprises two parts:
- ISO 11784 which defines the structure of the unique code stored in the transponder (microchip)
- ISO 11785 which defines how the exchange of energy and information between transponder and reader must take place.

The New Zealand Standard comprises two parts:
- NZS /ISO 11784:2000
- NZS /ISO 11785:2000

The identity of the microchip implanted must have a worldwide guarantee as being unique for that animal. This will be achieved by the use of the Manufacturer’s Code that will be used in place of the Country Code in the Country Code field or by use of the Manufacturer’s Code in conjunction with the Country Code. In New Zealand a Country Code can only be used in the Country Code field where a single national body with appropriate legislative authority is responsible for allocating the ISO 11784 national identification code numbers to a manufacturer.

Microchips carrying the test code ‘999’ are not permitted for use.

The act of implantation requires knowledge of anatomy, asepsis, injection technique and the ability to assess the need for local anaesthesia and/or sedation prior to implantation. Accurate positioning of the transponder is essential. Implantation sites must be standardised in New Zealand as described in this policy or as described on the WSAVA web site www.wsava.org.

Authentication of the procedure and accurate recording of detailed information for certification is required under the Dog Control Act. For this reason, NZVA believes that only a registered veterinarian should carry out the implantation procedure in companion animals. It is important to note that under the Dog Control Acts only Registered Veterinarians and Animal Control Officers can verify that an animal has been identified with a microchip.

If horses are to be microchipped, they must be implanted by a veterinarian.

**Guidelines**

The owner of the animal presented for microchipping should sign a statement acknowledging ownership and specify the animal’s name, sex, age, breed, colour and any distinguishing marks. The owner should also give signed consent to the veterinarian to implant the device and acknowledge that the dog is not classified as menacing or dangerous.
Implantation Site

a. In New Zealand dogs and cats must be implanted subcutaneously, on the dorsal midline, just cranial to the scapulae using a sterile technique. The microchip should lie parallel to the skin plane. The use of local anaesthetic and sedation is at the discretion of the implanting veterinarian. This is the standard implantation site in all countries, including the United Kingdom but excluding those in Europe. The standard implantation site in most of Europe is subcutaneously in the midway region of the left neck.

b. Prior to implantation the veterinarian must ensure that no existing microchip is present in the animal by scanning the animal as described in paragraph 3.

c. Check the microchip to be implanted is functional with a 15-digit NZS/ISO number (which corresponds with the number on the bar code stickers) by holding the reader over the microchip while it is still in its sterile pouch.

d. Following implantation, ensure the “in situ” microchip is functional, reading the correct 15-digit NZS/ISO number corresponding with the number on the bar code stickers.

e. Apply the bar code stickers and immediately sign the certification documents to avoid errors. Only in the rare case that bar code stickers are unavailable should the number be copied by hand.

f. In horses the microchip must be implanted aseptically in or beside the nuchal ligament on the left side of the neck, in the middle third or half way between the ears and withers and just below (2 cm) the mane line.
   i. Use of local anaesthesia and/or sedation is at the discretion of the veterinarian.
   ii. Before implanting, ensure the horse is not already implanted, by scanning both sides of the neck with a reader.
   iii. Check the microchip is functional with a 15-digit NZS/ISO number (which corresponds with the number on the bar code sticker) by holding the reader over the microchip while it is still in its sterile pouch.
   iv. Direct the needle at right angles to the skin, insert to its full depth, and slowly advance the plunger taking care not to damage the glass capsule containing the microchip.
   v. After injection, verify the microchip is in place and working correctly.
   vi. Apply the bar code stickers to registration documents immediately to avoid errors. Only in the rare case that bar code stickers are unavailable should the number be copied by hand.

g. Birds less than 5.5kg adult body weight should be implanted intramuscularly into the left pectoral muscle. Birds greater than 5.5kg and/or long-legged are implanted subcutaneously in the dorsal midline at the base of the neck.
   i. Ratites up to four days of age are implanted in the piping muscle behind the head on the left side. Adult emus and ostriches can be implanted
subcutaneously in the left thigh (emus in dorsal midline in the s/c lump in Australia).

ii. Penguins and vultures implanted subcutaneously at the base of the neck.

iii. For native New Zealand species, please refer to the Department of Conservation for implantation sites.

iv. For implanting in birds, direct the implanter in a caudal (downward) direction. Use tissue glue and digital pressure or a suture to seal the implantation site.

h. For further information on implantation sites please refer to the WSAVA web site [www.wsava.org](http://www.wsava.org).

Scanning technique for implanted microchips:

i. Dogs and Cats
   
i. Make two steady sweeps along the dorsal midline long axis from skull to mid thorax and two sweeps at right angles to the long axis from elbow to elbow passing over the standard implantation site.
   
ii. Use a read speed less than 0.5 m/sec
   
iii. Maintain read distance at less than 5 cm from the skin
   
   
v. In the event of a positive scan, use access or PIN code to access database registry and retrieve owner details.

j. Horses
   
i. Make a slow and steady scan down the LEFT side of the nuchal ligament in the middle section of the neck.

k. Birds
   
i. Scan as appropriate according to size and species (see section on guidelines for implantation site).

l. Implantation and scanning sites for other mammals, birds, reptiles and amphibians are available at the WSAVA website [www.wsava.org](http://www.wsava.org).

Database Principles:

m. Any database must be able to be accessed by authorised users, via an 0800 toll free number or a secure Internet service, 24 hours a day, seven days a week.

n. All dogs registered from three months of age under the Dog Control Act will have microchip/animal /owner details recorded on the National Dog Database held by the Department of Internal Affairs. This was established in July 2006.

o. The New Zealand Companion Animal Registry ([www.animalregister.co.nz](http://www.animalregister.co.nz)) and the Australian Animal Registry ([www.aar.org.au](http://www.aar.org.au)) held by the Royal Agricultural Society of New South Wales, Australia at present provide independent database facilities that meet the guidelines described in the policy statement.
p. Privacy of stored data must be preserved in accordance with the Privacy Act, 1993. All ethical and legal requirements for protection of individuals’ data must be observed. The data on the National Dog Database belongs to the Territorial Authorities. The data on the NZ Companion Animal Registry and the Australian Animal Registry remains the property of the animal’s owner but restricted access is granted to registered and authorised users e.g. Veterinary Practices, SPCA, and Local Government for the sole purpose of animal-owner repatriation.

Reader Capability:

q. The reader should be able to read microchips that meet the ISO 11784 and ISO 11785 defined standard and microchips conforming to NZS /ISO 11784:2000 and NZS /ISO 11785:2000. The reader should be able to at least detect the presence of non-ISO standard microchips.

r. In companion animals only, the use of older style readers, which only read FDX-B and FDX-A and are as such not fully ISO 11785 compliant, is acceptable.

References
Dog Control Act 1996 and Amendments
NZVA Guideline 2: on Database Storage of Microchip Information for Animals (herein)