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February 24, 2011

Mr. Wayne Bogovich, National Agricultural Engineer  
Conservation Engineering Division, USDA  
Natural Resources Conservation Service  
Room 6136, South Building  
1400 Independence Avenue, SW  
Washington, DC 20250

Submitted Via E-Mail: [wayne.bogovich@wdc.usda.gov](mailto:wayne.bogovich@wdc.usda.gov)

Dear Mr. Bogovich:

On behalf of the South Dakota Cattlemen's Association (SDCA) and our 1,000 beef producer members, thank you for the opportunity to comment on proposed changes to the Nutrient Management "Code 590" conservation practice standard in the National Handbook of Conservation Practices. SDCA's Vision Statement - *To be a producer-oriented organization that consumers and producers rely on for factual information to enhance a profitable business climate and promote environmental stewardship* – clearly demonstrates our members' commitment to conserving the resources in our care while producing a safe and wholesome product for beef consumers.

In general, the proposed changes to the 590 standard are concerning to SDCA. First and foremost, they set a regulatory tone regarding nutrient management, a change from what has previously been a planning tool for cattlemen and was never intended to be a nutrient "regulation". However, we believe EPA and state regulatory agencies will rely on the 590 standard when providing oversight for nutrient management activities, so it's imperative that NRCS gets the standard right.

More specifically, our concerns are as follows:

- The following prohibitions on the land application of manure are of utmost concern and would have a devastating impact on South Dakota's livestock industry:
  - "To frozen and/or snow covered soils" – The proposed language totally prohibits surface application of manure on frozen and/or snow covered soil, which ignores vast differences in geography, weather patterns, soil characteristics, slope and the type of surface cover that exists, not only across South Dakota, but nationwide. South Dakota's winters can be lengthy and, during the winter months, most livestock producers are unable to completely clean outside feed yards. The manure is allowed to accumulate primarily because it is frozen, but occasionally temperatures rise enough to allow some of the manure, snow, and ice to thaw. When a thaw does occur, producers clean the thawed manure from the yards as well as possible. Much of this material is manure-contaminated snow and ice or "brown snow". For the sake of logistics and economics, cattlemen prefer to land-apply this brown snow the first time it's handled, if at all possible. Typically, a producer's nutrient

management plan would call for the application of brown snow to uplands, which can be protected by terraces and/or buffer strips. They may also be rough ground or have a significant crop residue cover. Any and all of these measures will minimize the risk of nutrient runoff and are preferable to building costly containment structures to hold this brown snow while awaiting a thaw. SDCA agrees that appropriate management practices need to be implemented; however, the key word is “management” and Code 590 should not prohibit this practice.

- “During periods of winter dormancy” & “During seasons of high runoff potential”– These provisions are not defined and may be subject to the whims of over-zealous regulators. Further, South Dakota winters are unpredictable, at best, and may begin as early as the last half of September and end well into April. March and April are typically high moisture months and crops are being planted as soon as soils are suitable in late April and May. Once the corn and soybean crops are planted, manure application becomes impractical for numerous reasons. As the crops emerge, clearly no surface application is possible without damage to the growing crop. The corn and soybeans will not be harvested in this region until September, October and November, depending on planting and growing conditions.

If the proposed language is implemented in South Dakota, it may well result in manure application being limited to a matter of days or weeks in a year. Use of the term “winter dormancy” for the northern geographical region, such as South Dakota, would in many years prohibit application of manure after the corn and soybeans are harvested, which would render many existing livestock feeding facilities inoperable due to the inability to timely apply and utilize manure.

- “When the top two inches of soil are saturated...” – In South Dakota, March and April are typically high-moisture months and land application of manure would likely be excluded due to rainfall and/or snow melt. Application in the spring is limited by soil conditions, if it is too wet to plant, it is too wet to apply manure and the window of time for tillage in anticipation of planting is very limited. In addition, if this prohibition is incorrectly interpreted by regulatory personnel or field staff, this provision could prevent the application of all wastewater by any means of surface application. For example, it is common for the top two inches of soil to be saturated during application of wastewater using a center pivot irrigation system.

SDCA suggests a better approach would be to allow for surface application of manure provided the risk of runoff is low due to soil characteristics, topography, ground cover (including crop residue) and implementation of appropriate conservation practices.

- It is not appropriate to include an arbitrary cut-off level for soil phosphorus (P) in the 590 standard. Instead, it is critical to the viability of the animal agriculture industry for the standard to retain and encourage states to implement effective risk-based assessments for P. The P index provides this risk-based assessment by evaluating scientifically the **source and transport** issues for each field. As currently drafted, a 10X soil test P level is arbitrary and is not correlated to water quality concerns as evidenced by the fact that it is ONLY a **source-based** threshold and does not encompass the critical second half of a risk assessment – **transport** – which is designed to protect water quality. An arbitrary cut-off level for P application without consideration of environmental impact will prevent the land application of manure on many soils. Under guidance

from South Dakota State University (SDSU), South Dakota has developed a P index, which has been reviewed through the NRCS State Technical Committee and incorporated into the South Dakota Department of Environment and Natural Resources (DENR) *National Pollutant Discharge Elimination System (NPDES) General Permit for Concentrated Animal Feeding Operations (CAFO)*, commonly referred to as the General Livestock Permit. Livestock producer groups are currently working with SDSU to further validate the index and/or to determine and demonstrate changes that may need to be made in order to further ensure water quality is protected. If the proposed changes allow either a leaching index and/or a P index to address nutrient application timing and placement issues, it would be important to know what criteria is acceptable to develop and/or validate either index. The huge variability in the landscape and climate of our state and country is not conducive to a “one size fits all” index. Utilizing the expertise of the Land Grant Universities (LGU) to develop a leaching and/or a P index is a logical alternative to address this variability. In addition, funding research to develop best management practices relative to nutrients is critical.

- The criteria proposed places too much emphasis on soil tests alone. A nutrient management plan based solely on soil test analysis as to concentration levels fails to take into account critical factors such as slope. Slope conditions may mean that P will not run off except under extreme conditions. The soil profile may result in absorption of P below the surface. Application protocol, erosion control measures and other proper management practices can all significantly reduce the potential for P loss, yet the language fails to consider any of these factors in calculating proper quantities of manure for application. Likewise, the language imposes an arbitrary limit on application of nutrient to the soils based solely on phosphorous and potassium (K) levels exceeding ten times the critical soil test. This would prevent application in areas where K levels are naturally high. The level of reduction of nutrient application should be based on a threshold consistent with the crop removal rate and the soil’s absorption rate of the material applied. Simply stating no application would be allowed above a certain level totally ignores the level of nutrients removed by crop production. In addition, K does not pose an environmental risk and so we wonder why it is being included. These provisions would effectively prohibit manure application on many lands which have historically benefited from nutrient application.
- The section entitled, “Additional Criteria to Minimize Agricultural Nonpoint Source Pollution of Surface and Groundwater” discusses strategies to maximize nutrient efficiency. While the management techniques outlined in this section have important attributes to offer in developing a nutrient management plan, in many instances they are not possible to implement. Beef cattle feeding facilities in South Dakota have historically been open lot pens. In those facilities manure is removed on scheduled intervals, depending on a multitude of factors including weather, ground availability and suitability of the application of manure and livestock stocking dates. Using these methods for manure application on surrounding cropland allows for proper nutrient utilization and maximization of the value that is inherent in the manure for crop production. Incorporation within twenty-four hours, while desired, in many instances is not practical. Application of the manure can cover a large number of acres and the producer may not have sufficient manpower or equipment to accomplish incorporation within such a short timeframe. Further, injection is simply not an option for the vast majority of beef feeding operations. While deep pit operations do exist, they are the exception, and bedding used for most feedlots prevent injection as a practical alternative. As proposed, the 590 standard would require one or more of the listed nutrient management technologies to be utilized, several of which may be impractical or even impossible for beef feeding operations. Once again, a one size fits all approach fails to take into consideration

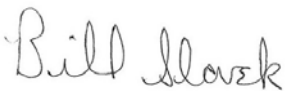
the many variables that exist within South Dakota and the country. A preferable alternative would be to utilize scientifically established procedures recommended by the LGU's, accounting for variables between different species.

- The section labeled "Additional Criteria to Protect Air Quality by Reducing Odors, Nitrogen Emissions, and the Formation of Atmospheric Particulates" discusses "areas with an identified or designated air quality concern". Such a designation should consider the landscape as well as input from the producers that will be expected to comply with such designations. Understanding that air borne particulates can travel considerable distances once in the atmosphere, it is strongly suggested that the level of human activity in the surrounding area should also be considered. In a state such as South Dakota there are vast expanses of sparsely populated landscape, somewhat minimizing the need to regulate manure application based on odors and atmospheric particulates. This section also discusses the issue of "when application area wind velocity is likely to blow the material off-site." "Material" needs to be defined and should not include odor. Finally, SDCA suggests adding an additional bullet point to this section providing for other approved technologies and practices as they become available. LGUs and others are currently testing additional techniques to reduce odor and such a provision would allow for inclusion of techniques as developed and approved on a state by state basis.
- Finally, SDCA encourages NRCS to broaden the references to the recommended practices of the Land Grant Universities to include industry standards. The LGUs are well suited to develop practices that fit the area, recognizing the significant geographical, topographical and weather-related differences that exist in South Dakota and nationwide. In addition, the standard must allow for individual states to request authority to vary from the national standard when it can be demonstrated that such a variance is recommended by the LGU.

For centuries, animal manure has been recognized as important sources of macro and micro nutrients for healthy crop growth, and organic matter which is critical to improving soil quality. SDCA clearly believes the one-size-fits-all approach proposed in the 590 standard simply isn't feasible. We believe the use of animal manure as fertilizer and readily available organic-matter-builders should be encouraged, promoted and incentivized by the NRCS, instead of regulated in such a way that would prevent their application on many crop and grazing lands in South Dakota. Placing burdensome requirements and prohibitions on their use will have the unfortunate effects of increasing the stockpiling of manure, discouraging farmer applications, and increasing the fertilization of fields with expensive commercial fertilizers.

Thanks again for your consideration of our comments regarding the proposed changes to the 590 Standard.

Best regards,



Bill Slovek, SDCA President & Cow-Calf Producer  
Philip, South Dakota

Cc: Janet Oertly, South Dakota State Conservationist