

# How to Freeze Brand your cattle

---



In Queensland, Northern Territory and Western Australia, all animals over 100kg are legally required to be branded.

ALCA members have an exemption in Queensland with member to member stud sales, as we have DNA & PV for our stud cattle.

But all animals sent through a saleyard or to the meatworks or abattoir must be branded, no matter what breeding they have. It is illegal not to do so!

## How to freeze brand your cattle

Freeze branding can be a relatively painless and very effective form of permanent animal and herd identification. Research indicates that freeze branding is more comfortable to cattle than is hot iron branding. While hot iron branding makes a neat, legible scar on the surface of the hide, freeze branding changes hair color to white. Freeze branding works by destroying the pigment-producing cells in hair follicles, resulting in white hair growth. Liquid nitrogen or a combination of denatured alcohol and dry ice are effective methods for cooling freeze branding irons. Denatured alcohol is undrinkable and is used for industrial purposes. Liquid nitrogen cools freeze branding irons to a colder temperature than does alcohol and dry ice.

## Supplies Needed for Freeze Branding

- Cattle working facility with an area to restrain individual animals
- Freeze branding irons
- Ice chest (plastic or Styrofoam, not metal)
- Dry ice or liquid nitrogen
- Denatured alcohol
- Clippers and a source of electricity
- Spray bottle
- Rag or brush to clean the clipped area
- Timer or clock with a second hand or digital second display
- Leather gloves
- Copper alloy freeze branding iron



# How to Freeze Brand your cattle

---

Irons suitable for freeze branding are often made of copper alloy. Copper irons tend to work better than stainless steel and aluminum irons because they transfer cold well. Freeze branding irons are recognizably different from hot branding irons. They do not have breaks in the metal at key joints to release excess heat, they typically have shorter wooden handles and a thicker branding surface area to achieve a good brand. Clipping in a block pattern, with level and square edges, makes proper brand placement much easier and results in a more attractive brand. Use a cloth rag or brush to remove clipped hair, manure, and other debris that may interfere with iron-to-hide contact. The denatured alcohol sprayed onto the hide forms a layer that helps transfer the cold temperature of the iron to the hide. Apply enough denatured alcohol to wet the hide thoroughly.

## Step by Step Instructions

1. Let the irons cool for 20 minutes before first use.
2. Properly restrain the animal.
3. Clip the area to be branded.
4. Brush or wipe the area clean.
5. Spray a liberal coat of alcohol on the clipped surface.
6. Apply the branding iron for the predetermined amount of time (see table below). If the iron moves, reapply it to the depressed area and add a few seconds to the application period.

The big advantage of freeze branding is the brand is readable year round on black or red cattle. Good brands are easily seen from quite a distance and readable from over 20 metres. The only disadvantage to freeze branding is the amount of time it takes.

One will have a good idea if the brand is done properly if the hide area is frozen stiff. One can determine this by taping with your fingernail. It should feel like taping on an ice cube. It will take three to four weeks for the brand to show up nicely.

<b>Branding iron contact time for freeze branding</b>		
<b>Age of animal</b>	<b>Contact time (seconds)</b>	
	<b>Dry Ice and Alcohol</b>	<b>Liquid Nitrogen</b>
4 to 8 months	25	15
9 to 18 months	30-40	20
Over 18 months	45-50	25-30
Mature animal with thick hide (i.e. Hereford)	50-60	35

