

# Home TV tells farmer when to buy and sell

LANCASTER — After working his farm all day, Howard Martin turned on his home television to get the latest prices and trading figures for grains. Within minutes, he phoned his broker to cancel an order he had made that morning.

"Market conditions had changed enough so that I really would have regretted not cancelling that large order to sell," he said. "For the first time, I realized how important it is to have timely market information and quick access to it."

Howard Martin is a cash grain farmer who has 2000 acres in Kentucky. Like 199 other farmers from Todd and Shelby counties, he is getting commodity, weather and other information about agriculture every day from a special computer system hook-up to his home television set.

The system is called "Green Thumb" after a portable Green Thumb box (a memory unit) that retrieves data from a computer hook-up to home telephone and TV sets.

The pilot project is sponsored by the U.S. Department of Agriculture's Science and Education Administration, the Kentucky Cooperative Extension Service, and the U.S. Department of Commerce National Weather Service.

In the system, a farmer using a selected code for the type of information he wants, calls the county extension office and is connected to a micro-computer there that receives information from a computer at the University of Kentucky College of Agriculture.

"The system is the first project of its kind anywhere in the country and is a unique and valuable decision-making tool for agriculture," said Howard Lehnert of the Science and Education Administration - Extension. He helped conceive the idea and nurtured its development.

"Day or night, farmers can get information at home from data sources throughout the country," he said.

According to Lehnert this is more than just a computer dissemination system for the farm.

"It is a demonstration of new technology, of electronics that has worked like a charm. It has limitless possibilities for business and commercial use because it is portable and less expensive than other view data systems," he said.

John Ragland, associate director of the Kentucky Cooperative Extension Service, said farmers already are putting the system to many uses.

William Giltner, for one, has learned to apply the new technology in complex ways. In combination with Extension's Green Thumb, he uses a micro-computer to handle field records and accounting, and to balance the feed ratio for each cow in his dairy herd operation.

Giltner has a 1200 acre diversified farm in Shelby County and has profited \$2,800 by making corn future transaction decisions with the system. He frequently uses it for weather in-

formation. This spring he was able to plant corn 20 days earlier than usual because the system told him that soil temperatures were warm enough.

"Green Thumb's memory unit has been very helpful in telling me how many good working days I have for planting, how many acres I can get planted, and it helps me in planning my field scheduling. I can watch the possibility of rain coming. I'll know I'm likely to get rained out in the middle of growing," Giltner said.

Ray Moss Tucker has used the system to keep track of the path of the alfalfa weevil and rainfall in different parts of the country.

Tucker, who grows corn, hay and tobacco on his 600-acre farm in Shelby county, also has gotten extended weather forecasts when he has missed news from other sources.

David Kerr, who raises hogs on a 200-acre farm in Todd County, said his wife has profited from valuable nutrition tips, menus and other items communicated to homemakers through the system.

The Kentucky project began operating in March with \$300,000 in grant funds from the Science and Education Administration and the National Oceanic and Atmospheric Administration.

Lehnert, who worked two years to set it up, envisions the project as the beginning of a nationwide system. He said that a number of state extension offices currently are investigating ways of implementing the system with the cooperation of the private sector.

The first commodity information in the system was the regional market report from the Chicago Board of Trade and the Chicago Mercantile Exchange.

Since early September, market reports have included local and other information that they did not previously have on auctions and on supply, demand, movement and volume of commodities.

The new information is being supplied by the USDA's Agricultural Marketing Service. Drawing on its nationwide commodity network system, the marketing agency eventually will provide farmers

using the system with national reports from many other markets.

The National Weather Service primarily provides short-term and extended forecasts and weather radar maps.

Extension specialists at the University of Kentucky now are providing reports on agricultural economics and occurrence of pests. Local extension offices are preparing information on 4-H and other community activities.

The Food Safety and

Quality Service has been providing home economics and nutrition information since May.

"Extension's Green Thumb project is the real wave of technology of the future," Ragland said. "For agriculture, it will mean more productivity. For farmers, it is the first logical step toward more comprehensive use of other computers that will help farmers and other consumers in their decision-making."

## How to control smut in small grain

LITITZ — Each year hundreds of unsuspecting farmers across the country lose part of their small grain crop to smut. And, unfortunately, by the time those insidious fungal spores have started to do their damage, it's already too late to stop them.

But smut problems on crops like wheat, oats and barley can be avoided by simply treating the seed before the disease gets a chance to start, according to a number of experts.

Although smut on small grains is caused by a variety of fungi and is usually not apparent to growers until late in the growing season, the problem is a relatively simple one to understand. The two basic types are loose smut and covered smut.

Loose smut is a seed borne disease whose spores eventually replace the seed of the plant. During flowering time, the smut spore is floating in the air. It will land on the flower of a plant, then germinate and grow into the developing seed.

Following harvest, the loose smut fungus will overwinter in the seed as mycelium.

After planting, it invades the young seedlings, replacing the kernels with fungal spores. Instead of producing grain, the kernels will then become a mass of fungal spores.

Later, when the kernel membrane breaks, the smut spores will be released into the air, eventually landing on healthy plants and starting the cycle again.

For covered smut, also known as bunt or stinking smut in wheat, the process is slightly different. Once again, the smut spores will infect the developing kernel and displace all tissue within the membrane, but instead of rupturing during flowering time, the membrane may remain intact until harvest.

At that time, the membrane will usually break, releasing black, powdery spores and a strong fishy odor. These spores begin to infect the plants as the seedlings emerge, eventually displacing kernel tissues and forming new bunt balls which will again break at harvest to renew the cycle.

Smut damage all depends on the level of infection of the seed.

In the case of loose smut, if 30 percent of the seeds are infected, you'll probably lose almost 30 percent of your crop.

But with stinking smut farmers have two kinds of losses: the loss from the destruction of the head by the disease organism the same as you would with loose smut. But on top of that, they get a dockage when you take your crop to market.

Covered smut can be a major problem, especially because of the smell.

Some elevators won't even take grain infected with covered smut. Those who will take it give a dockage on the order of 10 to 20 cents per bushel and they also charge a grower to wash the grain to get rid of the smut.

There really aren't any good reasons for not treating seed. There have been instances when 50 percent of the plants in a field are infected, completely ruining the crop. When seed treatments can control the problem almost 100 percent, it doesn't make sense not to treat.

Until recent years, many growers had success in controlling smut with methyl and phenol mercurial fungicides. But with the banning of mercury seed treatments in 1978, farmers and researchers have been turning increasingly to other compounds.

Carboxin is a systemic that will go inside the germinating seed and control smut. he said. Carboxin will work externally on young plants to control seed decay and damping-off.

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