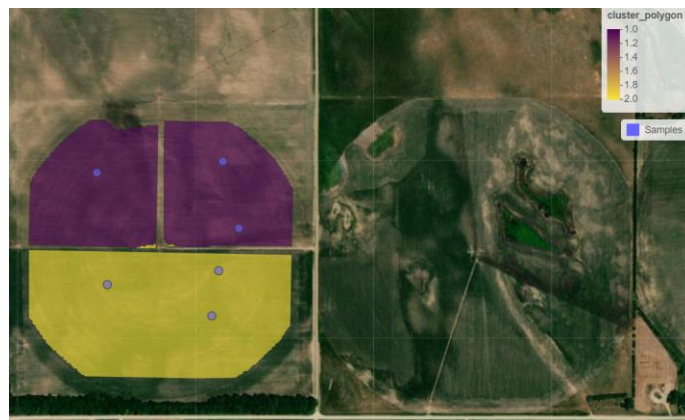


## Soybean Quality Project Sampling Protocol – South Dakota

### Structure of the sampling points in the field

The fields are divided into clusters (labeled as Id\_Cluster), and each cluster has up to 3 sampling points (labelled as Id\_Sample). The sampling will have the same amount of soil samples as the number of clusters in the field, and same amount of plant sampling (seed samples) as sampling points in the field. For example, if a field is divided into 2 clusters (2 colors, see below) then the total number of soil samples will be 2, and if we have 3 plant sampling per cluster, then the total number of plant sampling will be 6 (3 samples per cluster).



### Procedure

1. Finding the field location

The sampling locations from each state and fields can be found as a kml file in the following folder: [South Dakota](#)

To read the file we recommend first to download the Google Earth App (works for Android and iOS). Once in the folder, select the corresponding **state**, and then the **field**.

Example: **State:** Kansas, **Field:** Ks\_ksufield\_22.kml

My files > SoybeanProject\_Fields > Kansas

Name ▾

[Ks\\_ksufield\\_22.kml](#)

After downloading the kml file to your device, the Google Earth App should be able to open it automatically. Each pin indicates the exact location of a sampling point. By clicking on the pin, you can check the **Id\_cluster** and **Id\_sample** data.



Link to download the Google Earth app:

[https://play.google.com/store/apps/details?id=com.google.earth&hl=es\\_US&gl=US](https://play.google.com/store/apps/details?id=com.google.earth&hl=es_US&gl=US)

## 2. Plant sampling

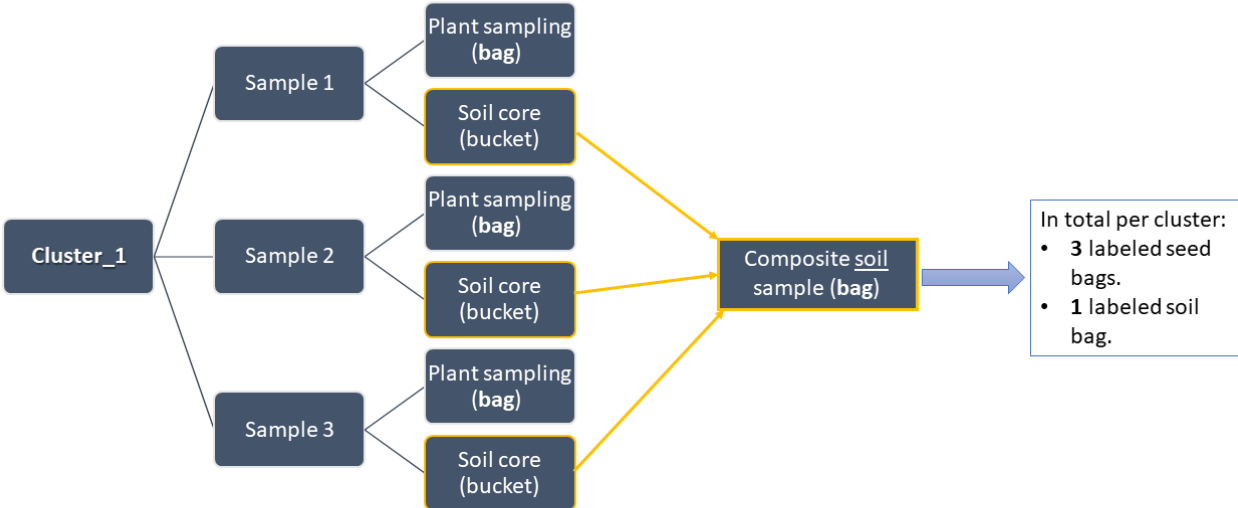
- Once located at the sampling point, collect all the consecutive plants within a row that is 21 inches long. According to the row spacing of the soybean field: 30, 15 or 7.5 inches, collect 1, 2 or 4 rows, respectively. The sampling area is always the same and the overall goal is to collect close to 10 plants (with a target density of 100,000 pl/acre). All harvested plants will be placed into one bag per sample point.
- After all plants are collected and for seed harvest, separate the pods from the plants and extract the seeds to put them in the labeled bag according to **State\_Field\_Cluster\_Sample** (*0.32 pound of seeds sample is enough*)

## 3. Soil sampling:

Following the **State\_Field\_Cluster**, take 4 soil cores of 0-24 inches soil depth at each plant sampling point. Once all soil cores from the sampling points in a cluster are collected, then

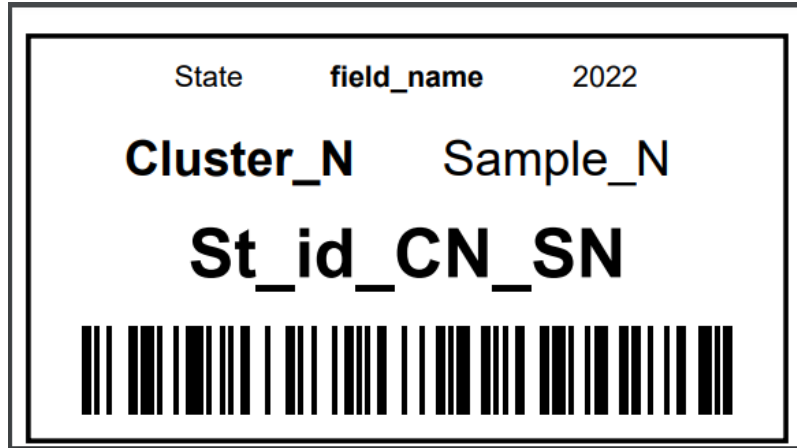
mix homogeneously to create one composite soil sample per **State\_Field\_Cluster** from all the sub-samples (soil cores) and prepare one soil sample with the corresponding labeled soil-bag.

*Example:*

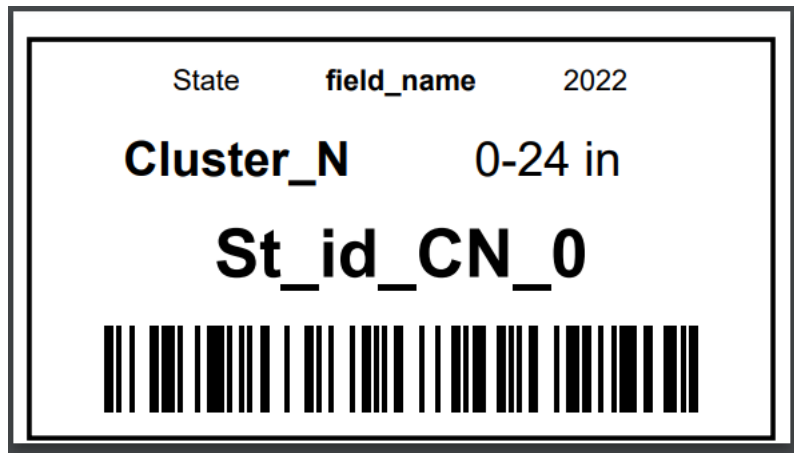


Materials

- Labeled seed bag:



- Labeled soil bag:



**St\_id\_CN\_SN** and **St\_id\_CN\_0** are unique sample codes to track the sample in the lab process.