

Corn Talk News RESEARCH UPDATE



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On many dairy farms in Pennsylvania, corn and alfalfa are

grown on rotation on at least some of the acres on the farm. In practice, rotations often vary in length from three to more than five years in each crop. A new Penn State study I am

conducting in cooperation with an ag economist, Dr. Jay Harper and an entomologist, Dr. Art Hower, will focus determining the best corn alfalfa rotation on dairy farms in the state.

The initial phase of this project will be to evaluate the rotations using yield information from ongoing crop rotation studies at Rockspring and recommended practices based on the Agronomy Guide. We have found that shorter, 3-year rotations offer many advantages such as higher corn yields, higher hay yields, reduced need for soil insecticides on corn, reduced potash needs on alfalfa, and more potential to take

advantage of no-till corn.

Compared to a four-year rotation, for example, 100 fewer pounds of insecticide and 4,600 fewer pounds of nitrogen fertilizer would be needed on a 300-acre farm per year because of a greater percentage of the corn would follow alfalfa, where N fertilizer recommendations are low and soil insecticides are not needed. Likewise, with no fourth year alfalfa fields, potash requirements would be reduced by 4,400 pounds on the farm since these fields frequently have high requirements for K. These fields may also have slightly lower yields than second or third year fields.

The downside of the three-year rotation is that hay fields need to be reseeded more frequently and some nice three-year-old alfalfa fields need to get killed to rotate to corn.

We are in the process of determining the best way to estimate the whole farm profitability of these various rotations to find the conditions that the shorter rotations make the most sense.

The next phase of this project has been to work with two working dairy farms and evaluate the potential of various rotations on their system. Adding real-world considerations to the project made it more complex. For example, both farms we selected indicated they liked the three- to four-year rotations, but they also like to harvest a first cutting of hay before they rotate a hay field to corn. Based

on this input, we added another rotation to our project for consideration.

Some of our preliminary profitability estimates indicate that indeed this double crop hay/corn rotation might be the most profitable alternative, provided that the hay can be harvested early, and the corn yields at least 75 percent of a normal crop. To do this, however, requires good soils, adequate labor, good management, and a long season. Otherwise the double crop rotation can be costly.

Based on this and other conversations with the producers, we realized we need some actual hay and corn yield data to carefully estimate the economics on these rotations under production situations. This year we have been measuring yields and monitoring pest problems such as western corn rootworm and clover root curculio, an alfalfa pest that causes stand decline in third and fourth year alfalfa.

Our initial findings seem to indicate that short rotations probably do have a place on dairy farms in Pennsylvania, but we need to identify the conditions where they fit best. These conditions will include the pest levels on the farm, the amount of manure available, the yields of corn and alfalfa during each year, and the feed needs of the farms. Commodity prices and conservation requirements will also have some effect. We also need better software to compare complex whole farm economics of the various rotations.

When It Comes To Corn, Some Risk-Reducing Instruments Are Risky

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In these times of the highest corn prices in years — if not ever — corn producers and country elevators should be prosperous and happy. Right? Wrong.

It seems that a number of grain merchandisers, many in the upper Midwest and a few in Ohio and other areas, have been offering a "flexible" hedging contract, described as a Hedge-To-Arrive (HTA) contract, as a marketing tool to attract farmers.

With the strong upward move in corn prices, the contracts have gone sour. A number of farmers have threatened not to honor the contracts, many elevators have lost big money, and there is potential for some of the elevators to go bankrupt, perhaps with significant losses to their lenders as well.

Elevators commonly con-

tract to buy corn from their farmer customers specifying an amount, price, and delivery date. A common practice involves the delivery of corn to the elevator at harvest, with only the timing of price determination specified in the contract. The elevator hedges its position by selling futures contracts.

When the farmer delivers (or elects to set price of the corn previously delivered), the elevator buys back the futures contract, thereby completing the hedge. The futures position protects the elevator against price declines after the forward contract has been made, and losses resulting from price declines in the cash market are offset by gains from the futures position.

Under the HTA contract, however, the farmer can deliver the corn anytime. That is, delivery date is not specified. Apparently many people, including many farmers and some contractors, even interpreted the contract to mean they could decide to forego delivery of old crop corn in, for instance, June and make delivery instead of '96 crop corn in December.

So what happened? As the corn price went up, more and more farmers forward con-

tracted to get the increasingly favorable cash price. The elevators coughed up more and more margin money as their short positions became further and further below market prices.

Farmers saw the cash price go higher and higher. So rather than deliver corn with cash contracts for \$3.50 in May, for example, why not sell the corn at \$4.50, and then make good on the delivery (i.e., the HTA contract) in December after the 1996 crop is in?

More importantly, if the elevator hedges using current crop, July for example, and the farmer doesn't deliver the corn until December, the spread between July and December futures (old versus new crop) tends to widen substantially in a rapidly rising market. The elevator might sell a July futures contract and then have to "roll it over" to a December contract. The catch is that the July contract may have risen \$1.50 while the December contract only rose \$.75. In rolling it over the elevator loses \$.75 per bushel.

Apparently, no one ever envisioned 1996 market conditions when the HTA marketing strategy was developed.

Pa. Corn Production Higher

HARRISBURG—Based on Sept. 1 conditions, Pennsylvania's 1996 production of corn for grain is expected to be higher than last year, according to the Pennsylvania Agricultural Statistics Service.

Yield of corn for grain is expected to be a record 123 bushels, up 27 bushels from last year, up three bushels from the August 1, 1996 forecast, and three bushels more than the previous record yield of 1994.

Acreage for harvest is estimated at 1,050,000. Production is expected to be 129.2 million bushels, 37 percent more than last year.

At the United States' level, corn for grain production is forecast at 8.80 billion bushels, 19 percent above the 1995 crop. Acreage for harvest is expected to be 73.3 million acres. The yield is forecast at 120.2 bushels per acre, up 1.5 bushels from last month and up 6.7 bushels from last year.

AGWAY SEED CORN YIELDS TO NO ONE.

**HEAVIEST
TEST
WEIGHT
AG 566**

- heaviest test weight in corn demo plots—Lebanon, PA: 59 lbs, Oley, PA: 58 lbs (1995)
- 140.8 bu/acre (2nd place), Pleasant Gap, PA, corn demo plot (1995)

**1ST PLACE
GRAIN &
SILAGE
YIELDER
AG 657**

- 34.4 tons/acre (1st place), Linwood, NY, silage trials (1995)
- 190.9 bu/acre (1st place), Phelps, NY, corn yield test plot (1995)
- fast dry down

**TOP
YIELDER
AG 767**

- 154.0 bu/acre (1st place), Hershey, PA, corn demo plot (1995)
- 172.7 bu/acre (2nd place), Johnsonville Reading Bone corn test plot—topped Pioneer 3295 by 14+ bu/acre (1995)

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