



2009 CSREES National Water Conference; St. Louis, MO

Live Action Manure Spill Response Demonstrations Improve Response, Decrease Environmental Impact

Kevin Erb*, Robert Meinen, Senior Extension Associate; Penn State University Extension, Roxanne Chronert; Hydrogeologist, State Spills Team Coordinator, Wisconsin Department of Natural Resources, Amy Bradford; PennAg Industries Association, Vice President, Manure Hauler/Applicators Council, Steve Lehman; Lehman Ag Services

University of Wisconsin; *kevin.erb@ces.uwex.edu

Abstract:

An integral yet often overlooked part of manure management planning is preparing a manure spill response plan. As farms expand, farmers and professional manure applicators must manage larger volumes of manure. Environmental, legal and safety issues arise from potential accidental releases (tanker tipovers), field runoff (snowmelt or rain driven) or catastrophic manure storage failures. It is vital that all livestock farm employees and professional applicators know how to prevent spill situations and minimize risk.

When a manure spill or runoff event occurs, applicators need to know what action is expected and where to find the necessary tools and resources to minimize impacts. Putting a response plan on paper is one thing, knowing how to implement the plan with real life experience is another.

To assist applicators in this process, local Extension, conservation and regulatory staff have joined with the professional manure application industry in two states (Wisconsin and Pennsylvania) to create live action manure spill response. These field events focus on both educating clients about potential spill response techniques, and then demonstrating 3-6 actual manure release scenarios and actions. Planned releases have ranged from small (500 gallons) to tanker tipovers to dragline breaks (20,000+ gallons).

These events have proven their value in many ways. In Wisconsin, the willingness of farmers and manure applicators to voluntarily report incidents has increased significantly. When releases do occur, the environmental impact is lessened, as responsible parties know not only what steps to take first, but also how to clean up and restore the site. In Pennsylvania, the spill response demonstration is used to prepare certified professional applicators for emergency situations as a component of continuing education requirements. More than 1,600 people have attended the 15 events held so far. Planning for a catastrophic manure storage failure demonstration is underway.

Impact Statement:

Live action manure spill response demonstrations require significant planning, and it is essential to bring Extension, local conservation staff, state regulatory (including animal waste, spill response and risk management/legal) staff and professional applicators to the table during the planning process, the initial idea of creating an intentional spill is hard for some partners to initially accept. In both states, this has increased working relationships and trust between partners. NRCS in Wisconsin reports that the quality of spill response plans included in CNMPs has improved dramatically.

A review of the reported spills to the Wisconsin Department of Natural Resources from 2006-present showed that, in counties where spill response training was held during that same time frame, 18 incidents occurred. Eight of these involved applicators or farmers who attended training. Of these, each event was contained and cleaned up before it reached surface or groundwater. In 2000-2002, 10 events are documented in these same counties, 40% of which impacted surface/groundwater and 3 involved applicators.

Pennsylvania has over 800 certified individuals in the state's required commercial manure applicator and broker certification program. By targeting an audience that handles large quantities of manure, a spill response field day provides continuing education that truly leads to increased human safety and decreased environmental risk in manure application situations.

Category: Agricultural BMPs

Type of Presentation: Poster Presentation