Attachment 1: Guidelines for Soil Sampling:

The value of a soil sample is to determine the average nutrient status of a field. Sampling procedures should also identify nutrient variability in the field to accommodate nutrient application adjustments that will reduce costs and potential nutrient loss from the field. The sampling procedure determines the quality and usefulness of the soil test information. These guidelines indicate minimum soil sampling guidelines.

A. Divide Fields: The sampling zones or grids should represent uniform areas such as soil type, slope, cropping history, known crop differences, or other factors that would indicate or influence nutrient levels in the soil.

1. Samples shall represent no more than 40 acres unless field nutrient history has been established with evidence of at least two prior soil tests.*
2. Separate samples by topographic features:
    a. Hilltops represented by one sample.
    b. Side slopes or eroded areas represented by one sample.
    c. Low areas represented by one sample.
3. Separate samples by cropping history, manure applications, cultural differences in the field, yield responses (i.e., yield maps or visual observation), soil type, or any other features that might influence crop nutrient response.

B. Sampling Depth:

1. Surface Samples 0″ to 6″ (i.e., P, K, pH and OM)
    a. In long-term, reduced, or no-till systems, samples of 0″ to 3″ may reveal a potential soil acidity (pH) change from nutrient application methods.
    b. When sampling for mobile nutrients such as nitrate, sulfur, and chloride, (minimum 10 cores per 20 surface cores) collect a separate 6″ to 24″ sample.

C. Core Collection:

1. Maintain consistent core depth by marking collection tool.
2. 15 to 20 cores per sample.
3. Random core collection to represent the entire area being sampled, avoid loading and feeding areas, dead furrows, old fence rows, etc., that would give unusual results.
4. Collect cores in a clean plastic container.
5. Collect a continuous core that will represent the entire sample layer.
6. Collect sample from compressed or firm soil to assure consistence, e.g., from vehicle track.
7. Thoroughly mix sample, keep cool or air dry at room temperature, and immediately submit samples to the laboratory.

D. Timing of Sampling: Early enough to use for nutrient management plan development. At least 2 to 4 weeks prior to planting or fertilizing of the intended crop.

E. Frequency:

1. A sample is considered current if no older than three years for P, K, pH and Zn.
2. Sample at least once during each crop rotation cycle until field history is established.
3. When sampling for mobile nutrients (i.e., nitrates), annually sample prior to planting crops where N will be applied.**

*****Prior soil samples would have taken field variability into consideration and should establish that the field uniformly responds to nutrient applications, and there are no differences in management strategies or cropping sequences since the field history was established.
******For example in a wheat, sorghum, and soybean rotation, sample in the fall prior to planting wheat and sample in late winter or spring prior to sorghum. Sampling for the soybeans is not required since they “fix” the amount of N needed for growth.