



Lancaster Farming Photo

Toppled Harvestore (center) was replaced by the company within five days.

“BRIDGING” CAUSES 20 BY 80 FT. HARVESTORE TO TOPPLE

Midnight Silo Crash Creates Excitement

LEBANON, PENN. — “It came down with a crash,” said Tom Krall, describing the fall of the Lebanon County farm family’s 20 x 80 ft. Harvestore silo at 12:30 a.m. on Tuesday morning last Jan. 4. “It looked like it just made a hole in the ground and disappeared. The dust it raised made it look like a rocket going off.”

The collapse of the “almost full” steel and fiberglass structure was the unfortunate finale of slightly more than a week of watching and waiting for Penn-Jersey Harvestore Systems, Inc. and dairyman John Krall of South Lebanon Township and his family. Sons Tim and Tom, who work on the family dairy operation, were joined by John and daughter-in-law Shirley in a vigil Monday evening, anticipating the fall of the leaning blue tower.

“We thought the silo had to go on Monday,” recalled Tom. “During the day, Tim said he heard something cracking in the feed room, next to the silo — sounded like an electrical short or something. What it was, we realized, was the splattering of glass as it cracked off the silo. By the end of the day, the silo had leaned three-quarters of the way over.

“It had leaned against the Star silo first,” said Tom, pointing out the long, dark scratch in the concrete and the slightly squashed silo ladder. But then the weight must have shifted and it fell away from the barn and remaining silos, out toward the ryecovered corn fields, he said.

Curiosity more than dread marked the occasion that could have been termed disastrous except for the backing the Kralls received from Penn-Jersey Harvestore. Instead of wincing from the crushing blow the silos collapse could have dealt to their huge investment of feed and finances, the family gladly “sat back and watched” as the silo company took over the responsibility for cleanup and replacement of silo and feed.

According to Penn-Jersey’s Bob

McLean, what caused the silo to fall was a phenomenon known as “bridging.” He explained that the ground high-moisture ear corn, which is a semi-free flowing material, created a shifting pattern in the feed inside the silo due to uneven unloading.

“The internal load shifted and put stress on the structure,” McLean said, pointing out that this is the first case of its kind experienced by Penn-Jersey in more than 1,500 silos the company has constructed.

What is presumed to have happened is that while the Kralls were unloading the high-moisture corn, a gap in the feed layer was created — leaving a bridge potentially eight tons wide between the suspended feed layers. When the upper layer finally dropped down, a vacuum sucked the airtight Harvestore’s panels in, causing a buckle about 15 ft. off the ground. The pressure of the shifted weight-load on the panels eventually caused the silo to split and fall to the ground.

McLean stated that various factors could have led to the bridging condition in the ground ear corn — moisture, length of cut and grinding, filling patterns, and outside temperatures.

Although McLean stressed the company is “not pointing its finger at anyone” for the structure’s implosion, he hypothesized that if the signs of bridging had been noticed by the farmers after the silo was refilled in November, there may have been a possibility of “working the unloader pattern differently to pull feeds off different sides of the silo.” He recommended farmers work closely with their structure sales people so that best management practices can be followed.

The feed which stayed in the upright remains of the 80-ft. tall silo was unloaded and sold, said McLean, adding that crews worked for 24 hours and finished early Thursday morning.



Klevberg planted four rows of sunflowers every 160 in.

SKIP ROWS OUTYIELD SOLID SEEDED CROPS, STILL COMPLY WITH REGULATIONS

He Grows Crops On Set-Aside Acres

by Don Lilleboe

Northwood, N. Dak., farmer Marv Klevberg accomplished two things within the same 160-acre field last year: he qualified part of it for the set aside program and he grew a crop of confection sunflowers.

Klevberg used a “skip-row” concept he’d seen on cotton ground in Texas. He learned from his state ASCS office that he could skip a minimum of 160 in., plant four rows of sunflower (or other non-program crop), skip another 160 in., plant another four rows, and so forth. Fifty percent of the field would then qualify as set-aside acres. (The four-row/160-in. pattern is a minimum. One could, for example, have gone with eight rows and 320 in.)

Klevberg seeded his confection flowers by utilizing only the center four boxes on an eight-row planter and then extending his guide marker 10 in. This established the desired cropping pattern.

The final yields on the skip-row confection flowers were impressive, due in good share to the four-row concept permitting more outside rows, which in turn resulted in larger heads and seeds. On a per acre basis, the skip-row sunflowers yielded 1,980 lbs. Another nearby field — this one planted entirely in confection sunflower — ran 1,550 lbs. per acre.

Percentage of large seeds, a very desirable trait with confection sunflower, also differed considerably between the two fields. The sunflower in the skip-row field produced 57% large seeds while the

other field yielded 32%.

As a cover crop between rows, Klevberg broadcast-seeded winter wheat in late July. He’ll find out this spring whether the early seeded wheat (which, since it would not be harvested in 1982 was still just a cover crop) will produce a crop. If it looks good this spring, he’ll harvest it. If not he’ll tear it up and plant another crop.

Klevberg definitely plans to continue with the skip-row set-aside/confection sunflower in another field in 1983. And he intends to insert some oil-type sunflower in part of the field to see if the higher percentage of larger seeds will affect oil content.

While the bottom line on the skip-row endeavor was profitable, the process also had some minuses, notes Klevberg, who incidentally, is also wrapping up a term as president of the National Sunflower Association. Though only half the field was in flowers, his herbicide and insecticide costs in essence doubled, since the chemicals had to be applied across the entire field. And there was some added inconvenience and under-use of equipment connected with planting, cultivating and harvesting sunflower in this cropping pattern.

Klevberg urges anyone considering a skip-row program to first check the matter out thoroughly with his ASCS office.

Story and photo courtesy The Sunflower, Box 2051, Fargo, No. Dak. 58107.

Five days after the mishap, Penn-Jersey had a brand new, 20 x 80 Harvestore standing where the one-year-old structure had been. And the silo company replaced Krall’s ground ear corn with high-moisture shelled corn.

McLean said the fact that the company rebuilt the same structure on the same spot answers the question in some farmers’ minds: “Is 80 ft. too

high a silo for ground high moisture corn?”

In summing up the mishap, McLean referred to a remark made to him by John Krall after the silo fell: “He said no one likes problems, but we have to take the good with the bad. It’s how people respond that’s important.”

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