Replacing coal with cattle

September 16 2009, By Bill Estep

As Larry Clay tends cattle at D&D Ranch, massive dump trucks growl nearby, hauling off rock stripped away to uncover coal. The Perry County ranch site was a hillside covered in trees before Pine Branch Coal Sales mined it, leaving behind flatter areas reclaimed as pasture land. These days, the ranch has 800 to 1,000 acres of pasture where cattle graze as mining continues on other areas of the sprawling property.

It surprises visitors to see that grass and cattle can grow well on a mined area, said Clay. "If you didn't know where it's at, you'd never think it was on top of a strip mine," said Clay, a Texas cowboy transplanted to the heart of coal country to run the cattle operation.

D&D is playing a notable role in efforts to use reclaimed surface-mine sites in Eastern Kentucky for agriculture, an effort that is growing but faces challenges.

The total amount of acreage listed as farmland, which includes woodland, in the top surface-mining counties in Eastern Kentucky went up nearly 17 percent from 2002 to 2007, according to agricultural statistics.

There are small herds of cattle on reclaimed mine sites throughout the region, as well as horses and goats. Small farmers cut hay from reclaimed mine sites, and a few people are using the sites for products such as Christmas trees and apples, according to University of Kentucky extension agents in the region.

Agents said they've seen an increase in the number of cattle being raised in Eastern Kentucky over the last decade on reclaimed mines.

"I would say as far as the expansion of land, strip-mined land is probably the best thing that we've got going," said Shad Baker, the extension agent in Letcher County. "It's some of the only land that we have that's manageable. I'm seeing more people graze it."

Still, agriculture remains relatively small business in the Eastern Kentucky coalfield.

Relatively little land is being managed to produce hay or provide pasture for domesticated animals, even though tens of thousands of acres have been reclaimed as hay or pasture land since the late 1970s, according to coal- and agricultural-production statistics.

For instance, in Pike County, the state's largest coal producer, landowners harvested only 700 acres of hay in 2008, and there were an estimated 600 cattle in the county in January, according to U.S. Department of Agriculture estimates.

In 2007, the year of the last national census of agriculture, the value of agricultural production topped $1 million in only one of the 10 Eastern Kentucky counties with the highest surface coal production over the prior decade.

Most were far below that figure, and the value of production had declined in some, according to coal and farming statistics.

Officials say there is potential for agricultural use of reclaimed land to increase in Eastern Kentucky, though that will depend in large part on the health of the cattle market.

"I think you're going to continue to see it expand unless something just goes haywire with the cattle industry," said Charles May, the UK agricultural extension agent in Perry County.

Baker said extension agents in the area have advocated using reclaimed land for agricultural purposes.

There can be challenges, however.

After a site is mined and reclaimed, there is little or no natural topsoil left in most cases, and the ground is made up largely of particles of rock. That means that it must be enriched in many cases to restore nutrients such as nitrogen.

Letcher County businessman Jack Looney said that in 1986, when he planted 100,000 Christmas trees on land that had been mined and reclaimed as pasture, they all died. He spread truckloads of sawdust mixed with treated sewage and planted soybeans on it, then plowed them under to build up the organic content of the soil.

These days, Christmas trees and grapes for his Highland Winery do well on reclaimed mine areas, Looney said.

Katie Dollarhide said she and her husband Tom, who also live in Letcher County, had little luck growing grapes, fruit trees and a garden on land that was mined in the early 1980s. "You're dealing with nothing but ground-up rocks," she said.

They've had better luck producing hay on the reclaimed land, making "good money" with it.

If not for a federal program that helps with the costs of fertilizer and fencing, they might quit producing hay, however, Dollarhide said.

Reclaimed pasture sites often don't hold water in the ground as well as unmined land, so forage on reclaimed sites can wither more quickly during dry weather or drought. Farmers have to be careful not to let cattle overgraze reclaimed pasture land.

There's less room for error in trying to balance maximum production with keeping a good ground cover, Clay said.

"You just gotta be careful with it because it's not native ground," he said.

It's clear, however, that reclaimed pasture land can produce enough food for livestock, said David C. Ditsch, who heads UK's agricultural research station in Breathitt County and has studied cattle production on reclaimed pasture sites.

Many people see the massive disturbance of active mines and think the land could never be made productive again, but that's not the case, Ditsch said.

In addition to studying cattle production on mined sites, UK researchers have studied using them to produce such "high-value" crops as blueberries, Ditsch said. "There's all kinds of possibilities."

D&D Ranch has been a research site, and has operated a heifer improvement program for a decade. Producers from around the region bring cattle to the Perry County ranch in the fall. The ranch took in about 200 in the fall of 2008.

The cows graze on reclaimed pasture through the winter and also get feed cut from unmined river bottom land. They are artificially bred in the spring to introduce good genetics.

The program identifies the best cows and which ones may have trouble

calving or other shortcomings, so owners can cull them.

The next fall, the pregnant cows go home or to a special sale, and the cycle starts again.

Owners pay a fee to have their cows in the heifer program, but Pine Branch pays some costs of the ranch, Clay said.

The program has helped improve cattle quality, said May, the Perry County extension agent, who helps with the program.

"It's been just a constant upgrade of the herds here in Eastern Kentucky," May said.

Clay came to Kentucky in 1989 to run a cattle operation for Don Duff, father of current Pine Branch owner Dave Duff, after working in Texas for Don Duff's brother, a doctor.

The hills and winding roads of Eastern Kentucky were quite a switch from the West Texas plains, where the main road in Clay's home county ran straight for 14 miles.

"It was a culture shock to me to come to this area," Clay said. But he enjoys living in Eastern Kentucky.

Clay, a past president of the Kentucky Cattlemen's Association, said he has seen growth in the number of cattle in the region since the late 1980s. But much of the land reclaimed as hay and pasture is not used to feed cattle, he said.

Some coal or land-holding companies don't want to lease sites for cattle or hay production; in other cases, mined sites have multiple owners and it's hard to get permission from all of them to use the site, Clay said.

"It would be nice to use a lot of it," he said. "You hate to see all that land sitting around here sitting idle."

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