

Written Testimony – Dennis Berglund, Centrol Crop Consulting

I would like to offer this written testimony concerning soil sampling as it relates to North Dakota One Call.

CENTROL is a crop consulting company working in ND, SD and MN.

- We provide a service to farmers to help them maximize their profitability.
- Our service is non-biased and not tied to the sale of any product.
- We use science, technology and experience to provide full-service consulting on all crops.
- Our services include:
 - Soil sampling
 - Precision agriculture
 - Field monitoring
 - Record keeping
 - Crop planning
 - Fertility and pest recommendations
- We have 50 full-time agronomists.
 - They average 14 years of experience.
 - They all have college degrees.
 - All Consultants are Certified.
 - They are members of the National and State Crop Consultant Organizations.

Here is a brief description of the soil sampling process for fertilizer recommendations:

- 1) The best soil samples are taken in the fall, before the field is worked, so the soil sampling season is very compressed.
 - a) We have about 2-3 months to do about 20,000 soil samples.
- 2) For Phosphorus and Potassium we sample to a depth of 6-8".
 - a) We go 24-42" deep for our Nitrogen and Sulfur tests.
- 3) A "normal" soil sample in ND goes to a depth of 24".
 - a) Sugarbeets are often sampled to a 42" depth.
- 4) We take 20-30 cores of soil on an average ND field.
 - a) The core of soil is about 3/4 inches in diameter and 24-42" in length.
 - i) This requires the steel probe to pass vertically into the soil to a depth of 24-42".
 - ii) After the probe is removed from the ground, there is about a 1" diameter hole in the ground that is 24-42" deep.
 - b) We do more intensive sampling and take more cores of soil on fields that are zone sampled or grid sampled.
- 5) We do not sample within 100 feet of the field border.

Soil testing should be encouraged.

- a) Soil testing is the best method of determining the nutrient status of the soil, yet a majority of ND fields are not soil sampled.
- b) If there were more soil sampling:
 - i) There would be an economic benefit, through better crop yields.
 - ii) There would also be an environmental benefit, due to applying only the fertilizers that are needed.
- c) If sampling costs are increased, then that could discourage soil sampling.

Calling in all fields that are soil sampled deeper than 18" would increase soil sampling costs.

- a) It would decrease our sampling efficiency and increase our labor needs.
- b) If implemented on all fields, soil sampling prices would have to increase and increases of 50% to 100% could be feasible.

We have thought about going to an 18" standard soil sampling depth, rather than 24".

- a) However, all university recommendations have been based on a sample depth of 24-42".
 - i) Long term research has shown that the Nitrogen in the top 24" of soil is usually available to our ND crops.
 - (1) Sugarbeets usually use the Nitrogen down to 42".
- b) If we sample to an 18" depth, it would under-estimate the Nitrogen and Sulfur tests by 20-30%, resulting in an over-application of Nitrogen.

Here are some requests that would help us comply with North Dakota One-Call:

- a) Exempt agricultural fields, if we stay 100 feet from the field edge, so that a locate request is required only if disturbing the soil deeper than 42".
 - i) If that 42" exemption is not possible, then exempt agricultural fields, if we stay 100 feet from the field edge, so that a locate request is required only if disturbing the soil deeper than 24".
- b) Allow the locates that are done on farmland to be valid for more than 21 days.
- c) Develop a way to map out the entire farm to see where the potential issues are, so that we can minimize actual locate requests from North Dakota One-Call.

Thank-you,

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