

Seed cleaning hits the road

The slogan "Have Seed to Clean, Will Travel," applies to Phillips Seed Co., Hope. Unlike most certified seed growers who add a seed cleaner for their own seed, then expand to accommodate nearby farmers, Don Phillips expanded to clean seed for farmers across the state. Phillips's state-of-the-art cleaning system is portable.

In 1981, when Phillips harvested his first crop of certified seed, he had to haul it to New Cambria, a round trip of more than 50 miles. It was the closest site for a seed cleaner that met the standards necessary to clean certified seed.

In the early days, the trip wasn't bad because his seed volume was relatively low. But, as he grew, the distance took a toll in time and repairs.

Resolved to make a change, he salvaged a cleaner from the fourth story of an elevator. True to his dislike of hauling seed for cleaning, he mounted it, a bagger and a generator on a 36-foot gooseneck trailer. He was set for selective "door-to-door" seed cleaning.

The unit was a modest one, cleaning 200 bushels an hour. All the while he used it, he envisioned a larger, more complete system. When he discussed the idea with others, they questioned that it could possibly work.

The result of his planning and building was a portable seed cleaning system mounted on an 8-by-53-foot custom-built semi-trailer. Transport height is 13.5 feet. It's pulled by a semi-tractor truck.

When set up at the cleaning site, the system extends to 57 feet in length and telescopic elevator legs rise to 20 feet. Six hydraulic jacks are used to level the trailer.

The legs are raised by air pressure, not hydraul-

ics. The reason, explains Phillips, is that a hydraulic system would be unforgiving should something get stuck as the legs are raised into place. The entire trailer frame serves as an air pressure tank.

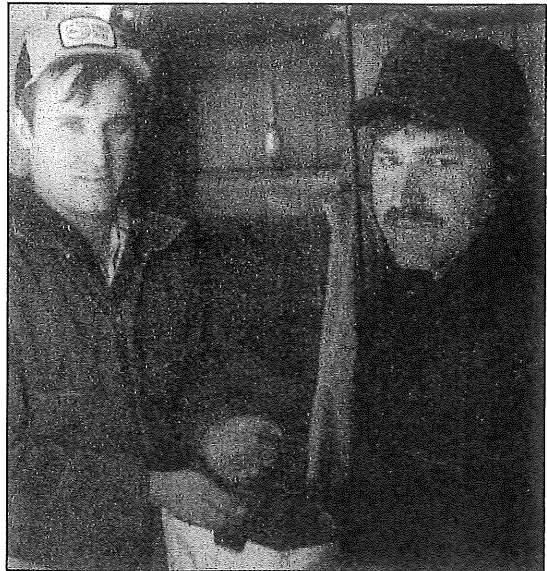
Components of the cleaning system include a Clipper 248 Di-alamatic seed cleaner, a Carter-Day length grader, an LMC gravity table and a seed treater. An accompanying Taylor electronic air bagger bags 500 an hour.

When on location, power for the cleaner comes from a 60 KW generator that drives 21 electric motors with a total of 74 horsepower.

The key to the system's operation is to synchronize the Clipper cleaner with the length grader and gravity table. The Clipper can clean up to 400 bushels an hour compared to the others' 500 bushels per hour. An 80-bushel surge bin above each of the other components, once full, serves as a cushion to even out the flow of the total system.

Phillips admits to losing sleep as he designed the system. His is the first portable system to include a gravity table.

Seed brought to Phillips for cleaning can go through one or all of the components. The length graders and the gravi-



Don Phillips of Hope and employee Kent Whitehair check alfalfa seed.

ty table are precision cleaners.

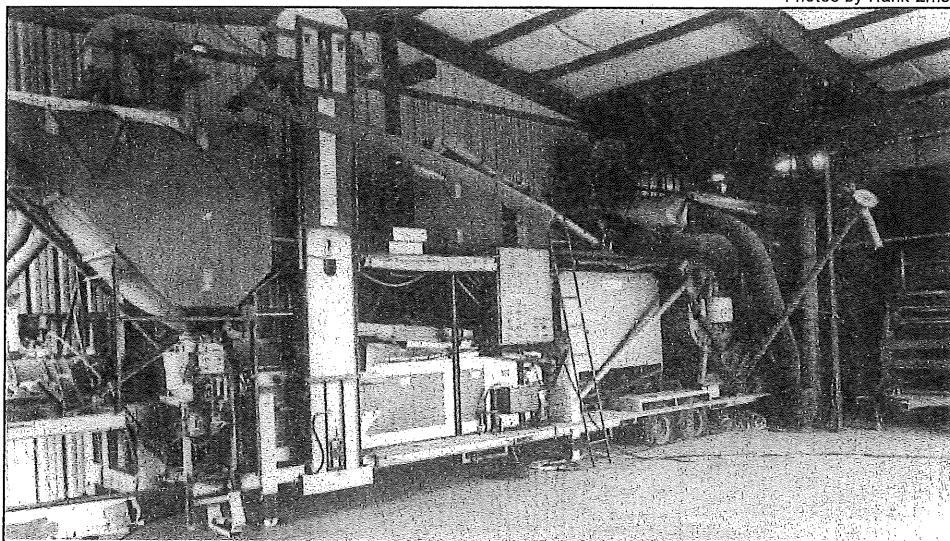
"The length grader and gravity table take a good situation (good, high quality seed) and make it perfect," says Phillips.

The length grader eliminates joint grass, buckwheat, cross cut and cracked seed. Wheat and oats are typically run through the length grader.

The gravity table separates seed by test weight, using air and side-to-side movement. By using the gravity table, seed with 1 to 3 points higher test weight can be selected from the batch. In the years Phillips has run his portable cleaner, he's cleaned between 100,000 and 150,000 bushels a year. Typically, he'll clean his own wheat after harvest, then hit the road before the first of August.

Phillips's set-up can be set to treat seed. About one-half of the seed wheat which goes through the system is treated.

The seedsman's interest in certified seed prompted him to expand into soybeans, testing and marketing them in Kansas. Under Phillips Brand Seeds, he's tested five varieties and released three. He's also a member of AGSECO, a new seed company planning to release new wheat varieties in 1989



Portable seed cleaning system was designed and built by Don Phillips, the 1988 Kansas Ag Innovator. The competition is sponsored by K-State Ag Engineers, the Western Association and Kansas Farmer.

Photos by Hank Ernst