NLEAP GIS 4.2

The Nitrogen Loss and Environmental Assessment Package (NLEAP) has been improved with new capabilities. These new capabilities include being able to connect to GIS software, quickly communicate with databases on the Internet, convert these databases into a format that is compatible with the program, run thousands of simulations, and perform other new functions that were not available in the DOS program that was called the Nitrate Leaching and Economic Analysis Package (NLEAP). NLEAP-GIS 4.2 allows users to assess the effects of management practices across large numbers of fields simultaneously. Detailed information on how to use NLEAP-GIS 4.2 can be found in Delgado and Follett (2010), the NLEAP-GIS 4.2 user guide, and Shaffer et al. (2010). NLEAP has been tested and validated for different parts of North America, Asia, Europe and South America. These validations show that when proper input is entered for all of these different agroecosystems and climates, predicted values for residual soil nitrates and nitrate leaching rates are reasonable estimates of observed ones.

References:

- Delgado, J.A., and R.F. Follett (eds.) 2010. Advances in nitrogen management for water quality. SWCS, Ankeny, IA.

- Delgado, J.A., P. Gagliardi, M.J. Shaffer, H. Cover, E. Hesketh, J.C. Ascough, and B.M. Daniel. 2010. New tools to assess nitrogen management for conservation of our biosphere. p. 374-410. *In* Delgado, J.A., and R.F. Follett (eds.) Advances in nitrogen management for water quality. SWCS, Ankeny, IA.

- Shaffer, M.J., J.A. Delgado, C. Gross, R.F. Follett, and P. Gagliardi. 2010. Simulation processes for the Nitrogen Loss and Environmental Assessment Package. p.362-373. *In* Delgado, J.A., and R.F. Follett (eds.) Advances in nitrogen management for water quality. SWCS, Ankeny, IA.

For more information or questions please contact:
Dr. Jorge A. Delgado
Phone: (970)-492-7260
Email: jorge.delgado@ars.usda.gov