

# Growing Soybeans More Than Magical For Reigel Brothers

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The Reigels credit their grandfather for "giving them their start" in farming, with advice and free labor.

After graduation from Annville Cleona High School where he was president of the FFA, Jeff began by farming his grandfather's place which was about

30 acres. Jeff farmed with his father and then went out on his own the next year. He began growing soybeans in 1979.

Steve, who was the vice president of his FFA club, joined his brother in farming a few years later.

The two brothers have expanded their farming partner-

ship to about 200 acres. They own 43 acres in partnership and rent 167 acres on which they plant 80 acres of soybeans, 60 acres of corn, and 40 acres of wheat. They also have about 60 acres in pasture that accommodates their purebred herd of Herefords, now numbering 17 cows and 23 calves. Rounding out the Reigel farm enterprises is a 34,000-bird broiler operation.

The soybeans were grown for a cash crop, not for livestock feed as many dairymen are now doing. The crop will be sold this summer. They are in storage "for hitting August highs," said Jeff.

Expansion in their farming operation is definitely on the agenda for the Reigel brothers. "We would grow more of everything if we had the ground," Jeff said. "We're looking for the opportunity to expand, but we're competing with developers just like everybody else."

Not only do they work the soil in farming, but the Reigels

spend a lot of time in the dirt with the family's excavating business, P and N Excavating. Their older brother Dwilan is company president and Steve is vice president. Their youngest brother Kent is in the trucking business.

When they are not too busy farming and excavating, hunting is a pastime of choice for both brothers. Jeff and his wife, in fact, just came back from a honeymoon trip to South Africa where they enjoyed a Safari. Beside hunting, Steve also takes snowmobiling trips during the winter months.

Soybeans have carried the "magic" label for years, but there is no crop that could be called more practical today than the magic beans. The mainstay market for soybeans has been cooking oils and livestock feed.

According to the ASA, tofu production alone utilizes 22 million bushels of specialty soybean production. They also report that soy ink is being used by one third of the nation's newspapers.

That includes *Lancaster Farming*.

Accounting for the tremendous growth in soybean acreage and its future importance, the ASA lists other uses for soybeans such as soy-blended biodiesel, recyclable soy-based containers, building products, and a host of other uses being tested.

The Pennsylvania Soybean Yield Contest is sponsored by the Pennsylvania Soybean Association with soybean checkoff funds and conducted by John Yocum, Penn State extension agronomist and manager of the Southeast Regional Ag Research Farm in Landisville.

Yocum said that the growth of soybean acreage in Pennsylvania did not take away from corn. Farmers planted more soybeans instead of wheat and barley, he noted.

For more information about participating in the soybean contest, contact Yocum at P.O. Box 308, Landisville, PA 17538, (717) 653-4728.

## Geographic Information

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### Use In Agriculture

GIS may also be used as a tool to help determine areas with highest potential for erosion. Diane Waters, a bioscholar at Virginia Tech, was part of a team which grouped together to complete the "Kentland Farm Project."

Kentland Farm is a collection of fields owned by the university and used for research. Containing alfalfa, corn, and various pastures, the fields are also host to small wildlife areas. The goals of the project were to predict erosion rates and see what areas are susceptible to erosion. Further research would identify if there was any dominating factor to erosion.

Pulling soil, field delineation, and contour line data from Website information, they calculated soil erosion by plugging in their numbers into an accepted formula.

For instance, besides Website information, they performed math calculations, got crop information from the farm manager, and measured the slope of the area.

Multiplying all factors together, the group calculated values for soil loss for each field. The corn fields were the highest area of erosion, not surprising since they are a row crop, said Waters.

"We cautiously concluded that the crop factor is the best predictor of the highest erosion," she said. Researchers measured soil loss in tons per acre per year based on slope, grass cover, support, type of soil, and rainfall amount.

### A Useful Tool

For Environmental Management Mapmaking applications include mapping and classifying the Chesapeake Bay watershed to provide solutions to government or Bay-related organizations working on restoration.

Researchers at the geography department at the University of Maryland, for example, mapped the impervious surfaces in the Bay watershed area to measure urbanization, one step in calculating the effect of development on the Bay.

Since increased runoff, erosion, flooding and decreased water quality are hallmarks of urbanization, mapping impervious surfaces is a useful tool.

In addition Towson University Center of GIS has posted, at Chesapeakebayfromsapce.net, a visual reminder or forest fragmentation, the degree of urban sprawl, and the large-scale land clearance on the Delmarva Peninsula.

Also in Maryland GIS provides an automated review process for agriculture preservation candidate's properties. GIS allows analysis of soil compatibility, land cover, and the conformity to preservation guidelines.

GIS is also used to protect bogs by identifying them quickly for construction and zoning decisions. Because of the system,



Diane Waters

zoning maps are available to the public. The tool is also used for officials to recalculate watershed boundaries with GIS information.

The Chesapeake Bay was the focus of many GIS projects. River basins or urban sprawl could be mapped with GIS systems. Additionally stormwater runoff programs can be developed.

### Mapping Green Cover

Another software extension of GIS is to map "green cover."

"Cities nationwide are losing their green cover," said Mike Lehman, direct of sales, CITYgreen software.

Lehman's organization, "American Forests," is a non-profit organization based in Washington, D.C. By regionally analyzing tree cover, the organization can help cities determine, in dollars, what tree cover is worth.

The organization provides cities with statistical data on storm water runoff, energy benefits, and air pollution statistics with GIS used as a tool for analysis.

"It's a decision management tool," said Lehman. "Policymakers can then budget for tree conservation or replanting." Carbon absorption and energy savings are just a few of the benefits of trees, said Lehman.

Stephanie Orndorff, representative of Advanced Technology Solutions, Inc., presented her work in identifying trends in human population growth in proximity to ecologically significant areas.

Using GIS for the commonwealth of Pennsylvania, Orndorff was able to plot census data and overlay the map with a map of species richness, where the greatest diversity of kinds of animals reside. Pike, Monroe, Carbon, York, Montgomery, and Berks counties placed highest in species richness.

Orndorff found, however, by overlaying the population map with the species richness map, that these areas were also rich in species diversity. Applications of the project, said Orndorff, was to identify areas of low population growth so the land could be acquired easily and cheaply for preservation.

## Agribusiness Takes Lead In Updating Water Quality Program

HARRISBURG (Dauphin Co.) — Walter N. Peechatka, executive vice president of PennAg Industries Association, recently told the House Agriculture and Rural Affairs Committee that his 600 members recommend and support enhancement of the state's Nutrient Management Act (Act 6 of 1993) and its accompanying regulations.

"Pennsylvania was first in the nation when it adopted Act 6, which was applauded by the agricultural and environmental communities for its foresight in regulating manure application to crops and providing strict criteria for storage areas. Other states are just beginning to catch up," Peechatka testified. "Now, near-

ly a decade later, we are ready to raise the bar again with the primary goal of protecting water quality."

"How we proceed with this program will help shape the future of agriculture in Pennsylvania because it affects the keystone advanced farms and the thousands of farms which are supported by them," Peechatka said.

"Successful farms today often are more concentrated, are more diverse, use more advanced technology and must produce more per acre to compete — what we call advanced farming. But this trend does not have to come at the expense of our environment."

Act 6 and its regulations have

numerous requirements based on farm livestock per acre (animal equivalency units). These include comprehensive nutrient management plans prepared by certified specialists and applicable clean stream, federal water quality and storm water management permits. In addition, there are public participation, erosion and sediment control plans, contingency plans, and manure storage facility design, location, construction and certification mandates.

Since 1992, higher yield farms have been required to emit "zero" discharge — none at all — under the federal Clean Water Act.

## Dairy Farmers Learn

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good right now, but unless dairy farmers 'lock in' these prices through their cooperative or the futures market, they're subject to marketplace whims."

Funded by the USDA and delivered by Penn State Cooperative Extension agents in 25 counties, DOPP will allow farmers to buy "put options" on the sale of their milk against a future date.

Purchasing a put option for a future month creates a guaranteed minimum "floor price" that a farmer will receive for a specified amount of milk at the time the option is due to expire, Bailey said.

For example, a farmer during the month of May who is concerned about the possibility of low milk prices in September could buy a put option contract that sets a floor price above what he expects the market price to be in September.

When September comes, if the market price of milk is indeed lower than the purchased floor price, the farmer will receive a check from his broker that makes up the difference between the market price he received from his milk buyer and the floor price set by his put option contract.

But what if the market price of milk when September comes is higher than the put option floor price?

That's when having a put

option can seem like a win-win situation, Bailey said. Even if the market price of milk goes higher than the put option floor price, the farmer will still receive the higher market price for his milk.

"If the farmer is always guaranteed the higher price between his put option and the market price, what is the catch?" Bailey asked the group of farmers.

"The catch is that put options come with a price," Bailey said. The farmer must risk the premium he pays for the option.

The price of put options vary according to the futures market and the floor price sought, Bailey said. Locking in a higher floor price requires a larger premium.

One feature of DOPP is that the USDA will pay 80 percent of the cost for each put option purchased by a dairy farmer enrolled in the program. The USDA will also pay \$30 of the broker fees involved in each transaction.

Bailey said that this government cost-sharing makes the program a lot more affordable at this time while giving farmers an opportunity to learn how to use the futures market.

"Right now, options are expensive," he said. "Five years from now, they might be less so."

Ron Jones of the USDA's Risk Management Agency pointed out that the success of using put options will depend on

current and future milk markets.

"It's not always going to be beneficial (to use put options)," he said.

According to Bailey, few farmers participated in the pilot program conducted in Tioga and Lebanon counties one year ago.

"Farmers could have locked in prices for the fall in June. Then the markets deteriorated and the Class III price fell to a 20-year low. Producers could have protected a lot of their income," he said.

Sam King, who milks 30 cows on 60 acres south of Georgetown, said that the program "sounds interesting" and that he would consider enrolling in it.

King said he was attending the four-hour training session to fulfill a requirement of the USDA's Farm Service Agency loan program.

Chester County extension agent and Southeast Region DOPP coordinator Tim Fritz said that an unofficial post-training session will be offered later in the year for farmers who want to learn more. Those who missed the official training session can also start to learn about DOPP in preparation for the 2002 program.

The training session conducted on May 3 was timely, Fritz said, given the relatively high price of milk and the uncertainty of the market in future months.