

## Self-Proclaimed Steward's Of The Soil Practice Low-Input Farming

BY LISA RISSER

Editor's note: This is the second in a two-part series on low-input farming. The first appeared in the June 4 issue.

LITITZ (Lancaster) — Roman and Lucy Stoltzfoos and Claude Hess are among a fast-growing number of farmers who consider themselves stewards of their land. They believe in carefully managing the soil using few inputs rather than heaping on commercial fertilizers and chemicals.

Hess and the Stoltzfooses have turned to low-input farming as a way to nurture the land while earning a living from it. Although each is at a different stage in implementing low-input methods, both profess to be in the learning stages. "I'm excited (about low-input farming), but I want to go slow enough so I don't make big mistakes," said Hess. "I'm in kindergarten, but I'm a believer."

The Stoltzfooses and their four children farm 165 acres of land situated southeast of Lancaster in Kinzer. They currently are renting this land and an additional 50 acres of pasture from his father to raise dairy cows and turkeys.

When they began farming in 1983, they followed conventional thinking. Corn fields received a light application of manure, which was disced in, followed by an application of Sutan or Eradacane or both. This was worked in two times before planting, later the fields were side-dressed with liquid nitrogen.

Alfalfa fields received a split application of 600 pounds of potash, limed off and on depending on soil tests, and sprayed for weeds and insecticides.

### Chemicals were costly

During their first year of farming, the Stoltzfooses spent more than \$13,000 on fertilizer and chemical costs. The next year they reduced that amount by only \$1,000. "That first year we farmed we spent a lot more than we wanted to," related Lucy. "One reason we got into low input was because we needed to keep cutting costs."

The Stoltzfoos land is completely off chemicals now. "Chemicals do remedy the situation, but we don't feel it's worth it," declared Stoltzfoos. "We're interested in doing things the healthy way. We'd like to provide a product that we don't have to be answering to anyone on its quality."

Last year the Stoltzfooses paid out slightly more than \$64 in chemical costs, but that was to do some rescue spraying on eight acres, which didn't receive proper cultivation because Roman was sick during that time.

The Stoltzfooses believe that low-input farming has helped their herd's health. "We saw a substantial difference on the health of the animals when we began feeding the crops (that had less or no chemicals applied to their soil)," Stoltzfoos said. Lucy agreed, adding "Cows freshened more easily, we had less problems with twisted stomachs, and there wasn't as much mastitis."

The Stoltzfooses aren't sure if the difference in the crops is the sole factor in their herd's improved health, but they feel the coincidence is too strong to discount.

### Herbicide amount halved

Stoltzfoos began reducing his inputs before 1986, but that is the year he really put a dent in the amount of chemicals he applied. He had been combatting a Johnson grass problem, and the pesticides



Claude Hess farms more than 700 acres of land in southeastern Pennsylvania. Besides corn, he grows wheat, alfalfa, and, soybeans.

he applied didn't seem to do much after the first application. So in '86 he asked his custom sprayer how much chemical would be needed for reasonable weed control, if they ignored the Johnson grass. He also decided to cut fertilizer applications other than a layer of manure.

"I took less than half what I was told would work," explained Stoltzfoos. "I didn't feel my management was up to going completely off chemicals at once. Until we learned how to cultivate and get the ground healthier, we felt we needed some chemical."

Stoltzfoos estimated that '86 was a fairly good year for him in terms of yields. This encouraged him to cut out pesticide and commercial fertilizer usage entirely in 1987. "The yields we had in '87 without weed control or fertilizer, without nitrogen, without insecticides, was as good as we've ever had," he stated. In addition, "since the reduction of chemicals, the soil is looser and a lot more pleasant to work with."

Last year Stoltzfoos prepared his corn fields by applying liquid manure treated with beneficial bacteria, which was disced in immediately, followed by an application of liquid bacteria, P3K, mixed in water. Next he disced twice and planted using Pioneer 3358 corn seed. Five days after planting he ran a drag harrow to control weeds. Further weed control came from cultivating the fields twice.

At harvest time, which Stoltzfoos has done by a custom harvester, Stoltzfoos had a Pioneer weigh wagon come out and measure his yields. Of the fields measured, the range was 113 to 153 bushels per acre.

### Improving soil conditions

In addition to cutting chemical and commercial fertilizer usage, the Stoltzfooses are attempting to improve the condition of their soil, a factor crucial to the success of low-input farming. The farm has a manure pit capable of holding a year's worth of manure from 65 to



Roman Stoltzfoos tests the sugar content of his alfalfa using a refractometer. The higher the sugar content, usually the higher the crop is in trace minerals. Manufacturers of the device contend that a high sugar content in crops keeps away insects, which don't like the taste.

75 cows. "At first we spread some in the spring and some in the fall, but now everything is spread in the fall because of (the) compaction (that occurs) in the spring," said Stoltzfoos. "We also feel that manure being applied in fall gives the bacteria time to digest manure."

Stoltzfoos is doing some experimenting now with fertilizers and natural additives such as calcium to see what happens to the soil and to yields.

The Stoltzfooses use a high-calcium lime when soil tests indicate the need for either, which doesn't happen often. "Other farmers use high-magnesium lime, which we wouldn't consider using because we have a magnesium-lime soil. We feel calcium is the

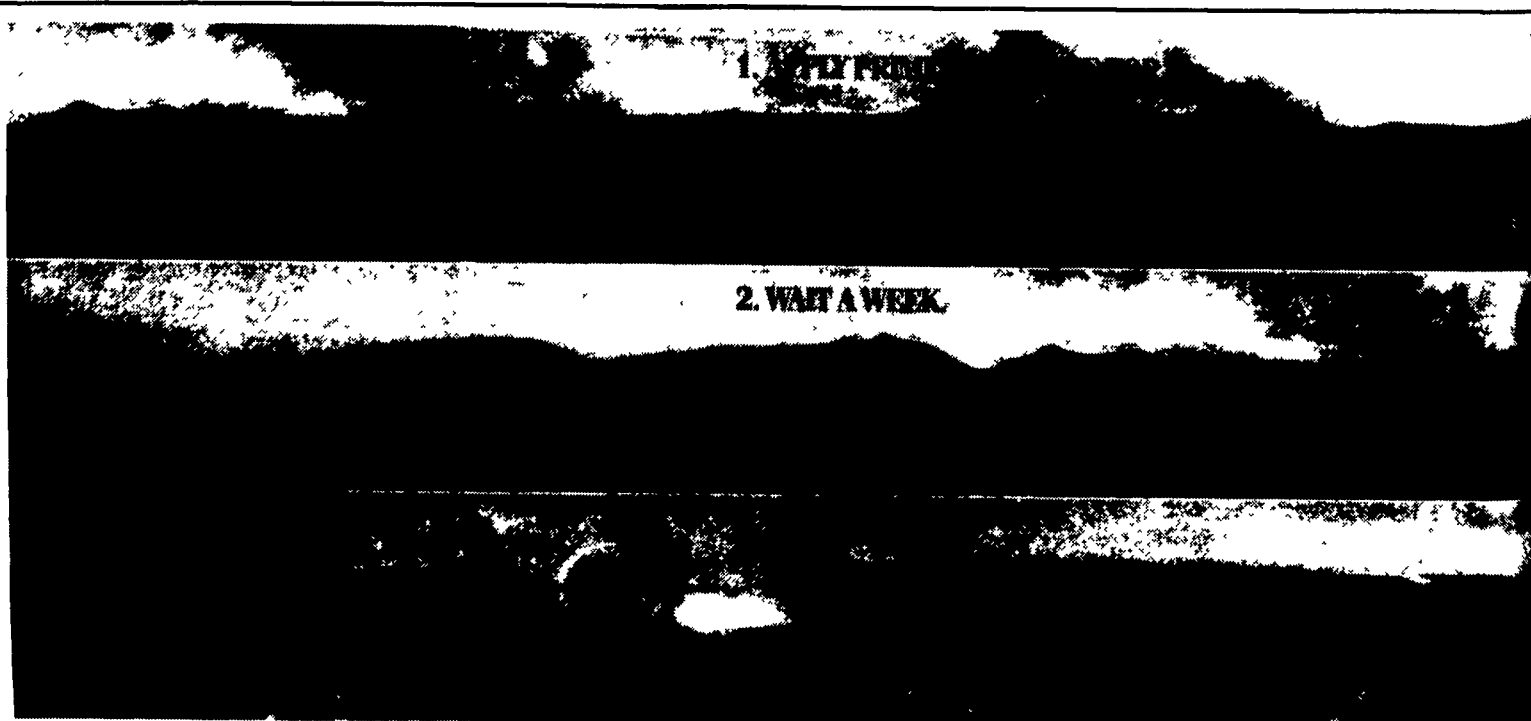
most important element in the soil. If the calcium is high, you can get away with other problems."

Marginal lands are producing increased yields for the Stoltzfooses as pasture rather than cropland. Stoltzfoos fenced off some marginal cropland and now rotates his herd of 75 cows in different pastures, which allows grasses to stay healthy and not be overgrazed.

Crops also are rotated on the Stoltzfoos farm. "My goal is to not keep corn in a field more than two years," he said. "I do some now but that's where I want to be eventually."

Currently he has 75 acres in corn, 60 in hay, 15 in wheat, and 15

(Turn to Page A21)



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