



## Background Information on Microchips.

Micro chipping of livestock is of growing concern and governments around the world are introducing legislation to make chipping compulsory. It's a huge task as there are about 4 billion livestock animals and 200 million pets in the world.

The microchip is generally injected deeply under the skin. It sits safely there, totally inert. A special scanner is used to send a radio signal through the skin of the animal to read the chip. The animal feels nothing as the scanner is passed over him. The microchip sends it's number back to the scanner.

The microchip has no power supply, battery, or moving parts. It is designed with an operating life of over 25 years. Once injected, the microchip is anchored in place as a thin layer of connective tissue forms around it. The chip requires no care. It does not pass through or out of the body.



Vet explains microchip procedure to a group of alpaca breeders

Microchips go into the animal by way of standard injection. Those familiar with the delivery systems for vaccines and regular shots will have no problem injecting the chip. Although the microchip needle is larger than a typical vaccine needle, the general rule is this...your animals will react the SAME way to this shot as they do to any other. No better, no worse. Animals do not over react to it. Their physical performance is not impaired and there is no scarring. You are not injecting any substance that can burn or irritate; the chip is completely biocompatible and non-offensive.

So if it doesn't have a battery how does it work? Microchips are powered and their identification codes are read by radio frequency signals generated from scanning devices. Scanners generate a magnetic field that is intercepted by the microchip. The microchip uses the energy from this field to power itself and transmit a return signal to the scanner which converts it into the microchip's identification code. The resulting alpha-numeric identification code is displayed on a scanner.

Veterinarians have been implanting microchips in animals for years, and the process has been proven to be very safe. The chip is made out of an inert, biocompatible substance, which means it won't cause an allergic reaction in your furry friend, and it won't degenerate over time. The first versions of the microchip would sometimes migrate from where they were injected, but manufacturers now design the chips with antimigrating properties. When they're

implanted properly, today's chips won't migrate. Once they're in place, they won't move around or get near any delicate tissues or organs.

The Destron micro chip readers which sojaa purchased are "universal" readers. This means they will read the micro chips which are currently used in the USA and the new ISO standard micro chips that are starting to be used in Europe and Canada.



Vet cleans the injection site before injecting the chip



Vet pinches a fold of skin behind the alpacas ear



Vet injects microchip into fold of skin behind alpacas head



Vet holds the hand held scanner and prepares to check for correct insertion of the chip into the alpaca



Syringe with safety cap removed



Syringe with white drive pin visible in the bevel of the needle and a microchip

# How to implant a microchip in 15 easy steps..

*This write up was prepared by Adrian Stewart (who is not a DVM) following a demonstration of the technique by a qualified veterinarian at a SOJJA meeting in February 2005.*

**If in doubt please consult your own veterinarian. Neither sojaa nor Adrian Stewart accept any liability arising from the use of this 15 step guide.**

What you will need:

- A supply of chips (each sterile package contains a unique chip, syringe, needle and four self adhesive ID labels showing the chip number and bar code).
- A scanner (with batteries)
- Somewhere to record the ID numbers
- A "sharps" container.

Optional:

A supportive friend to help hold your animal

You may want to consider steps one and two when buying a new animal. No one has yet used a microchip ID in a court of law to establish ownership but together with the ARI documentation it is as good as it gets in our industry.

## Step 1

With newly acquired animals check your ARI paperwork to see if the animal already has a microchip. Scan the animal and confirm the number on the scanner and the ARI certificate are the same. Do not insert a new chip.

## Step 2

Even if your ARI paperwork shows no micro chip scan any new animals thoroughly using the search patterns illustrated on the scanner to check if a chip is present. If there is a chip present record the number but do not insert a second chip.

Okay lets do it!

## Step 3

Scan the sterile needle assembly in the package to confirm the ID of the chip is the same as that shown on the package bar code label. This confirms the chip is working as designed and that the label ID and chip ID match. Don't attach the ID label to your records just yet.

## Step 4

Remove the sterilized syringe, needle and chip from its package. Place the package in a safe place. Do not remove the protective plastic cover from the needle until just before use.

## Step 5

Locate the injection site. For Llamas and Alpacas, the site is usually located behind the ear on the head. There is however, no rule or strong medical reason about where the chips should go and your vet may recommend an alternative site.

## **Step 6**

Prepare the injection site as you would normally for any subcutaneous injection. Many owners and vets do not prepare the site for subcutaneous injections.

## **Step 7**

Now is the time to remove the protective cover from the needle.

## **Step 8**

Using your thumb and index finger, pull some loose skin up at the injection site, pinching it lightly. Roll your index finger over your thumb to release some skin. Holding the syringe carefully, insert the needle subcutaneously below your thumb. The needle must be inserted all the way up to the hub. There is no need to draw back before insertion to check for blood and in any case the syringe has been modified to insert the chip so cannot draw or push fluids.

## **Step 9**

Holding the hub of the needle against the skin push the plunger into the body of the syringe to inject the microchip. Do not begin to withdraw the needle until the plunger has been pushed all the way forward. You should feel the plunger "click" as it reaches the end of its travel. You may well feel the microchip under the skin.

## **Step 10**

Withdraw the needle slowly. You should see the white colored drive pin inside the bevel of the needle tip. This tells you the chip has been pushed out of the needle. If you see bleeding apply light pressure to the injection site with your finger.

## **Step 11**

Discard the syringe, needle and plastic cap into your sharps container.

## **Step 12**

Scan the injection site to check the microchip is working correctly. In the unlikely event that you cannot get a reading the most likely cause is that you have injected into "thin air". Double check the scanner with another package, assuming the scanner is working rescan the injection site. If after double checking you are certain the chip has gone then discard the syringe and its packaging including the labels and return to step 3. Even if you do find the chip in the fleece do not attempt to reuse it as it is no longer sterile.

## **Step 13**

Retrieve your package from its safe place, remove the bar code labels and attach as appropriate to your records. We do this last just in case the chip is accidentally injected into the fleece or onto the floor.

## **Step 14**

Scan your animal the following day. This way you can be certain the chip is implanted and not just hiding in that wonderfully dense fleece.

## **Step 15**

Well done you have new alpaca husbandry skill.