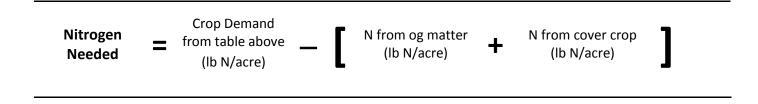
## Nitrogen Needs by Feeder Groups

Based on Nitrogen Table in MN Guide (Low OG Matter Column [less than 3.1%])						
Low		Medium		High		
100lb/acre or Lower	Lb/acre	101 – 150lb/acre	Lb/acre	Over 150lb/acre	Lb/acre	
Beets	100	Brussels	140	Broccoli	180	
Cucumber	100	Carrots	120	Cabbage	180	
Green Onions	80	Eggplant	120	Cauliflower	180	
Lettuce	100	Endive	120	Celery	180	
Parsley	100	Garlic	120	Corn	160	
Melon	100	Kale	110	Potatoes	160	
Radish	50	Mint	130	Other	Lb/acre	
Rutabagas	100	Onions	110	Other		
Spinach	100	Parsnips	120	Peas	0	
Summer Squash	70	Peppers	140	Beans	0	
Turnips	60	Swiss Chard	120			
Winter Squash	70	Tomatoes	130			

## Process For Determining Nitrogen Needs

- 1) What is the square-footage of your bed? (**bed top in feet x bed length in feet**)
- 2) Convert the area of your bed to acres. One acre = 43,560ft<sup>2</sup> (bed square footage [Question 1]/43,560).
- 3) Use the percent organic matter from your soil sample to credit Nitrogen. (10lb N per 1% of organic matter)
- 4) Determine Nitrogen credits from cover crop (covers with low N [less than 1.5% N in Dry Matter] provide little or no PAN; covers with high N [3.5% N in DM] provide approximately 35lb PAN/ton of dry matter)





5) What is your target Nitrogen per acre application rate for your low feeders? What about medium and high?

	Low Feeders	Medium Feeders	High Feeders
Target (crop demand)	lb N/acre	lb N/acre	lb N/acre
Total Nitrogen Credit	lb N/acre	lb N/acre	lb N/acre
Nitrogen Needed from Amendment	lb N/acre	lb N/acre	lb N/acre

- 6) Using the Cover Crop Calculator, determine how many pounds of feather meal each category translates to?
  - a. Go to Nutrients Provided tab
  - b. Experiment with different numbers in the yellow column for Feather Meal
  - c. Match the *Estimated PAN After Full Season* column with your *<u>nitrogen needed from amendment</u> <u>figure</u> (from table above)*

	Low Feeders	Med. Feeders	High Feeders
Lbs of Feather Meal needed to meet Nitrogen	lb N/acre	lb N/acre	lb N/acre
Needs from Amendment PER ACRE	ID N/ ACIE	ID N/acre	

7) Calculate how many pounds of feather meal to apply to one bed.

(bed area in acres [answer to question 2]) x (lb product needed [answers to question 5]) EXAMPLE: If one bed is 0.0137 acres and low feeders require 511lb feather meal/acre, then: 0.0137 x 511lb = 7lbs feather meal/bed

	Low Feeders	Med. Feeders	High Feeders
Lbs of Feather Meal needed to meet Nitrogen	lb N/bed	lb N/bed	lb N/bed
Needs from Amendment PER BED	ib Nybeu	ib Ny beu	ib Ny beu

8) Using the *Nitrogen Needs by Feeder Group* table and your planting plan or map, determine how much feather meal you intend to put down per bed. What is the total amount of feather meal you'll need for the season?