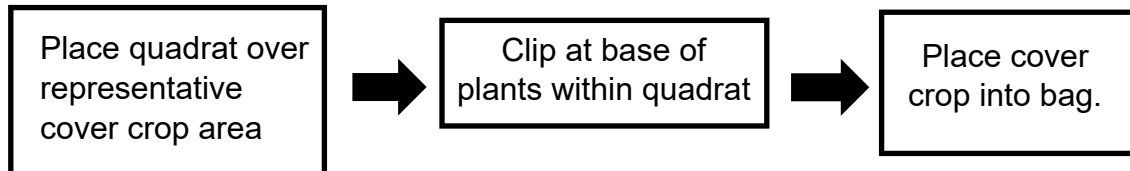


SOP: Cover Crop Aboveground Biomass

Overview:

This standard operating procedure (SOP) describes a protocol for cover crop aboveground biomass in order to quantify cover crop growth. Key instruments include a quadrat, clippers, and a collection bag.



Safety:

All standard safety protocols and online safety training via UIUC [Division of Research Safety \(DRS\)](#) are required.

Instrumentation & Consumables:

Collection

- Quadrat (0.25 m², or other desired size), typically made of PVC but could be made with wire or wood
- Pruners or scissors
- Paper bags (small bag, 7 x 4 x 13, in early spring or fall and large bag, 12 x 7 x 17 in late spring or fall)

Drying

- Drying oven at ~ 150°F

Detailed Procedure:

I. Collection

1. Place quadrat over a random section of cover crop within the field.
2. With pruners/scissors, cut all of the cover crop plants at the base (as close to the ground as you can get) that are within the quadrat (do not clip biomass that is within the quadrat where the base of the plant is outside the quadrat). Try to remove any sticks or residue that is stuck within the cover crop plants.



3. Place cover crops plants into labeled bag. Recommend to use the small paper bags when cover crop biomass is low (beginning of spring and fall) and large paper bag when cover crop biomass will be high (end of spring and fall).

II. Drying

1. Place cover crop bags into the ovens (in the field lab or the energy farm) to dry. 60 °C is standard, but can be lower if needed.
2. To test if samples are done drying, pick two bags to weigh for 2 days in a row. If the weight does not change between these days, then the samples are dry. Typically this will be complete in 5 – 7 days.
3. Weigh the cover crop without the bag and record the weight (to the hundredths).

Citation:

SOP: Cover Crop Aboveground Biomass. 2021. Soils Lab, University of Illinois Urbana-Champaign. Urbana, IL. Accessed at:

<https://margenot.cropsciences.illinois.edu/methods-sops/>

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