

INITIAL OBSERVATIONS ON ELECTRONIC IDENTIFICATION OF SHEEP AT HETTINGER RESEARCH AND EXTENSION CENTER

D. Nudell, C.S. Schauer, D. Pearson, D. Drolc, and D. Stecher

Hettinger Research Extension Center, NDSU, Hettinger, ND

Impact Statement

Electronic identification of livestock is a hot-button issue for livestock producers across the United States. Hettinger Research and Extension Center (HREC) has tagged approximately 400 hundred head of adult ewes with electronic tags and plans to have the entire inventory tagged by the end of 2006. This paper describes some of our preliminary observations on the use of electronic identification at HREC.

Materials Used

The equipment we use is simple, rugged and fairly inexpensive. This is not to say that the equipment is affordable for small operations; it is not, but it is affordable for medium to large sized sheep flocks or for an entrepreneur who wishes to purchase equipment to do custom work.

We are currently using an Allflex full-duplex button tag, a wireless RFID Tag Reader (model BT3, purchased from Ag Info Link) a Hewlett Packard iPAQ hx2000 pocket PC, and an electronic scale head to record weight information. The pocket pc, associated software, and tag reader cost about \$2000. The initial tags were priced at about two dollars each. We plan to switch to an electronic tag this year that includes a dangle that will carry our flock number and provide a visual tag number.

Results and Discussion

We tagged three bands of ewes at the research center in 2005. On the 4th of May 2005 we tagged 152 head of mature ewes in the upper right ear. Total time for tagging was 90 minutes or about 35 seconds each. On May 5 an additional group of 142 head was tagged. Again, this took approximately 90 minutes or 38 seconds per animal. Finally, on the 6th of May we tagged an additional 119 head of half blood Katahdin yearlings in approximately 90 minutes or about 45 seconds per head. In total, 413 head were tagged at an average rate of one animal every 40 seconds. Two people completed the tagging for all three bands that were tagged. The facility consisted of a pen large enough to hold the entire band and a smaller pen that was used to crowd the animals while they were tagged. The ewes were crowded tight and one person climbed in the pen among the sheep to tag them. The other person filled the tagger and recorded information with the palm pilot.

Time spent working animals as they are sent to various research locations has been dramatically reduced with this new technology. For example: on May 12, 2005, two-hundred ninety six animals needed to be weighed and recorded before being shipped to a research pasture in Morton County. Weight and animal identification were obtained in 1 hour and 50 minutes using the wand and the electronic scale head. Labor for this operation consisted of 2 people. This new technology allowed us to process animals at a rate of one every 22 seconds.

On the 15th of May a second band on animals was shipped to Camp Grafton, ND. This band did not need to be weighed. They were scanned for identification only. In 1 hour and 10 minutes we were able to identify and record 161 animals. Time per animal was 26 seconds to record animal identification and location being shipped to.

On September 1, 2005 we scanned 296 fall lambing ewes in 3.5 hours. Time per animal was approximately 43 seconds per head.

Implications

Our initial conclusions are that the technology works and it is not difficult to use. The cost per animal for the tags is not prohibitive, but the cost for equipment to read the tags is not viable for small flocks at this time. We can envision veterinarians or some other custom operation offering the equipment for rent or offering tag reading as a service. It appears that tag retention is adequate, and we will monitor this response and will report on tag retention next year.