

## Electronic Identification - Two Steps Ahead, One Back

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Attempts to implement a national identification program for animal trace-back have been noticed. News about the outbreak of a disease with notable impact has increased the pro and con discussion, but the lasting outcome is far from defined.

The Dickinson Research Extension Center is involved in a project that is designed to monitor cattle in transit and locate cattle during shipment. This research involves evaluating the ability to read calves going on and off a truck using low-frequency RFID (radio frequency identification) tags.

The full duplex electronic identification button tags were placed in 18 yearling steers prior to being loaded onto and unloaded from the truck. A walk-through reader was attached to the rear loading door of a commercial livestock semi tractor-trailer. The printer and computer program were placed in the cab of the truck. The calves were loaded and unloaded three times for this test run.

In terms of successful reads by tag, 13 out of 18 tags (72.2 percent) were read all six times, four out of 18 tags (22.2 percent) were missed once, while one out of 18 tags (5.6 percent) failed to read twice.

These results also can be presented by successful reads per run. The success rate for reading individual tags on each individual run was 18 out of 18 tags (100 percent) for the first and third runs, 17 out of 18 tags (94.4 percent) for the second and fourth runs, and 16 out of 18 tags (88.9 percent) for the fifth and sixth runs.

In terms of overall performance, each tag was read six times and there were 18 calves, so there were 108 tag reads. The 102 out of 108 reads means there was a success rate of 94.4 percent and a failure rate of 5.6 percent.

For the optimist, the trial was 94.4 percent successful. For the practical cattle producer, only four of the six runs actually resulted in a 94.4 percent or higher success rate. In reality, only 66.7 percent of the runs

actually achieved a realistic outcome, while 33.3 percent failed. One tag failed twice, requiring three reads to achieve a 100 percent read for this set of data.

The concern within the industry is the speed of commerce and the accuracy of the tag reads. Theoretically, enough equipment could be set up to assure a 95 percent read success rate. However, more equipment creates more chances for equipment failure. Program and equipment malfunctions in the field are devastating. This was actually the second attempt at reading tags during this trial. The first attempt failed.

While equipment improvements do remove many of the headaches, failure is still failure. For today, the calves need to be run through testing again. Perhaps this time an acceptable success rate will materialize. As frustration brews in the industry, the battles are disconcerting.

The foe seems to come and go, depending on the scenario. The challenge seems insurmountable at times.

As a side note, one of the center's readers failed the other day. The response from the company was that someone would be glad to come and fix the reader. The estimate for the repair was round-trip airfare, all expenses paid and a significant per-hour charge.

Tag costs have jumped significantly. There are issues facing the industry that are not going away. A response needs to be found. Ultimately, whether the cause was man-made or natural, the response is no different during difficult times. The end goal is to return to normal with as little intervention as possible.

The task goes on.

May you find all your NAIS-approved ear tags.

Your comments are always welcome at [www.BeefTalk.com](http://www.BeefTalk.com). For more information, contact the North Dakota Beef Cattle Improvement Association, 1133 State Avenue, Dickinson, ND 58601 or go to [www.CHAPS2000.com](http://www.CHAPS2000.com) on the Internet. In correspondence about this column, refer to BT0298.

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## Low-frequency Tag Reads



**Tagged  
Calves**

**Tags  
Read**

Loaded onto truck	18	18
Unloaded off truck	18	17
Loaded onto truck	18	18
Unloaded off truck	18	17
Loaded onto truck	18	16
Unloaded off truck	18	16

Readings were done utilizing a walk-through reader.