Nitrogen Needs by Feeder Groups

Based on Nitrogen Table in MN Guide (Low OG Matter Column [less than 3.1%])					
Low 100lb/acre or Lower	**Lb/acre**	**Medium 101 – 150lb/acre**	**Lb/acre**	**High 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		
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^2 (**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)**

Nitrogen Needed = Crop Demand from table above (lb N/acre) − [N from og matter (lb N/acre) + N from cover crop (lb N/acre)]

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 *nitrogen needed from amendment figure* (from table above)

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

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?