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Gas Price Hike: Idle Irrigation Land Tells Tale

By Lee Pilgrim, Editor, Texas Water Resources
A curious object recently donated to the museum in Fort Stockton, Pecos County, was readily identified by the director, Mrs. Dell Beeman, as part of an old wooden irrigation pipeline.

She would know. Her late husband was manager of the Leon Springs Irrigation Company, which existed as far back as 1915. A close look at the crude pipe--eight strips of wood 6 inches wide fitted together --might be an indication of the reason that early irrigation disappeared in that area and why most people think it came to the Pecos Valley initially in the 1950s.

For the mid '50s were peak days for irrigation farmers in that section of Texas. At that time Pecos Valley (Pecos, Reeves and some parts of Ward Counties) had 150,000 acres of irrigated, tilled land in cultivation--85,000 of it in cotton.

The acreage dropped in 1975 to about 15,000 acres, and this year the figure is between 5,000 and 10,000. During the prosperous '50s, there were as many as 50 producers. Today there are less than 20. Of 8 cotton gins in Pecos County, only 1 will operate this year.

What happened?

A couple of bad crop years, plus rising production costs, topped by the sudden increase in the price of natural gas. Farmers say the latter is "the straw that broke the camel's back." Agriculture producer Dan Massingill says it's the event that made many producers "pick up their hat and head off down the road." Natural gas fuels the irrigation pumps that make farming possible in the Pecos Valley.

Massingill doesn't hide his emotions. He points to pumping gas wells and grumbles, "They take the gas right out of the ground three miles from here, ship it to Arizona and

California and sell it for 55 cents. Here we are within three miles of that thing, and we're paying $1.55. And it's going higher." Some producers pay $1.85.

No Controls In Texas

Emotions aside, it is a fact that the price of gas that leaves the state is federally controlled, but in Texas a free market allows gas producers to establish the price. Texas-produced gas costs out-of-state consumers about 50 cents per 1000 cubic feet. In Texas, except for a few users still enjoying old contracts--32 cents per 1000 cubic feet-- the price ranges from $1.20 to $1.35 in the High Plains and from $1.55 to $1.85 in the Trans-Pecos area. The cost leap came with contract renewals in January 1976.

The effect is increased production costs. For example, the cost of irrigating 300 acres of cotton in the Pecos Valley will jump from $4,800 to $22,000. In the High Plains the cost to irrigate 300 acres of grain sorghum increased from $3,100 at 80 cents to $5,000 at $1.30, and if it reaches $2 per 1000 cubic feet, the cost will be $7,800.

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The study indicates that with current crop prices, the $1.85 per 1000 cubic feet in Trans-Pecos will result in production costs much higher than returns for the crops.

A serious regional implication is the possible default in land payments. According to the investigators, many producers face this possibility in the Trans-Pecos.

"This differs from the situation in which one individual goes

bankrupt," Condra pointed out, "because severe stress may be placed on financial institutions as borrowers default and land values decline. In turn this situation can impact throughout the region, severely affecting the economic base, employment, and community welfare."

Lacewell cited the hypothetical case of a man who retires after farming all his life and sells his land to a younger man for 15 percent down, carrying the note himself. "The new owner has made payments three to five years; now he defaults and the original owner has to reassume the land," Lacewell continued. "He sold the land at $500 an acre but has to reassume it--or has to resell it--at about $250. So both parties are affected. If the original owner had not held the note, some financial institution would have been involved. Now we have a ripple system working. Some farmers won't be able to pay off their operating loans; this could impact on the lending agency, causing a difficulty in retaining loaning ability; and there could be some drying up of financing which would have a tremendously negative effect on agriculture production."

Adjustments Predicted

Since irrigation is vital to agriculture--Pecos gets about 7 to 8 inches rainfall a year--farming adjustments will be necessary. The Condra- Lacewell study suggests a possible shift from intensive irrigated crop production to extensive livestock production even though it takes from 30 to 60 acres to run one cow and calf.

Massingill, who farms in partnership with his father, says he expects to switch to cattle on the 9,000 acres he has leased.

Charles Forehand, who like Massingill has one more year of 32 cents gas, has abandoned cotton. Of the 1,800 acres he farms, 450 are in barley, 400 in hegari, and the rest is layout; but Forehand has a 3,000 head pasture-feed lot operation.

"You've got to have a variety, and it has to work together," Forehand remarked.

Forehand thinks "there would be a lot of cotton production this year if we had financing. l can't blame financial institutions too much. We had some bad years. Most banks and Production Credit Association decided not to finance after the disaster last year and the year before."

Forehand does not lay all the blame on the soaring natural gas prices. "To me the gas price is not the primary concern. Everybody talks about it because the price jumped all at once, but other inputs have gone up just as much as gas. A pump overhaul job used to cost about $1,200, and it would cost you $4,000 right now."

He also pointed out that although land prices are down, "no land is moving here. The only land that has moved is that which somebody thought he just had to get rid of, and you might say he gave it away- - $115 or $100 an acre."

Impacts On Economy

The TWRI study indicates that the High Plains and other irrigated farming regions may find themselves approaching a similar situation. Results of the High Plains study indicate the natural gas price is reaching a level where adjustments may be expected. A reduction in pumped water, irrigated acreage, and agricultural production are certainties if the price goes beyond $1.30 per 1000 cubic feet. Some farmers will be forced to quit irrigating. Rainfall in the area is 18 to 20 inches a year, which makes dryland farming a possibility. Lacewell says internal shifts will start impacting on the economy, including loss of land values.

He predicts, however, that the High Plains will continue to be a very productive irrigated agricultural area for a long time even with high natural gas prices. His concern is that the young farmer will have to sell out or go bankrupt and thus be forced out of agriculture. Losing good productive agriculturists, Lacewell counts among the "serious losses for all of us."

Condra and Lacewell have hopes for recovery from the cost-price squeeze irrigated farmers are in today. Their hope lies in a system now being developed in Pecos County by the Texas Agricultural Extension Service which is designed to reduce the cost of cotton production from 70 to 50 cents or less per pound by improving pumping efficiency and reducing fertilizer, pesticides, and water application.

Convinced that the system has tremendous promise, Condra and Lacewell are counting on its future area-wide application to keep one of the hundreds of pumps now idle from winding up a relic in the Fort Stockton museum beside the wooden irrigation pipe.

Ag Efficiency Offers Hope

"One inevitable conclusion is that we have used a low gas price to subsidize some inefficiencies here. This is not to say we wouldn't be better off with a more reasonable gas price--and I think the gas price is unreasonable now--but when you pump 60 to 70, or even 80 inches, of water a year to put on a crop which has a consumptive use of maybe 30 to 35 inches, then there is some pretty severe waste."

So says William R. Bickley "telling it like it is." Bickley is general manager of the West Texas Cooperative Oil Mill, headquartered in Pecos, Texas.

Inefficient use of water is one of the factors that have contributed to the demise of cotton as the major cash crop in the Trans-Pecos region, especially since fuel costs for irrigation have increased five- fold. In an effort to restore upland cotton to Reeves and Pecos Counties, the Texas Agricultural Extension Service is engaged in a demonstration aimed at reducing cost of irrigation, insecticide, and fertilizer, and thereby increasing net returns or reducing net losses.

Working with two cotton farmers in Pecos County are Area Agronomist Kenneth E. Lindsey, Area Economist Gary D. Condra, and Area Entomologist Charles W. Neeb. Their goal is to reduce the production cost from 70 cents to 50 cents per pound. Estimated yield also has been lowered from 700 pounds of lint per acre to 630, but the Texas Agricultural Extension Service advisors say "we can give up a little bit of yield if it puts us back in a competitive situation."

The A&M team determined that a typical budget assumes 50% water efficiency; whereas 75% is possible under improved management. The amount of water then would drop to 30 inches per acre from the typical management figure which ranges from 44 to 80 inches. The improved management program also reduces nitrogen to less than 100 pounds--maybe lower depending on the soil--and insecticide applications from 7 to 3 based on participation in the cotton pest management program and reduced pest problems associated with lower water and fertilizer applications.

Aims To Reduce Cost

With these reductions in production inputs, costs of production are expected to decline from the present $570 per acre to about $375.

Although the program is limited to only two test plots in Pecos County, the Extension Service and producers involved are not alone in their hopes for the program's success. It also has the respect of producers and of community leaders.

Bickley said, "The approach they're taking makes an awful lot of sense to me. The ideas are definitely worth exploring and have some real possibilities."

Farmer Charles Forehand remarked, "I think the Extension Service can help a whole lot. It didn't in the past, but they're getting down to our level now. They weren't willing to stake their reputation on what might happen. They wanted to do what could happen, what they knew would happen, and they didn't recommend anything they didn't know wouldn't work."

The demonstration is located in Pecos County, but the Texas Agriculture Experiment Station in Pecos (Reeves County) is promoting a similar approach. Jim Hefner, associate professor in charge, said "We are trying to put together every practice to reduce production cost and accept a lower yield."

Even before the zooming gas price, Hefner and Soil Physicist Jaroy Moore at the Reeves County Station engaged in the following practices:

- 1) reducing preplan" irrigation (once 12 to 20 inches; now 8 to 12)
- 2) reducing fertilizer input;
- 3) initiating higher plant population coupled with short season varieties;
- 4) reducing cultivation, weed control, and insect control efforts;
- 5) going from traditional spindle harvesting methods to stripping; and
- 6) cutting down on land preparation.

Producers, agricultural experts, and community leaders in the Pecos Valley concur with a statement by Kenneth Lindsey. "This gas price hit us first, but it's going to hit all irrigated agriculture Perhaps we were the first to have our inefficiencies show up."

The project could well be a pilot program for other arid and semi- arid agricultural regions which will fall victim to high irrigation costs on top of the inflated cost of other production input.

There's Hope

Harvey Buehring, Pecos County extension agent, recalling predictions of future fuel costs, remarked, "If we think fuel cost for irrigation is high now, wait until natural gas plays out and we start depending on lignite coal. We'll look back 10 years from now and regard this as the time of cheap energy.

"We just need to find ways to make the cotton farmers' operations more efficient to get over the rough spots and hope the cotton market will come up. That's one of the big things we've got going for us now. The price seems to be increasing. Let's hope we can grow cotton with less water and with more overall efficiency."

Faith in the area was expressed by Bickley who remarked, "We have an abundance of underground water; we have adequate land; and we have what the old people used to call a salubrious climate--good for cotton production. Given these three, you can't discount an area like this on a permanent basis."