2013 Double Crop N Rate Study
Harvest Protocol
by Shona Ort

Nutrient Management Spear Program
Project Goal

- To determine the nitrogen (N) rate needed to grow winter cereals planted after corn silage for forage harvest.

- 4 replications with a site of 5 different N rates.
  - 0 lbs of N/acre
  - 30 lbs of N/acre
  - 60 lbs of N/acre
  - 90 lbs of N/acre
  - 120 lbs of N/acre

- Sites of 65 by 80 ft.
Setup

- 45 Sites
- Setup spreads over about 1 month
Harvest Time

Flag stage

http://billsforagefiles.blogspot.com/2013/03/winter-small-grain-silage-fertility.html
Harvest Supplies

- 20 paper grocery bags
- 2 large lawn and garden bags
- Sampling frame (8 by 38.5 inches)
- 3 hand held grass clippers
- Gloves
- GPS (only if GPS coordinates haven’t been taken already)
- Camera
Harvest Supplies
Prior to Harvest

- Give Shona a call so we know when you will be harvesting and can possibly have one of us there with you.

- Take pictures of field, entire site, each rep within a site, and any significant differences among the plots.

- Take GPS coordinates if not taken at setup time.
Harvest

- Lay the properly labeled bag at each site

- Next take the sampling frame and place it down perpendicular to the crop rows within a plot, with the 4" legs facing down. Avoid unrepresentative areas within the plot.
Harvest
Harvest

- Next remove all plant biomass within the sampling frame at a height of 4” with hand clippers and put into properly labeled bag.

- Use heavy gloves to reduce the risk of clipping fingers.

- Also avoid harvesting dead material and debris such as corn stalks in plots.
Repeat placing sampling frame and harvesting all biomass another 2 times within a plot in order to obtain a total of 3 frames per plot.
Repeat process just described for all 20 plots at a site.
After samples have been harvested, remove all flags, driveway markers, and post.

Ensure no harvest equipment is left in the field.

Keep equipment until someone from NMSP can pick it up (or send it home with the NMSP person helping you with harvest).
Finishing Harvest

- Complete field activity sheets with notes on harvest date, harvest stage, significant differences among plots, abnormalities, and participants.
- Call for pick up and transport of samples and supplies back to our laboratory if we are not out in the field with you.
- If samples cannot be transported back that same day, please place in a cool dark area and send as soon as possible.

If mailing is needed, send samples to:
Shona Ort
317 Morrison Hall
Dept. Animal Science
Cornell University
Ithaca, NY 14853
Forage samples will be dried and ground to pass through a 2-mm sieve.

Forage samples will then be sent out to Cumberland Valley Analytical Services for C and N analyses and hopefully a full forage analysis (still looking for some additional funding to cover all sites).

Once all soil and forage data analyzed, reports will be generated for each farm that participated in the study (you will get individual reports for each location you worked with).

Results from the entire study will be summarized to start to develop a recommendation system for winter forages.
Questions?

Thank You!!
Contacts

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New York On-Farm Research Partnership

http://nmsp.cals.cornell.edu/NYOnFarmResearchPartnership

There is great power from research information when field data are generated through well designed, repeated and widely implemented trials, with proper data collection and statistically valid analyses.

Consider being an on-farm research partner!

Relevant Questions and Sound Science for Agricultural Profitability and Protection of the Environment