Weather Control

Farmers Skeptical of Weather Control Programs

Western Kansas Weather Modification Program
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Atop his tractor, Dennis Franklin watches time and again as storm clouds gather over his parched farmland in northwest Kansas and a handful of small planes appear, releasing dry ice and flares into the base of the storm in an attempt to stop hail from forming.

Then he looks on as the storm clouds dissipate, instead of dumping a soaking rain on his wheat, corn and milo fields.

Franklin and his neighbors wonder whether the Kansas Weather Modification Program, which expanded its cloud seeding into northwest Kansas in 1997 to suppress crop-destroying hail, actually is robbing them of precious rainfall.

"This is basically a farming area, and you are messing with our livelihood," said Franklin, who farms in Rawlins and Thomas counties. "We have lived here quite a few years and taken it as it came. But that is part of farming. We don't need anybody influencing it, especially when they don't have any more control than they do."

In response to the weather program, one of the largest of its kind in the nation, Franklin and a few neighbors formed a group called Citizens for Natural Weather. Soon the dissident group grew to more than 550 people from Cheyenne, Rawlins, Decatur, Sherman and Thomas counties, among others.

Last April, Cheyenne County in Kansas passed a resolution of non-support of the cloud seeding program. Two months later, Rawlins County decided to end its participation. This past February, Decatur County commissioners also wanted out. A petition is currently circulating in Thomas County to bring the issue to a vote there. In neighboring Colorado, Kit Carson County withdrew from the cloud seeding program.

Meanwhile, those who have been doing weather modification in southwest Kansas for 25 years dismiss the groundswell of opposition as simply a public misunderstanding of the science of weather modification.

"Those people are not meteorologists, they are not scientists," said Keith Lebbin, manager of the Western Kansas Groundwater Management District. "It is impossible to delete their rainfall and make it fall downwind. If this program is as bad as those people indicate, we wouldn't be doing it."

Now part of the debate is a new study released by Kansas State University, done by Brian Vulgamore for his graduate degree program. Vulgamore, 23, works his Scott City family farm with his father and brother. They grow more than 8,000 acres of crop and finish about 2,000 head of Herefords on two small feedlots.

"I always thought they did something positive, but I wasn't sure," Vulgamore said about the weather modification programs. "Being a farmer, I wanted to know if there is a possibility they are reducing my rainfall. Are they reducing hail?"

Vulgamore examined rainfall data for affected counties dating back to the 1940s and looked at hail data dating to 1948. He concluded it couldn't be scientifically proven that the cloud seeding program was affecting rainfall or hail in the region.

That is because to come up with a statistically significant reduction - given the wide variability of western Kansas weather - the program would have to suppress hail by 60 percent. That is something nobody is claiming the weather modification program can do.

But if the cloud seeding succeeds in reducing hail even by just 3 percent, the program would pay for itself just in the savings to farmers, Vulgamore said.

"It is a good technology," he said. "There is a huge possibility of benefit to this technology."

Vulgamore found that counties within the program's target area had a 15 percent drop in hail-related crop loss when compared with neighboring counties not in the target area. But he was quick to also note that such a reduction could be as easily attributed to natural hail patterns.

He noted that every one of the five to seven evaluations of the weather modification program done by the Kansas Water Office and other researchers through the years has come back with different results.

And Vulgamore was especially critical of a 1994 study published last year in the Journal of Weather Modification that concluded the Kansas Weather Modification Program was decreasing rainfall by seven-tenths of an inch, while claiming that such an amount wasn't economically significant.

"They can't say that with scientific certainty," he said. "But if they are changing rainfall by even a small amount, it will be economically significant."

An added inch of rain during the growing season in arid western Kansas can mean an economic gain of about $18 million to farmers there, according to Vulgamore's study. A 1-inch loss of rainfall during the growing season translates into economic losses in excess of $19 million for western Kansas, the study found.

At the Western Kansas Groundwater Management District, Lebbin said he had "no problem" with Vulgamore's study, saying it closely correlates to other studies done by the Kansas water office.

The Kansas Weather Modification Program covers 16,000 square miles, or 10.2 million acres. Last year, it included 16 full and six partial northwest Kansas counties and portions of three Colorado counties. It was begun in 1975 in southwest Kansas by the Groundwater Management District in Lakin. It expanded in 1997 into northwest Kansas.

Texas has 10 similar projects, and the entire state of Oklahoma has a weather modification program, as does western North Dakota, among others.

The latest scientific findings do little to ease the fears of Franklin, a fourth-generation farmer who runs cattle in addition to raising crops. He said the latest study could be interpreted many ways.

"I've farmed for 25 years and I never saw clouds dissipate in the way I've seen them in the last few years," he said.

But Wayne Bossert, the manager of the Northwest Kansas Groundwater Management District, said that when clouds fall apart, it doesn't mean cloud seeding is responsible. That phenomenon is caused by the dew point where the clouds form, he said.

Lebbin also dismissed Franklin's observations: "That is just not true. If you have that kind of power with the program, it would be awesome. But it doesn't work that way."

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