



Smarter Cropping

Internet program helps farmers make decisions about crops

Along the coastal plains of Texas, farmers and crop managers are using the Internet to make more informed decisions about growing cotton.

This Web-based decision support system, the Crop Weather Program for South Texas (CWP), is stationed out of the Texas AgriLife Research and Extension Center at Corpus Christi.

The program provides easy access to historical and current weather data as well as calculators and other tools that generate useful field-specific information about the crop and its environment, said Dr. Carlos J. Fernández, associate professor and the Plant Physiology and Cropping Systems Program's leader at the Corpus Christi center.

Using CWP, farmers and others can access data from an 18-weather station network that extends from Fort Bend County to Kleberg County. This data includes air and soil temperature, relative humidity, solar radiation, wind speed and direction, and rainfall. Fernandez said the program's fully automated system collects, inspects, uploads, and makes weather information easily available on the Web.

Management tools include weather data search, daily rainfall, reference potential evapotranspiration, soil moisture content, pre- and post-planting soil temperature, degree-day calculator, crop development, defoliation, crop water use, and irrigation monitor.

Registered users enter information about their acreage in field profiles that are kept in a database. They can then access the manage-

ment tools to perform calculations or simulation of crop and environmental variables that are field-specific, Fernandez said.

When designing CWP, Fernandez said the program developers considered the types of questions farmers and crop growers would have. From there, the developers considered the tools necessary to answer those questions. Fernandez said additional tools have been added through the years based on feedback from farmers and crop managers.

The program, launched in 2000, is growing in popularity. In 2008, CWP's suite of tools was accessed 20,400 times, up from 12,375 times in 2007, Fernandez said. From 2006 to 2008, registered users increased from 396 to 743.

The CWP program replaced the Weather Station Network Program, created by Dr. Juan Landivar in the 1990s. Landivar is currently director of the Corpus Christi center.

Fernandez said that the main rule in planning the program was to make it both useful and user-friendly. The Web pages use simple point-and-click interfaces with user entry provided through drop-down menus wherever possible.

"I think we have succeeded very much," Fernandez said. "Our system is very sophisticated behind the screen display but very simple to use."

In the future, Fernandez said he hopes to expand the program to other crops and areas. The Web site for the program is <http://cwp.tamu.edu/>.



The Crop Weather Program for South Texas makes data from 18 weather stations scattered along the coastal plains of Texas available to users of the program.
Photo by Carlos J. Fernandez.