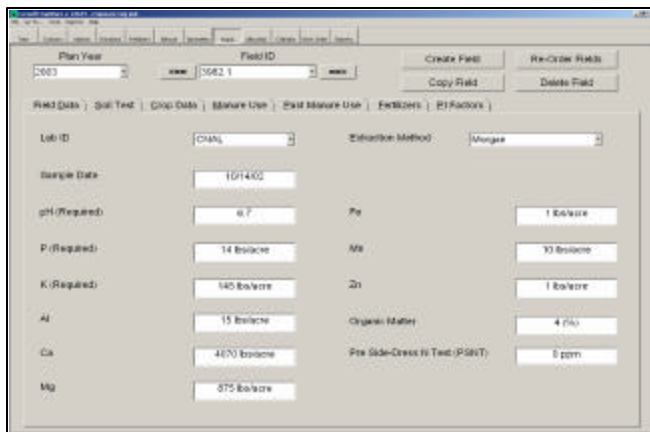


Coming Attraction: Cornell Cropware v2.0

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Many farms are following nutrient management plans to satisfy regulatory requirements as well as make more efficient use of manure and fertilizer. To be effective, this calls for



The screenshot shows a web-based form for creating a nutrient management plan. At the top, there are fields for 'Plan Year' (2003) and 'Field ID' (1062.1), along with buttons for 'Create Field', 'Re-Create Field', 'Copy Field', and 'Delete Field'. Below these are tabs for 'Field Data', 'Soil Test', 'Soil Data', 'Manure Use', 'Soil Manure Use', 'Fertilizers', and 'PI Factors'. The main form area contains several input fields: 'Lab ID' (CHAL), 'Extraction Method' (Morgan), 'Sample Date' (10/14/02), 'pH (Required)' (6.7), 'P (Required)' (14 lbs/acre), 'K (Required)' (140 lbs/acre), 'Al' (15 lbs/acre), 'Ca' (400 lbs/acre), 'Mg' (375 lbs/acre), 'Fe' (1 lb/acre), 'Mn' (10 lbs/acre), 'Zn' (1 lb/acre), 'Organic Matter' (4%), and 'Pre Side-Dress N Test (PDRNT)' (0 ppm).

Figure 1: Cropware integrates agronomic and environmental nutrient guidelines to develop plans for efficient use of manure and fertilizer.

integrating a number of crop production and environmental considerations. Cornell Cropware (Figure 1) is a software package that enables producers and their advisors to integrate Cornell's crop nutrient guidelines, the New York Phosphorus Runoff Index and the Nitrate Leaching Index. It contains equations that allow for conversion of soil test results from participating commercial laboratories to Cornell equivalents and allows for the integration of on-farm logistics to develop plans that fuel productive cropping programs and minimize losses to the environment in accordance with

the Natural Resources Conservation Service Nutrient Management Standard (NRCS NY590).

With support from NRCS, the NYS Department of Agriculture and Markets, and the NYS Department of Environmental Conservation, staff members of the Nutrient Management Spear Program (NMSP) at Cornell developed Cornell Cropware version 1.0 and released it to New York nutrient management planners in August of 2001. Currently, our staff supports over 250 registered copies and the software is being used to develop and maintain approximately 500 plans throughout New York State.

Combining research updates and user feedback from version 1.0, Cropware version 2.0 has been developed and is scheduled to be released for download from the Spear Program website (<http://nmssp.css.cornell.edu>) in mid-June. Funding for Cornell Cropware 2.0 was provided by USDA-NRCS.

Cropware version 2.0 contains the following enhancements:

- The Nitrate Leaching Index is now based on township-level precipitation data, thanks to Steve DeGloria, Quirine Ketterings, and Harold van Es of Crop and Soil Sciences, Karl Czymmek of Pro-Dairy, and Arthur Degaetano of Earth and Atmospheric Sciences. The

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result is a more site-specific tool for gauging leaching risk. The Nitrate Leaching Index manual has also been created and is available from the Spear Program website and in the Cropware Help section.

- Nutrient guidelines for a broad range of vegetable crops have been included thanks to help from Steve Reiners (Department of Horticulture at the Geneva campus), Don Halseth, Roy Ellerbrock, and Anu Rangarajan of the Department of Horticulture at the Ithaca campus.
- Soil test conversion equations have been added to translate University of Vermont Modified Morgan soil test values into Cornell Morgan equivalents. This addition builds on the list of laboratories for which conversion equations are available: Brookside Laboratories Inc., Spectrum Analytic Inc., and A&L Eastern Laboratories Inc. It is expected that more laboratories will be added in future versions of Cropware.
- Flexibility to plan up to two manure applications per field. Such a change better reflects field conditions and allows for a more accurate assessment with the New York Phosphorus Runoff Index.
- Plan data is housed in a Microsoft Access® compatible database form rather than in a text file; this facilitates information exchanges with other databases used by planners as well as with Geographic Information Systems for nutrient management plan map creation.
- Many additional improvements in data entry, organization, and report generation.

Cropware version 2.0 will be available to download free of charge from the Spear Program website, but a fast internet connection is recommended (e.g. cable modem, T1, DSL, etc.) as the installation package is 30 MB in size. Alternatively, a Cropware CD is also available free of charge. If interested in receiving a CD, contact Michelle Cole (607-255-7712 or mlc44@cornell.edu).

Training sessions for Cropware version 2.0 will be held later this summer. If you are interested in taking part in or hosting a training session in your area, please contact Greg Albrecht (607-255-1723 or glal@cornell.edu) or Caroline Rasmussen (607-255-2875 or cnr2@cornell.edu). You are also welcome to contact Caroline and Greg for telephone and email support of Cropware version 2.0. The Nutrient Management Spear Program website (<http://nmssp.css.cornell.edu>) is regularly updated to offer relevant nutrient management information integrated into Cropware.



Nutrient Management Spear Program Website
Access to Nutrient Management Research and Extension for NY

<http://nmssp.css.cornell.edu/>
