



### DROUGHTY SOILS

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A key problem in our Mid-Atlantic Region is that frequently we encounter droughts on a regular basis. Many of our soils are shallow or sandy and corn yields are severely impacted on these soils. As a result we are often unable to meet the demands for corn in our region.

Recently several land grant researchers in the region have joined forces to look for ways to manage our variable soils more efficiently. This project is known as the Mid-Atlantic Regional Cropping Systems Project, and is funded by the Foundation for Agronomic Research through support of numerous industry contributors and the United Soybean Board.

Dr. Mark Alley from Virginia Tech heads up the project. Other collaborators on the project are from North Carolina State, University of Maryland, and Penn State.

The main study site of the project is at the Camden Farm in Port Royal, Va. This is a large corn/wheat/soybean grain farm with two major soil types: droughty sandy loam Bojac soils and productive Wickham sandy loam soils.

On these soils, three different grain crop rotations have been established: 1) a standard no-till corn, conventional-till wheat, double-crop soybean rotation; 2) no-till corn, no-till

soybeans, no-till wheat, no-till double-crop soybeans; and 3) no-till wheat, no-till double-crop soybeans, no-till barley, and no-till double-crop corn. The objective is to determine the profitability of each rotation on the different soils.

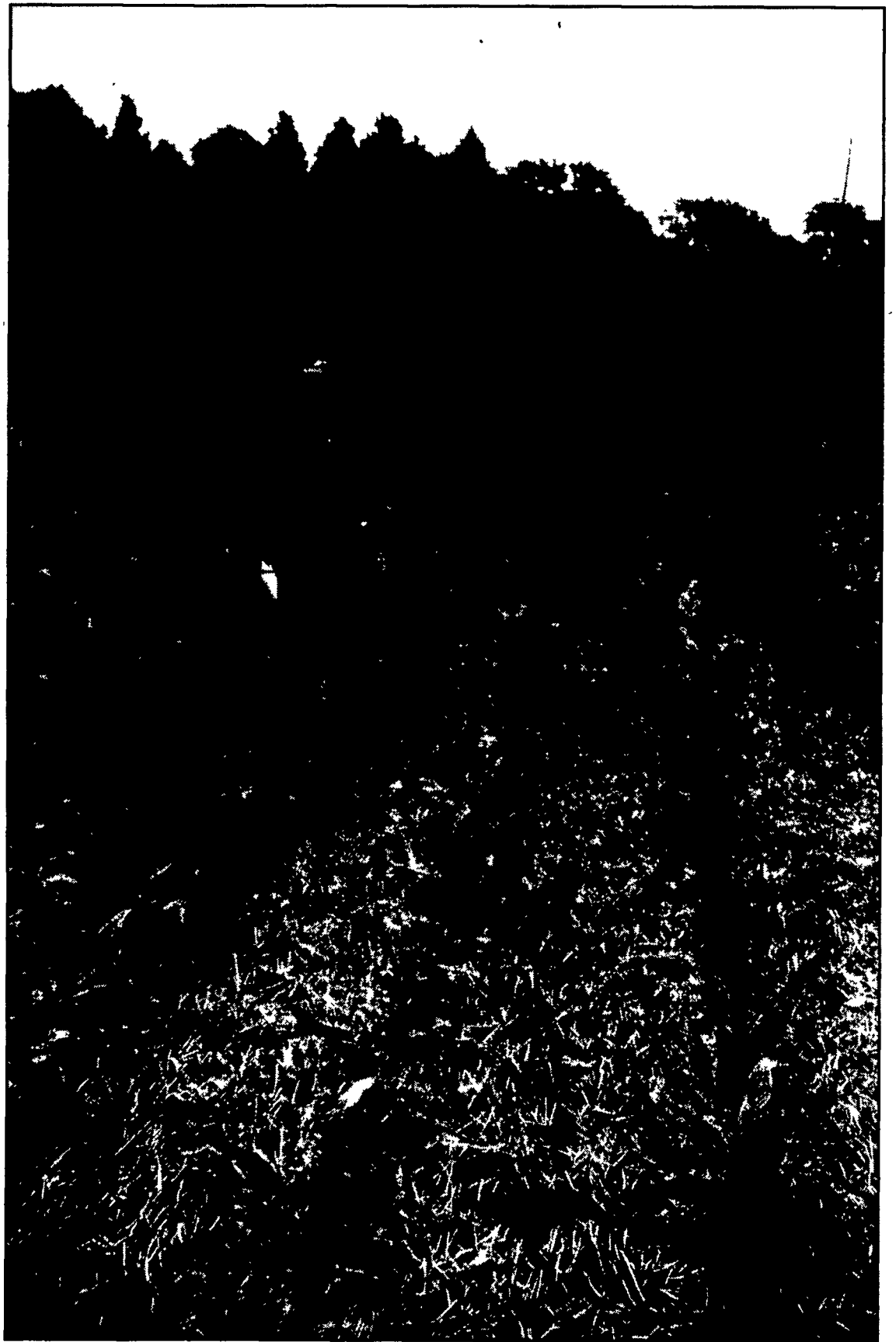
In the first year of the study, 1998, an economic analysis indicated rotation 1, the corn/wheat soybean rotation, would be the most profitable on The Bojac soils or on a farm with an equal portion of both soils. For a farm with all of the productive Wickham soils, Rotation 2 would be the most profitable. These results are based on yields during the first year (1998) when full season corn averaged 158 bushels per acre; double-crop corn, 78 bushels per acre; full-season soybeans, 35 bushels per acre; double-crop soybeans, 24 to 29 bushels per acre; conventional-till wheat, 64 bushels per acre; no-till wheat, 55 bushels per acre; and no-till barley, 92 bushels per acre.

The other researchers in the project are studying various components of the system and new technologies that could improve the base system. At North Carolina State, for example, Ron Heininger and Gail Wilkerson are developing variable rate N and variable rate weed management systems. We are evaluating starter fertilizers and plant populations for corn here in Pennsylvania.

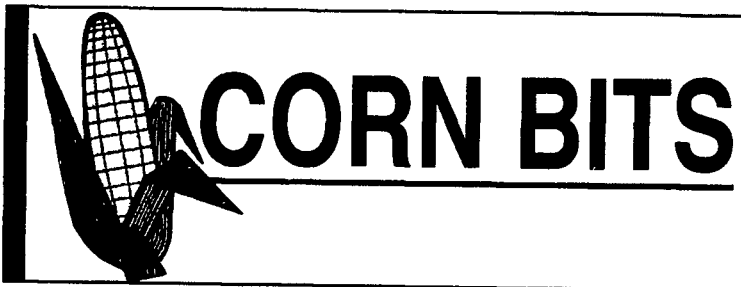
The project has established a Website to share the results of the main study and all of the satellite projects as they progress: [www.farmresearch.com](http://www.farmresearch.com).



**Penn State is one of four universities that have joined forces to study optimum crop management practices on droughty soils in the Mid-Atlantic region.**



**Potassium deficiency was apparent in some fields, especially where no starter was used, as shown here by John Rowehl, extension agent.**



### NRCS To Seek Input On Nutrient Management Guidelines

For some time, USDA's Natural Resource Conservation Service has been developing a technical guidance document related to implementation of comprehensive nutrient management plans (CNMPs).

As part of the Clinton administration's Clean Water Act Plan, it is expected that all animal feeding operation owners and operators will

have such plans in place by 2009.

While developing the guidance document, NRCS obtained input from the Environmental Protection Agency. EPA believes that document should be a comprehensive, standalone, prescriptive reference that would provide all the information necessary for development and implementation of a CNMP.

NRCS, on the other hand, maintains that development

of a CNMP is not significantly different than the agency's traditional planning process and, therefore, the document should be specific, but brief, with reference to technical materials that NRCS already

has in place to address associated issues.

NRCS believes such a document will provide maximum flexibility to producers during development of a CNMP. Recently NRCS leadership

decided to move forward with the brief document. It is expected to be posted in the Federal Register for a 60-day public comment period in mid-October. NCGA will review and offer input on the document at that time.