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Educating Producers about Manure Application

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Abstract Text:

The UW-Discovery Farms Program has been working with producers, USGS and others to collect water quantity and quality data from 21 monitoring sites on six privately owned farms in Wisconsin. These sites – a combination of edge-of-field, in-stream, and subsurface tile lines encompass a wide range of management systems from small organic grazing (MIRG) to large dairy confined animal feeding operations (CAFO). Meteorological stations were installed on each farm providing comprehensive climatologic data that can be used to predict the likelihood of runoff in the different regions of the state. These predictions could aid in the development of good on-farm management decisions, particularly those that may be environmentally sensitive such as when and where to spread manure. A Critical Condition Index (CCI) is being developed to assist producers with decision making. Multiple years of data suggest that the risk of runoff (either surface or tiles) is higher in the later months of the winter period (February and March) and in the early spring (April through June) when soils are wet and vegetation cover is minimal. These runoff periods are similar throughout the state and are particularly dependant on antecedent soil moisture conditions. Farmers who make proper management decisions during these critical periods will greatly reduce their risk of agricultural runoff and adverse environmental impacts. A programmatic goal is to develop a statewide network to provide producers with current climatic and soil moisture information to assist their decision making. One option is to make available hand held soil moisture meters calibrated to cover a range of conditions appropriate for manure applications (normal rate, reduced and none). An additional alternative would be to develop a web-based system that can provide producers, consultants and others with the information needed for these management decisions.

Impact Statement:

The information from these studies has been used by the Wisconsin Department of Natural Resources, the Department of Agriculture, Trade and Consumer Protection and the livestock producer groups to develop education and training programs for livestock producers. Each spring prior to the critical runoff periods these organizations work together on a press release updating producers on the risk of runoff. Each year this is updated to take into account current frozen and snow-covered ground conditions. Discovery Farms is working with researchers in the College of Agriculture to develop a CCI (Critical Condition Index) based on soil moisture and manure application rates.