

ISCA “Known” Texture Sample Project

Goal: To acquire large soil samples with lab data (sand, silt, & clay) on specific soil materials. These “Known” texture samples from a variety of Illinois parent materials would be used to help train new soil classifiers, as well as adding in recalibrating experienced classifiers, in texturing the soil.

Because ISCA members along with NRCS Resource Soil Scientists and MLRA Soil Scientists (as well as others) could benefit greatly from training their people with these samples, we are proposing a cooperative project. (The Initial reaction of key NRCS individuals, to this project, has been favorable. All final details of responsibilities and time tables have yet to be agreed upon.)

Samples will be gathered from various soil materials across Illinois to prepare the soil classifier for encountering the wide variety of texturing (and unique feel) they may encounter.

The following is a ‘working list in progress’ of the various targeted materials to be sampled.

Loess: silt, silt loam, silty clay loam, silty clay (if for example, samples had clay content at the critical levels of 27% and 35%, that might be especially helpful)

Eolian: fine sand, sand, loamy fine sand, loamy sand, fine sandy loam, sandy loam (again, if samples had textures near the adjoining textural classes it might aid in training)

Glacial tills: sandy loam, loam, silt loam, clay loam, silty clay loam, silty clay (samples from both illitic and mixed clay mineralogy sources would be helpful because they feel significantly different)

Outwash & Alluvium: loam, sandy loam, loamy sand, clay loam, silty clay loam, sandy clay loam, silt loam, silty clay (we need to determine whether it would be helpful if we had extra samples with gravelly analogues)

Residuum: loam, silt loam, clay loam, silty clay loam, silty clay, clay (which of these are common and needed)

To provide some sort of plan I offer the following possible scenario.

MLRA offices can help to locate sampling sites with the targeted materials after reviewing the historical Lab data. Some sites may yield one or multiple targeted materials. Resource Soil Scientists could then check and secure permission of sample sites. Then a combined coordinated sampling effort of MLRA, RSS, and ISCA Volunteers could sample 2 five gallon buckets of targeted material.

ISCA would then provide volunteers to ready the samples for the lab. This would likely mean crushing the dried samples, putting them through a 2 mm sieve and mixing the sample to get it as homogeneous as possible. Next, ISCA would deliver the sample to a lab and pay for analysis. All samples would be tested for sand, silt and clay, with a few getting sand fractionation.

Finally, agreed to quantities of the textural “known” samples would be delivered to NRCS Illinois and NRCS MLRA. The remaining “known” sample of at least 5 gal per sample, would be stored by ISCA and available to sale for to ISCA members and others, in order to recover costs and provide some profit to ISCA.

The total sampling will likely take several years to accomplish. If an agreement can be approved by all parties, the initial effort might include 1-2 dozen samples this fall.

It may be possible for ISCA certified members to receive CEU’s for volunteering for this project. (If the certification board is willing, I recommend that it be done in proportion to the time committed to the project, so there isn’t a disproportional burden on some members, if only a few help out.)

Texture project Committee

While the labor for this project will come from lots of people (ISCA & NRCS) a new committee charged with organizing this project is being formed.

The committee will :

- Finalize details with all parties involved

- Gain the proper agreements with NRCS

- Finalize the materials to be sampled

- Help develop a list of volunteers

- Help coordinate sample dates

- Help coordinate volunteers with sample processing and lab delivery

- Finalize plans for sample storage/initial distribution and future sample sales

Volunteers for this committee will definitely be needed and appreciated. There should be volunteers from ISCA and NRCS MLRA, and NRCS RSSS of Illinois on the committee in order to coordinate this project well.

For those of you in Northern or Southern Illinois... Face to face committee meetings need to be few, with as many meetings done over the internet as possible so that travel time is kept to a minimum and more of you can participate.

As of now Bill Teater will be coordinating the committee. Please Contact Bill Teater for further questions/comments/volunteering.

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Once Plans are finalized NRCS Soil Scientists and volunteers will be coordinated for sampling projects across the state. We will need your Help!!