

BEEF FEEDLOT MANURE COMPOSTING DEMONSTRATION PROJECT

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Introduction

Producer interest in alternative methods of handling manure has increased due to a focus on reducing the pollution potential of livestock manures to surface and groundwater. Stockpiling and annual application of manure is the most common practice of beef producers in North Dakota. There is some decomposition of the manure in the stockpile but the end product consistency and quality varies.



Wells County SCD compost turner in action.

Manure stockpiles degrade under less than desirable conditions. By composting the manure through turning of the pile, the manure is decomposed under more desirable conditions. Composting of the manure significantly reduces the volume that needs to be spread, kills weed seeds and severely diminishes pathogen content of the final product. Farmers have shown strong interest in composting, but it is a system rarely utilized in North Dakota. To address this need, the Wells County SCD received an NRCS Conservation Innovation Grant to demonstrate composting to producers in Wells County, ND.

Methods

With the grant dollars, the Wells County SCD purchased a compost turner. Four farmers volunteered to have the manure produced by their animals composted with the turner. The Wells County SCD was responsible for operation of the compost turner at the four sites. Manure at each site was scraped and windrowed into piles 10 feet wide by 12 feet tall. The manure windrows at each farm were turned at least 4 times based on pile temperature and moisture. Three of the four sites were showcased during a tour open to the public.

Outcomes

Each of the volunteering farmers were pleased with the final product and process of composting. Each of them will continue to do composting on their farms.

Tractor size on the compost turner is an important consideration. The first time the raw manure is turned it takes a significant amount of horsepower and the project was not prepared for this since the Wells County SCD owned a 100 hp tractor. One of the volunteer farmers rented his 150 horsepower tractor to the project for the first turn at each farm. After the first turn, the manure was more homogenized and the 100 hp tractor was sufficient to run the machine.

Nearly 50 people attended the demonstration site tour. The attendants got a first hand look at what finished compost looks like as well as how composting can be done at various farm locations. The event was covered by television media as well as newspaper outlets.



Anne Ehni, Wells County SCD, shares composting project information with field day attendants.

Reprinted from the 2006 NDSU Carrington Research Extension Center Feedlot Research Report. Volume 29. Oct 10, 2006