

Feed Trials Suggest Cows May Join Soy Bandwagon

CARBONDALE, ILL.

The latest consumers to clamber on the soy diet bandwagon? Cows. In feed trials run over the last couple of summers, Rebecca L. Atkinson, a beef nutritionist from Southern Illinois University Carbondale, found that cows would readily chow down on soybean plants both growing in the ground and served up dry. What's more, the plants provided pretty much the same nutritional qualities as the more traditional alfalfa.

"This might be an alternative to extend the grazing season, and it could help growers through the summer slump when forage quality starts to decrease due to the lack of rainfall," Atkinson said.

These aren't your grandfather's soybeans, though your great-grandfather might recognize them. U.S. farmers grew the nation's first soybeans for forage, not grain. It wasn't until the 1940s, when World War II created a need for a domestic source of oil and meal, that soybeans became the Midwestern crop powerhouse they are today.

Forage soybeans, developed specifically as deer and livestock feed, can reach 6 feet in height and sport leaves as big as a fist. Those huge leaves pack a powerful protein punch, and because the plants retain the legume family ability to enrich soil, these beans still can fit into a standard crop rotation.

"We planted toward the end of June after harvesting wheat, so it was a double crop," Atkinson reported.

The forage beans produced a respectable crop of hay as well.

"When we harvested after the second week of September, we got about five and a half tons of dry matter per acre," Atkinson said.

Recently, Atkinson has been working with Eagle Seed Co. of Weiner, Ark., to test its

Round-up Ready forage soybean Big Fellow.

"When we looked at nutritional quality after 15 weeks of growth, Big Fellow had a little over 20 percent crude protein," Atkinson said.

It scored 46 percent in neutral detergent fiber and 34 percent in acid detergent fiber, suggesting good digestibility. This bore out in later tests that rated its dry matter digestibility at 61 percent.

"This is very good considering the large diameter of the stems," Atkinson said.

Because grazing doesn't carry the costs harvesting does, farmers who already plant corn or beans could save some money by planting three to four acres in forage soybeans and letting the cows have at it.

"All you'd have to do is make sure the fences are good, supply a bloat block to be safe and ensure that they have some water," Atkinson said. "They'll take care of the rest."

Still, the numbers got even better when Atkinson turned harvested plants into silage. Crude protein rose to 26 percent, while the NDF and ADF percentages came to 32 percent and 36 percent. Overall, it scored 194 in relative feed value.

"This tells me that it compares well to alfalfa silage in terms of nutrition," Atkinson said.

In this year's work, Atkinson hopes to answer some questions about the hay-making process, which, she admits, doesn't always run smoothly.

"We have a few kinks to work out," she said. "We need to find out, for instance, how long we let it dry and how much to condition the stems."

Other areas she hopes to study include the effects on dairy cows of the plant estrogens in soybeans and the amount of flesh beef cattle produce when grazing on bean plants in addition to grass. △



Link Directly To: **SYNGENTA**



Link Directly To: **MONSANTO**