

Farmers Learn How To Adapt

Alliance Discusses How To Adjust To Climate Change

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HARRISONBURG — On the projector screen behind Mike Phillips, two dark horses pull a plow steadied by a young man in a faded picture. The man is his father.

Phillips, mentioning his father and other mentors of his to those gathered for the latest Climate Action Alliance of the Valley meeting Tuesday at Massanutten Regional Library, explained his philosophy: “I just want to leave the land better than I found it,” he said.

To do so, Phillips, a beef cattle farmer and local soil technician with Natural Resources Conservation Service, is incorporating a technique that encourages a variety of plants to grow much as they did when Europeans arrived.

He described natural prairies, which have been replaced by farms on much of the continent, as ecosystems with many plants and animals instead of acres with a single crop.

In the pastures at his farm outside Harrisonburg, he has 13 plants growing in the field, including radishes, clover and grasses.

“When this dies,” he said pointing to a green stalk, “then cattle are going to graze, but this, here,” pointing to the tuber connected to it, “is going to rot.”

The rotting plant, with worms already growing in it, feeds the soil, he said, while the top feeds the cow, which feeds the soil and also man.

Growing the plants together, including dandelions to attract bees, he says creates an ecology that gives the soil new life, in turn raising healthier plants and cattle, which sell for a higher price.

“[In a choir,] you got tenors, you got sopranos, but everybody’s harmony when you put it together,” he said.

Phillips’ mentality of leaving the land better than he found it was reflected throughout the evening at the meeting, including by Maria Papadakis, a James Madison University professor who has specialties in environmental sustainability and energy economics.

Papadakis spoke about how climate change could affect farmers by breaking it down to the basics.

“We’re talking about changes in temperatures and we’re talking about changes in precipitation,” she said. “That’s it.”

Climate change, she said could affect the length of drought and heavy rain periods and the time of first and last thaws, which will cause farmers to adapt their planting schedules.

“Many of the farmers I work with say, ‘We were the original environmentalists,’” she said.

Farmers are adapting, Papadakis said, through such methods as harnessing methane gas from manure lagoons.

“It’s closing a loop in the waste system,” she said.

Still, some adaptations are too expensive compared to their cost-savings, a problem Papadakis said is especially true for many small Valley farms.

Depending on the ventilation system, a four-barn poultry farm may use about 150,000 kilowatt hours or more per year, costing about \$15,000, she said.

The widespread view of the scientific community is that the burning of fossil fuels — which account for a significant portion of electricity production and, as a byproduct, the generation of greenhouse gases — is a major contributor to climate change.

Some people have urged farmers to add solar panels to mitigate the damage, Papadakis said. But they have other equipment needs, and solar power savings take too long to pay off to be economical for many farmers, she said.

“We wouldn’t do it for ourselves, so we can’t ask them to do that,” she said.

Just as farmers have made other “green” adjustments, she said, they will make more as it becomes economical.

While Phillips said he couldn’t speak to whether his diverse fields will be a successful adaptation in the face of climate change, he was sure it’s a step toward sustainability, often preached by environmental proponents.

“My main thing is, sustainability of any life is going to have to start with soil.”

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