

Fast Weather Service: A MANAGEMENT TOOL

By Michael Cade

AVON PARK — Bob Barben studied the weather map on a computer screen in his office at Avon Park. He could see that within two hours a heavy rain storm would hit his citrus grove at De Soto City where his oldest son Bobby, was about to apply fertilizer.

Barben called Bobby on the radio and told him to wait. He saved \$3,000 that day and about 20 tons of fertilizer that would have been washed away.

Keeping fertilizers, pesticides and herbicides out of Florida's lakes and streams is but one way growers use satellite weather imagery. The imagery now all comes from one GOES satellite, but, another GOES is scheduled for launch at Cape Kennedy. GOES stands for Geostationary Operational Environmental Satellite.

Florida growers receive GOES imagery and National Weather Service data through Florida Agricultural Service and Technology Inc. in Alachua, Fla.

Dr. John Gerber, who helped develop FAST, demonstrated the weather forecasting system at the Florida Agribusiness Computer Short Course and Trade Show Feb. 27-28 on the University of Florida campus.

Gerber, a climatologist with the Institute of Food and Agricultural Sciences, said farmers who develop their own weather forecasts have an extra edge in making daily management decisions.

"A forecast might say chances of rain today are 60 percent," Gerber said. "What it doesn't say is when that 60 percent is likely to occur. It may be the chances of rain before lunch are zero and after lunch are 60 percent.

"Maybe you need a window of four to six hours to apply a herbicide in order for it to be effective," Gerber said. "With satellite imagery, you can find thunderstorms, see where they're developing and watch their movement."

Television forecasts are general and can't make predictions for specific farms, Gerber said. But with FAST, agricultural managers can better answer the question, "What's going to happen right here?"

FAST, a non-profit company, grew out of a NASA-funded technology transfer project at the University of Florida, Gerber said. Farmers first used the technology experimentally in 1983. FAST now has its own CYBER computer and is governed by a board of private agricultural businessmen.

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Barben, chairman of the board, said FAST has about 90 subscribers. About 35 are heavy users and two to three new firms are joining each month.

"Each of us use the thing in a different way," Barben said. "The other night I was carefully watching the temperature because we wanted to turn on our microjets before it got to 36 degrees. If it gets down to 32 degrees, they'll freeze up.

"But it's not just for freezes," Barben said. "Those of us who grow citrus look at it as another management tool."

Orange-Co. in Lake Hamilton uses all phases of FAST's weather service, from minimum temperature reports to infrared thermal maps, and stores the information on floppy disks.

Mike Twyford, special projects supervisor, said studying the historical record of temperatures throughout the citrus belt during the season helps Orange-Co. decide when and where to buy fruit.

"It gives us a good overall impression of what went on besides what individual grove owners can tell us," he said.

Twyford said the futures market, played hourly, also is heavily dependent on weather.

"Anytime you have information that shows the entire citrus growing region, and given a clear and accurate report of what's going on temperaturewise, that'll help decisions throughout the company whether they be in crop estimates, future prices or whatever," he said.

Ron McLeod of Tropicana Products Inc. in Bradenton said FAST is especially useful to Tropicana's fruit coordinator, who projects the number of loads of fruit that will arrive at Tropicana each day.

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"If he knows it's going to rain in a certain area, he knows he's not going to get as many (loads) as projected," McLeod said. So then he can make an adjustment and notify manufacturing that the earlier projection won't be met.

"When there's a freeze forecasted, the zone-by-zone analysis is something we really rely on heavily," McLeod said. "That's something we really enjoy." But while FAST is useful, it's not perfected.

"We do encounter some breakdown," McLeod said. "Just this week, we received a message that it was not operational for a couple of days. Sometimes it can be a little aggravating."

Barben acknowledges that some customers have dropped the service because at times they were unable to get information when they needed it due to telephone transmission problems.

"I don't blame them for getting aggravated," Barben said. "I've been so aggravated, I can't stand it."

"But every few weeks I feel like we've made some progress," Barben said. "Control Data is helping us just any way they can. I think someday we're going to have something we can be proud of."

"We had a piece of equipment to start with that had a big chiller associated with it," Baben said. "Everytime that these people would get a surge on their electrical lines, why it could have put their computers out of business."

Those problems were solved, Barben said, and FAST has since switched from a CYBER 730 mainframe computer to an 830 mainframe that has added safety features.

Barben said that in addition to weather information, FAST will be offering any number of other services in the future. CAMP Inc., an electronic trading service for produce, is using FAST's mainframe computer and a University of Florida data base, now in the experimental stage, is scheduled to be linked to it in nine months to a year.

Then agricultural users will have immediate access to a vast amount of information and research data offered by IFAS, Barben said.

Despite FAST's problems, Barben said the company has a good future.

"We didn't have the money or manpower to market it properly, so we've had to crawl," Barben said. "Farmers are very conservative individuals. A lot of them are just hard-sell."

"We've been taking the people that are movers and shakers and are willing to try something new," Barben said. "I think at some point in the future some of these people are going to be surprised at what it (FAST) can do for their business." ■

Equipment needed for FAST weather service:

- 1) IBM/PC compatible monitor

- 2) Color monitor
- 3) 1200 baud modem for telephone hook up

FAST provides the software.

Cost of using FAST:

Commercial: \$1200 subscription; \$50 a year membership fee.

Farm: \$600 subscription; \$50 a year membership fee.

State: \$1200 subscription; no membership.

For more information contact:

FAST, Inc.
P.O. Box 550
Alachua, FL 32615
(904) 462-3492

Mr. Robert J. Barben
President, FAST Board
304 S. Delaney Ave.
P.O. Box 1056
Avon Park, FL
(813) 453-3659

Dr. John F. Gerber
Director
IFAS Grants Office
University of Florida
2014 McCarty Hall
Gainesville, FL 32611
(904) 392-2356

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