Plastic bags offer storage alternative

UNIVERSITY PARK - Huge high-strength plastic bags could make conventional silos obsolete for some farmers.

Using large "aggie baggies" to store grass and alfalfa silage for animal feed is an energy-, timeand cost-saving method currently under study at Penn State.

Agricultural engineers at Penn State say that storing silage in plastic bags could also result in a higher quality livestock feed than

hay.

They recommend the "aggie-baggie" method especially for small or part-time farmers.

Penn State has been experimenting with the technique for two years, and the bags already can be spotted throughout Pennsylvania's farming regions.

"This is an energy-conserving harvesting alternative," says William Kjelgaard, associate professor of agricultural

engineering, "It's not practical for baggies for small farming large farms, but it can be adapted for small or part-time livestock farmers or as an emergency feed recovery for large farms.'

With the bags, farmers create an oxygen-free environment for storing silage, explains James W. Garthe, Penn State extension agricultural engineer.

You can store feed indefinitely if the bag is totally airtight," says Mr. Garthe. "The beauty of the

operations is that you can bale the green crop quicker, sooner, and avoid the high capital costs of silos.

The bags help farmers conserve energy by eliminating the machine power required to fill and unload the silo, he says.

Also, the farmers use less energy because they need to operate only one baler for the bag method, as opposed to several pieces of harvesting techniques, Garthe adds.

The average plastic bag used for storing silage is about four to five feet in diameter, 10 to 12 feet in length, and has a maximum capacity for holding one ton of hay

The method was first developed in Manitoba, Canada, Professor Kjelgaard says. Penn State's research includes determining how much time it takes to adequately ferment the silage for feeding, as well as treating it with chemicals to enhance the feed

Average storage time before the silage can be used as feed ranges from one to six months, says Professor Kjelgaard. "Often, the sooner the material is fed the better," he states.

Because the bags do not provide a 100-percent guard against oxygen penetration, he states, Penn State researchers decided to inject a chemical treatment in the bale before it is bagged. They came up with an ammonia application method which has been demonstrated throughout Pennsylvania.

Using a probe device, farmers apply ammonia directly to the (Turn to Page D34)

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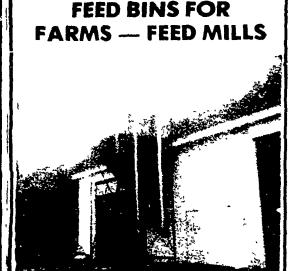
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