

**ENR10 Maine State Supplement 2012-1**  
**Using Nitrogen provided by Legumes, Animal Manure and  
 Compost to Supply 90% to 100% of the Nitrogen Needs**

- Manure and Compost materials should be tested for N content.
- 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 # / ac dry matter
3. Add 150 pounds per acre (#/ac) for each additional inch above 6 inches = \_\_\_\_\_
4. Dry Matter (step 2 + step 3) = \_\_\_\_\_ # Dry Matter/ac
5. Average 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:**

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

*Estimate Nitrogen Available to crop the First Year:*

**Conventional Tillage:**

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

OR

**No-Till:**

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

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**From fertility recommendations (soil test):**

**A** - Total pounds of Nitrogen (N) per acre needed by crop: \_\_\_\_\_ /ac X \_\_\_\_\_ ac = \_\_\_\_\_ lbs of Nitrogen needed

**Pounds Nitrogen (N) available from:**

**B - Manure:** lbs N /ton or gallon \_\_\_\_\_ X \_\_\_\_\_ tons or gallons = \_\_\_\_\_ lbs of N

**C - Compost:** lbs N /ton \_\_\_\_\_ X \_\_\_\_\_ tons = \_\_\_\_\_ lbs of Nitrogen

**D - Legumes** (as estimated above): \_\_\_\_\_ lbs /ac X \_\_\_\_\_ ac = \_\_\_\_\_ lbs of Nitrogen

$$\mathbf{B+C+D} = \text{_____} \div \mathbf{A} \text{ _____} = \text{_____} \times 100 = \text{_____} \% \text{ N available}$$

\*From "Managing Cover Crops Profitably"

\*\* If the green manure contains grass species, use 2.2% N (.022). You will need to do a weighted average of legumes and non-legumes in the stand.

For more info, see Maine Supplement ENR10 Addendum.