

THE FURROW

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PRESTRIP TION FARMING

■ Wild weather ■ Not a drop more



By Lorne McClinton

Fingertip forecasts

Internet-linked network of micro weather stations comes of age

Few occupations depend more on having accurate and timely weather data than farming. Thanks to WeatherFarm, a free Internet-based weather service developed in partnership by the Canadian Wheat Board and WeatherBug—the operator of the world’s largest network of weather stations—prairie farmers have access to in-depth, real-time local weather data. They also have decision-support tools right at their fingertips.

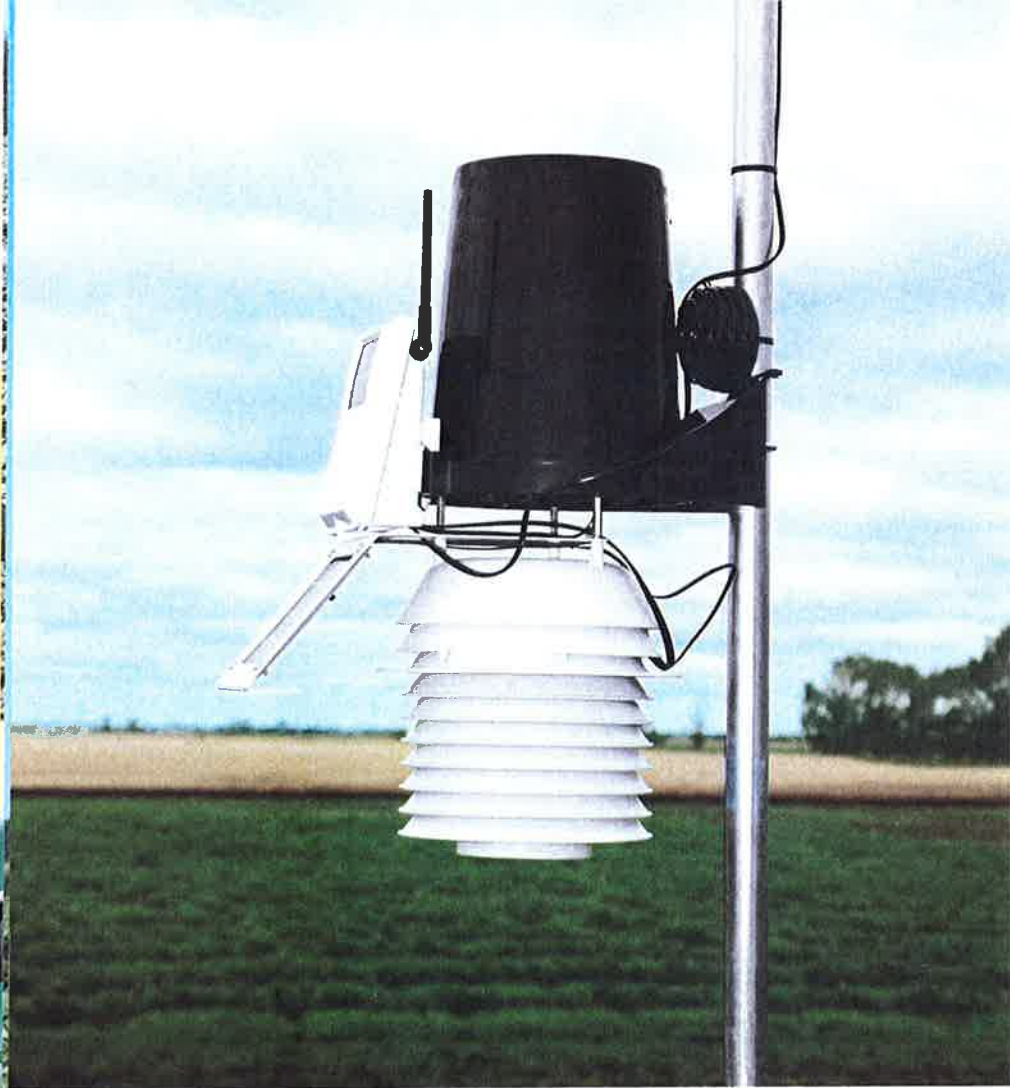
WeatherFarm, initially marketed as the CWB WeatherBug System, gives producers the ability to use their Web browser to check out real-time temperatures, precipitation, and wind speed at their default weather station. They can also check out and compare

current data at any of the thousands of weather stations in the system. It also allows them to set a number of customized alerts to notify them if a pre-selected weather condition occurs.

“If you want to know if the temperature at a weather station dropped below freezing it will color code that station in red,” says Guy Ash, manager of the CWB’s weather network in Winnipeg, Man. “You could also set it to give warnings if pest action thresholds are reached or program a station to turn a particular color when the winds climb above a preset velocity. The system also has the capability to send out custom alerts to a grower’s



►**Top:** Colin Craddock depends on the system to help track windspeeds and direction for his spraying operations. He also uses it to remotely monitor temperature and rainfall at his farm.
 ►**Above:** The system updates itself every 2.5 seconds to provide real-time weather data.



►**Left:** The basic weather station measures wind, temperature, humidity, rainfall, and barometric pressure. It calculates dew point as well.

minute data off of the network to help you evaluate what you want to do.”

Thanks to corporate sponsors, any farmer or ag retailer can access the system free of charge. The heart of the system is its network of 700 Internet-linked weather stations that have been purchased by individual farmers.

“We’ll sell a basic weather station for \$1,750,” says Alison Sass, weather network technician with the CWB in Winnipeg. “It measures wind speed, wind direction, temperature, humidity, rainfall, barometric pressure, and calculates the dew point. Producers can purchase additional components to monitor ultraviolet solar radiation, soil temperature, and soil moisture. Free installation and a five-year service and maintenance contract are included in the basic price.”

Colin Craddock, a farmer and spraying contractor near Fannystelle, Man., was one of the first in line to buy a weather station. He mainly uses it to monitor rain and track winds on an hourly basis to see if it’s fit to spray.

“I can link in and check the weather at the farm whether I’m at home in Winnipeg (about an hour’s drive away) or from anywhere else in North America,” Craddock says. “That’s important because I work for an airline so I’m on the road quite a bit. It lets me know if I’m going to be working when I get home or if I’ll have a day off.”

Craddock says it’s great for monitoring wind speeds. He’ll get up at 4 a.m. and check the station to see what the wind speeds are. If they’re light, he’ll head out and be at the farm by 5 a.m.—if not, he can go back to bed.

WeatherBug will showcase the technology to U.S. farmers in a California pilot project in 2010. Its long-term plan is to have the system available to farmers across the United States and eastern Canada in the future. The simplest way producers can access the site is by typing *WeatherFarm.ca* into an Internet search engine. ■



►**Above:** Alison Sass says there are now more than 700 on-farm stations in the network. Ideally it will have a grid of stations 20 to 30 km apart.

or an ag retailer’s mobile platform.”

A producer could use this feature to have the system call them on their cell phone when they’re spraying if winds get above pre-set levels. It could also call you at home if agronomic models show weather conditions are conducive to the development of certain crop diseases or insect pests.

“There is a whole set of agronomic decisions that growers have to make

every year that are highly weather dependent,” says Jim Anderson, vice president in charge of global network and business development for WeatherBug in Germantown, Md. “Generally speaking, although growers have access to weather information, they don’t have access to live, local weather information. The information they do get is often from a distant station and comes as raw weather data. Wouldn’t it be nice to have it integrated with tools they could use? We’re able to calculate growing-degree days, a freeze-severity index or pest risk models using our back-end systems, and we display that content in easy-to-use maps and charts in our application.”

Real-time solutions. “The weather station sends the network data every 2.5 seconds, so it’s real-time weather information for real-time problems,” Ash says. “You’re not waiting for an hour to go by before you get the next Environment Canada update. You’re getting the less than minute-by-