

USING LIQUID NITROGEN TO FREEZE BRAND CATTLE



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Advantages and Disadvantages of Freeze Branding

Advantages

Relatively painless
Reduced hide damage
Blotching does not occur

Disadvantages

Time required to brand
More expensive than hot-iron branding
Does not work as well on cattle with light color hair
Results may vary

Tools Needed to Freeze Brand with Liquid Nitrogen

Copper or copper-alloy branding irons
(Steel and brass irons have been used with poor success)
3 inches for calves
4 inches for mature cattle
Container to hold liquid nitrogen and branding irons while cooling

Rice brush or curry comb
Clippers with surgical blade
95% – 99% isopropyl alcohol
Liquid nitrogen



Procedures

(Results may vary)

1. Freeze brand when the weather is right. Avoid rainy, windy or humid conditions since changes in weather can decrease the temperature quickly hindering effects.
2. Place copper branding irons in liquid nitrogen.
3. Wait 20 – 25 minutes for irons to cool to the proper temperature. A coat of ice will begin to migrate up the handle as the irons cool.
4. Secure animal in squeeze chute.
5. Brush intended brand location and remove all debris and loose hair.
6. Clip brand location using surgical clippers to ensure good contact between the iron and the hide.
7. Brush brand location a second time to remove loose hair.
8. Saturate brand location with 95% to 99% isopropyl alcohol with a spray bottle or sponge. Using a lower percent alcohol solution will have dramatically reduced effects on brand quality.



9. Immediately after soaking the brand location with alcohol, apply the brand. Research reports that calves should be branded for 20 to 24 seconds, while cows should be branded for 25 to 30 seconds. Variations in hair length can change the amount of time needed to apply a quality brand. If brands are applied too long, the results will mimic that of fire branding; this can be done with red or white cattle.
10. Two numbers can be applied at once, but requires two people. Brand location must be saturated with alcohol thoroughly.
11. Make sure iron is free of debris and place back in liquid nitrogen.
12. Allow 3 – 4 minutes for irons to cool before using again.



Contact the Bradford County Extension Office (904) 966-6224 if you would like assistance with freeze branding or any other beef cattle management practice.

Note: (Source: Materials used in this fact sheet were taken directly from University of Georgia Circular 904, 2006)

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