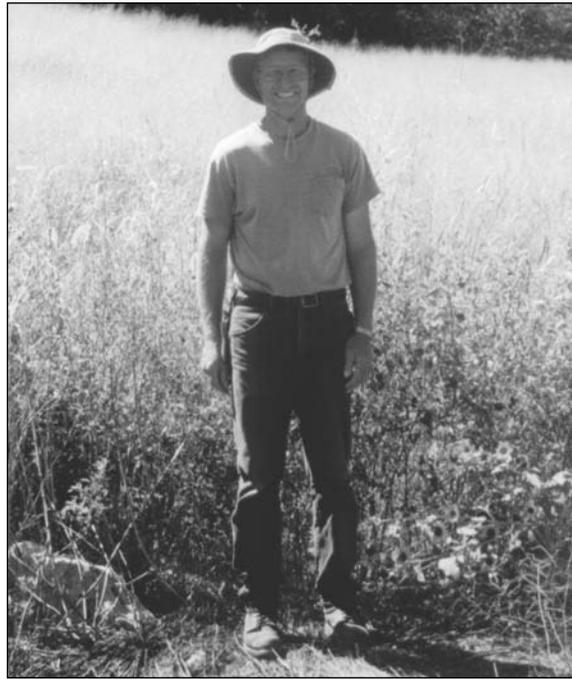


Darrell Parks Riley County



Ask Darrell and Donna Parks if they can see noticeable improvements in water quality as a result of recent changes on their farm and they are likely to tell you about their own backyard. A few years ago, a big rain would flush water through the hog lots on the steep slope behind their house.

"All that water washed right down through the yard, past the back door and the clothes line," Donna comments. Now the hogs are moved to more level ground and the slope is planted to switch grass. A diversion terrace coming off the slope is repaired and seeded to fescue. When the rains come, the water soaks into the grass-stabilized soil and any runoff is much clearer.

The changes on that slope behind the house are only a part of the

Pasture Pigs & Crop Rotation

Cooperator:

Darrell Parks
1001 E. 26th Ave.
Manhattan, Ks. 66502

Watershed:

Kansas River

Water Quality Concerns

Runoff from hog lots, and runoff from cropland.

Demonstration

* Convert cropland to grass for a pasture based hog finishing operation; move the finishing lots to new location; and replant old former finishing lot to

changes on Darrell and Donna's 350 acre diversified farm east of Manhattan. Working with KRC's Clean Water Farms Project, the Parks have developed a new pasture finishing site for their hogs on twenty acres of level cropland in addition to reseeding the former lot site on the slope. The demonstration also includes the establishment of pasture farrowing lots, and establishment of an extended crop rotation that plays a key part in his swine operation.

At the time of the CWFPP demonstration, Darrell's hog operation consisted of 100 sows with some of the pigs sold as feeders and others finished out. A farrowing house is still in use on the farm, but Darrell has established pasture farrowing lots near the barns for part of the sows.

The rocky slope at right used to be part of the Parks' hog finishing lot. They moved the finishing lot to a flatter piece of land and reseeded the slope to switch grass (below).



The new finishing lots are moveable pens and metal "huts" (right) and are now part of the crop rotation system. Below, alfalfa in wheat stubble next to corn is a key part of the crop rotation.





Darrell Parks shows his pasture farrowing huts in standing corn during a tour. He also farrows pigs in portable huts in a pasture near his barn. He notes that the pigs born under these conditions are "tougher" than his other pigs.

He has also experimented with farrowing sows in a field of standing organic corn with mothers and babies foraging in the stalks.

Darrell notes that the pigs born in the portable huts in the pasture lots are much tougher than his other pigs. "I hardly have to give a shot anymore. I used to routinely vaccinate baby pigs for several diseases, but rarely do now. The pigs coming off the outdoor huts to the pastures are tougher - and happier, too."

The pasture finishing system was established on twenty acres of cropland. Darrell divided the acreage in half with water hydrants down the center and a road adjacent to the hydrants. The finishing lots, and even the road, are rotated every other year from one side of the water hydrants to the other side. About 500 pigs are divided between 10 paddocks that will hold them from 50

pounds to slaughter. Portable shelters provide shade and protection from the elements and can be easily moved when it is time to rotate to the other side of the hydrants. Lots are seeded to alfalfa to provide a deep-rooted sod for the pigs.

"The biggest challenge in a pasture system, obviously," says Darrell, "is keeping vegetation in place. The logistics of it can be a problem. You have to be committed to it."

By changing to this system, the pigs are spreading their own manure which reduces labor requirements and will provide nutrients for a corn or soybean crop when the pens are moved. Odor is greatly reduced under this system with no need for a concentration of wastes in a storage lagoon. Darrell was careful in siting his new finishing pastures so that prevailing winds take any odor away from neighbors, but feels that his pasture system is less offensive. "Of course there is odor," he explains, "but, because you are not concentrating the wastes, and the animals are outdoors, you can minimize it."

Darrell feels that production costs per pig may be somewhat lower with a confinement system simply because it can be used more intensively throughout the year. But for young farmers wanting to start a hog operation, the pasture system has a distinct economic advantage over the construction of a confinement building. Darrell's costs for establishing the pasture system amount to \$19-20/pig compared with

estimates of \$144/pig for a confinement building.

Labor requirements are generally less but are more sporadic and can be planned to complement other farm labor needs. In Darrell's case, he especially likes working outside versus the environment of the confinement building.

The Parks' efforts to protect water quality are further enhanced with their transition to organic crop production. With organic certification, the Parks control weeds with a rotary hoe, a cultivator, and crop rotations. Fertility is based on organic inputs with an emphasis on nitrogen fixing legumes.

Their current crop rotation includes a clear hilum soybean, corn, wheat, clover, milo and alfalfa. They are using Austrian winter peas as a cover crop to fix nitrogen and provide

some grazing. Darrell hopes to market some of his corn through the pigs as organic pork sold direct to consumers. He works with Kansas Organic Producers to market his organic grains.

Darrell and Donna have made some significant changes that protect water quality on their farm and for their neighbors downstream. Their commitment to protecting the environment and building a good place to live and work puts their farm on the cutting edge of agriculture.

Parks Farm Characteristics

Farm Size: 160 acres cropland owned; 290 acres rented

Crops: Organic wheat, milo, corn, alfalfa, red and yellow clover, Austrian winter peas

Livestock: 50 sow farrow to finish hog operation

Equipment: JD 7000 planter; rotary hoe; buffalo row crop cultivator, AC field cultivator; 13' and 15' disks; 4 bottom plow; Gleaner K combine; 2 farm trucks; JD 4040, IH 966, IH 460 tractors.

Labor: Mostly self. Hires some part-time help.

Crop & Livestock Management: Finish hogs as part of an alfalfa/corn/hogs crop rotation. Sows are dry lotted or are on corn in winter, and rotationally grazed on alfalfa and clover in summer.

Insect & Disease Management: Crops- Uses crop rotation; plant early border for chinch bugs. Hog: Pasture system has reduced disease problems.

Weed Management: Timely cultivation and rotary hoeing. Strict crop rotation. Hand rogue in some difficult areas.

Soil Fertility: Plows down alfalfa, clovers, and Austrian peas. Try to target hog manure applications to soybean ground going to wheat. Periodic soil testing.

Crop Yields: 30-40 bu. wheat; 30 bu. soybeans, 85 bu. milo; 75 bu. corn

Water Quality: Placing the hogs on pasture and using rotational grazing limits the concentration of wastes and the need to haul it to fields. Has planted steep slopes to grass.

Marketing: Sells crops through Kansas Organic Producers Marketing Cooperative, or traditional channels; Markets hogs with five other producers, and is establishing a growing market of hogs directly to consumers.

Profit Indicators: Keeps production costs low; selling organic grains at price premiums results in significant profits.