

ENR12 Maine State Supplement 2012-1
Use of Legume Cover Crops as a Nitrogen Source

- For this Enhancement, Available N calculated must be at least 40 pounds.
- To estimate Nitrogen Credits from Legume Green Manure, first estimate dry matter yield by one of the following two methods. Then proceed to “Nitrogen Estimation,” below.
 1. **Yield Measure** - Clip four square feet (2’ X 2’ square) of typical growth and weigh it. Multiply by 11,000 to get the fresh weight yield per acre. Divide that number by 5 to estimate Dry Matter yield per acre.

OR

2. Alternative Method - Dry Matter Estimation*:

1. Cover crop stand height in inches = _____
2. The first 6 inches = 2,000 pounds per acre (# / ac) of dry matter
3. Add 150pounds per acre (# / ac) for each additional inch above 6 inches = _____
4. Dry Matter (step 2 + step 3) = _____Pounds of Dry Matter per acre
5. Average % of Ground Cover per acre (Visually Estimated) = _____%
6. ____Pounds of Dry Matter (step 4) times ____% Ground Cover (step 5) ÷ 100
(enter percent as a whole number, such as 80%, do not use decimal such as .80)
= _____ Pounds of Available Total Dry Matter per acre

Nitrogen Estimation from Legumes:

$$\frac{\text{_____}}{\text{(Pounds)}} \# \text{ Total Dry Matter (step 6)} \times .035^{**} = \frac{\text{_____}}{\text{(Pounds)}} \# \text{ Total Nitrogen}$$

Estimate Nitrogen Available to crop the First Year:

Conventional Tillage:

$$\frac{\text{_____}}{\text{(Pounds)}} \# \text{ Total Nitrogen (step 7)} \div 2 = \frac{\text{_____}}{\text{(Pounds)}} \# \text{ Available Nitrogen/ac}$$

OR

No-Till:

$$\frac{\text{_____}}{\text{(Pounds)}} \# \text{ Total Nitrogen (step 7)} \div 4 = \frac{\text{_____}}{\text{(Pounds)}} \# \text{ Available Nitrogen/ac}$$

*From "Managing Cover Crops Profitably"

** If the green manure contains all grass species with no legumes, use 2.2% N (.022). For grass/legume mixes do a weighted average of legumes and non-legumes in the stand.

For more information, see Maine Supplement ENR10 Addendum.