

One Farmer's Almanac



One of a series of regular visits to Laurel Ridge Farms south of Cedar Falls to follow the efforts of one area farmer, John Miller.

Farming for the future

With careful adaptation of the 'sustainable agriculture' system, John Miller believes a farm can go on indefinitely

By BILL SLAKEY
Courier Staff Writer

CEDAR FALLS — When it comes to advocating "sustainable agriculture," John Miller admits that he gets on his soapbox now and then.

But he wants it made clear he's no radical in a seed-corn cap.

Put simply, sustainable agriculture means a farming system that maintains a farm's productivity and usefulness indefinitely, Miller said.

"Most farmers practice some form of sustainable agriculture, but sometimes we don't recognize what we're doing," Miller said. "We think sustainable agriculture is something way out there that we're not familiar with, and yet most farmers are doing a number of these things."

With crops maturing in the fields, preparations for harvest on schedule and a vacation coming up, Miller took a break from the daily jobs at Laurel Ridge Farms this month to talk about the overriding idea that guides him.

Some farmers may shy away from the "sustainable" name, thinking it means a return to agriculture without chemicals, he said. At the same time many critics of the concept use some of its ideas on their farms.

Sustainable farming takes in a wide variety of practices, Miller said. For example, raising hogs and spreading manure on fields, using synthetic fertilizers and pesticides as efficiently as possible and leaving some land as habitat for wildlife are all a part of his efforts at sustainability.

A top priority is recognizing the resources you have and conserving them, Miller said. For years, many Iowa farmers allowed their precious topsoil to be swept away by water and wind without seeming to notice how important it was.

"With 50 percent of Iowa's topsoil gone, it's pretty obvious we haven't been sustainable," he said.

Changing till methods

Today that's changing, with the increasing popularity of "no-till" and "mulch-till" planting — in which farmers leave residue of the previous year's crop on the field to help hold down the soil. Federal regulations also require farmers with highly erodible ground to use soil conservation practices like grass waterways, terraces or minimum tillage.

At Laurel Ridge, terraces running across many slopes slow the flow of rain water. Minimum tilling has been the preferred practice for years. But new ideas like conservation tillage can be slow to take hold, Miller said.

"We were running tillage plots near Hudson in '71 and '72 doing side-by-side com-

parisons and 20 years later we're talking about the same things," he said. "How long does it take an idea to be adopted? In this case, it took 20 years."

A second principle of sustainable farming is using the resources you have to farm as efficiently as possible, Miller said.

At Laurel Ridge, that means farming according to the particular soil types in each field. No matter how much fertilizer is applied, some soils on the farm will yield less than others; so less fertilizer is applied to the poorer quality soils, Miller said.

He also does detailed tests of the nutrients present in his soil. The tests keep him from overfertilizing, sending contaminants into the local groundwater or spending money on fertilizer he doesn't need.

Reducing outside purchases

On herbicides and insecticides, Miller relies on a crop scout to tell him what pests are present so he can target those pests specifically and use as little of a chemical as possible.

That leads to another key to sustainable agriculture: reducing expensive purchases from off the farm. Too much reliance on outside resources cuts into the bottom line for many farmers, Miller said.

"Really where we got in so much trouble was purchasing so doggone much stuff — and the chemical companies loved it," he said.

Rotating crops can eliminate some pesticide treatments, Miller said, noting that some diseases specific to corn will not survive in a field planted with soybeans for a year and vice versa.

Soybeans also add nitrogen — a crucial nutrient for corn — to the soil. Miller also relies on manure from the hog operation at Laurel Ridge to supply nutrients to his fields. Sampling the manure helps him determine if additional fertilizer is needed.

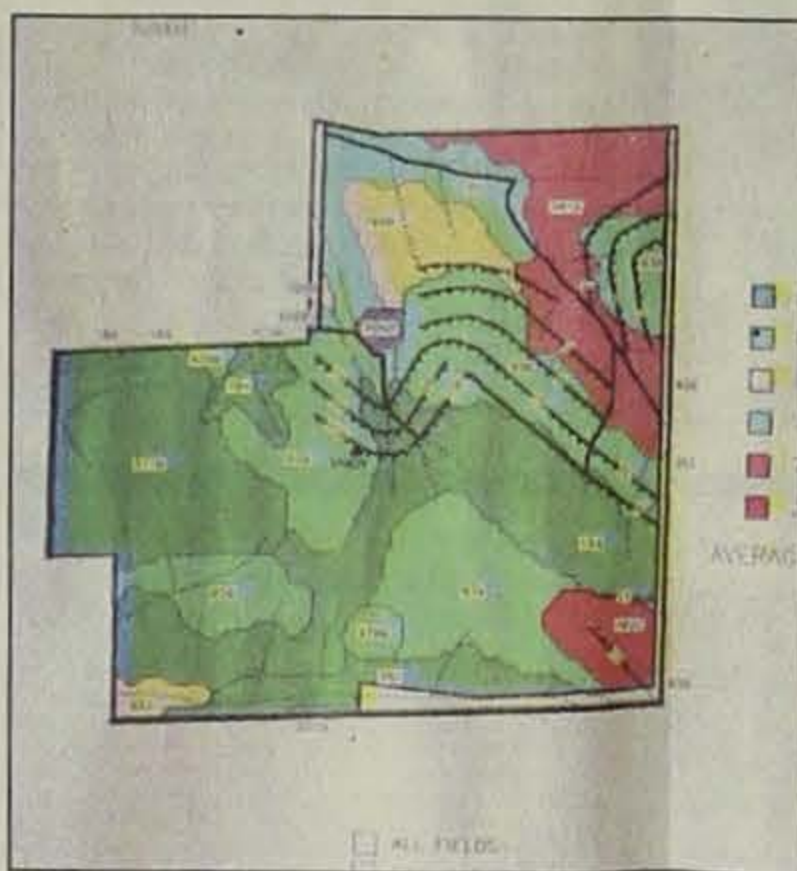
The hog operation, which is operated jointly with his neighbor, Larry Green, fulfills another principle of sustainable agriculture: diversifying the sources of income on a farm.

Diversity

In years when corn and soybean prices drop, hog prices may help carry the operation, Miller said, comparing the farm to a



Terraces running across some of the steeper slopes and drainages help control soil erosion and the flow of water in fields at Laurel Ridge Farms. The Miller farmstead is at top center.



Types of soils and how much grain they can produce varies widely, even within one field. Miller said the yield potentials of soils on his farm range from 80-114 bushels per acre up to 160-170 bushels per acre. On this soil map, red indicates the areas with poorer soils and green indicates the better soils.

plane with multiple engines.

"Would you rather fly in a plane that has four engines or a plane with one big engine and lose an engine?" he said, noting that his wife Mary's income as a piano teacher is another engine driving the farm.

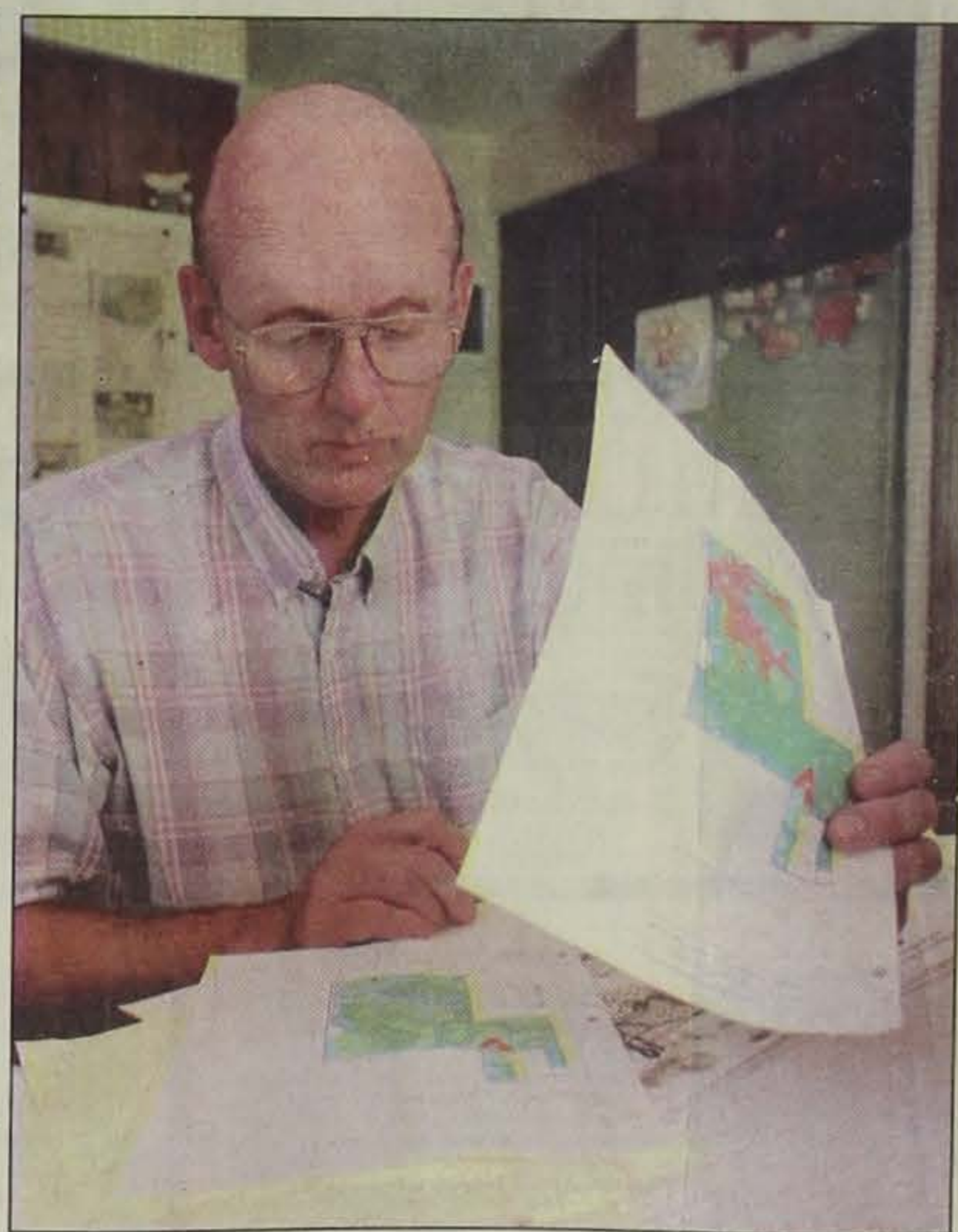
In fact, economics are also a crucial consideration of sustainable agriculture — you might call it sustaining the farmer. Efficient management of resources helps keep chemicals out of the environment, but it also means less money spent. Using hog manure for fertilizer means less use of synthetics. Although it does have a cost, it's also cheaper.

Creating a whole-farm management system

Financial difficulties can be a major impetus for managing a farm for short-term profit, rather than long-term sustainability, Miller said.

With the majority of Iowa farmers experiencing some financial difficulties, the bottom line always plays a major role.

"You get your back to the wall, sometimes you make good decisions," Miller said.



Detailed soil maps help Miller farm according to the capability of the ground. Soils with less yield potential get only enough fertilizer to support that yield, minimizing waste and the possibility of pollution.

"But you make bad ones, too, and you sometimes feel you have no choice."

Government policy also plays a major role in farmers' ability to farm sustainably, he said. For example, the U.S. Department of Agriculture had a zero "set aside" this year. Some farmers enroll soil conserving structures like filter strips and field borders in the program as a way to get some return on those acres.

"Within hours of that announcement, grassed headlands and filter strips across the sides of hills were going under the plow," Miller said.

The key to sustainable agriculture is to incorporate all these concerns into a whole-farm management system that works effi-

ciently, economically and also sustains the land, Miller said.

However, sustaining the land also includes attention to things outside the bottom line — wildlife that also lives on the farm, for example.

Miller points to conservationist Aldo Leopold's land ethic, which "enlarges the boundaries of the community to include soils, waters, plants and animals," as a basic tenet of sustainable agriculture.

"We tend to say the only thing that's important is corn and beans and to hell with everything else," he said. "I leave some dead trees out here for woodpeckers. That may be tokenism, but everything in the community is important."



In an effort to reduce expensive off-farm purchases — synthetic fertilizer, for example — John Miller recognizes the value of on-farm resources like the hog manure being pumped from a confinement building here. Miller also tests the manure for nutrient value so he knows what he's putting on his fields.