# 1. Determine the biomass produced.

* **Find a yardstick or metal frame of known dimensions.**
* **In several areas of your field, clip the plants at ground level within the known area.**
* **Dry the samples in an oven at about 140°F for 24 to 48 hours until they are crunchy dry**
* **Calculate:** 

*Example: You have sampled two 2x2 ft regions of your field. How much biomass per acre do you have?*

*Area sampled: 2x2 = 4 ft2 \* 2 = (8 ft2 )*

**2ft**

**2ft**

*The2 dried samples together weigh 1.2 lbs.*

*1.2 lbs \* 43,560 sq ft = 6534
8 ft2 1 acre*

*ANSWER:* ***6,534 LB ACRE (dry biomass yield)***

# 2. Determine the nutrient levels in that biomass.

* **Use tissue tests or estimate %N in cover crop**

**Tissue Tests: Send to NCDA for Plant Tissue Analysis, for an exact %N. Pick up mailing envelopes for plant tissue samples at any county** [**Cooperative Extension**](http://www.ces.ncsu.edu/index.php?page=countycenters) **office.**

[**http://www.ncagr.gov/agronomi/uyrplant.htm**](http://www.ncagr.gov/agronomi/uyrplant.htm)

**Estimate: Use approximate N% of known cover crops. (See “How much N can a legume fix?”)**

* **Multiply the dry biomass yield times the percentage of nitrogen**

*Example: If your hairy vetch cover crop in the last example has 4% N at kill, how much N are you applying to your field?*

 *(6534 lbs/acre)(.04) = 261*

*ANSWER:* ***261 lbs of N (legume biomass N)***

# 3. Predict how quickly the biomass will decompose, releasing nutrients for cash crops.

* **Estimate how much N is made available to your crop, multiply legume biomass nitrogen:**

**0.50 if the cover crop residue will be incorporated**

**0.40 if the residue will be left on the soil surface**

*Example: If your hairy vetch is incorporated in the soil in early may in a normal spring, how much N will be available to your crop?*

*(261 lbs of N)(.50) = 130.5*

*ANSWER:* ***130.5 lbs of N per acre (available N to crop)***