



PROFILES IN soil health

George McClelland

Fruitland, Idaho

1070 acres

Crops: 1,000 acres of conventionally grown mint, alfalfa, wheat, onions, corn, beans and 70 acres of organic mint, alfalfa and wheat.

Planting: No-till & Conventional

Covers: buckwheat, Austrian winter pea and triticale mix, sorghum-Sudan grass mix, buckwheat and hairy vetch



Idaho farm focuses on soil health to ensure productivity, sustainability

Hamanishi Farms is not your typical farm according to Natural Resources Conservation Service District Conservationist Mike Raymond. He should know. Raymond has worked with the farm's owners for over 20 years.

"I have watched the operation change over time," Raymond says. "They have moved to 'greener' agricultural methods and always seem to be interested in trying something new."

The southwest Idaho farm has been in operation for more than 60 years. Japanese-Americans, Arthur and Suye Hamanishi started farming near Fruitland,



"The best thing we can do to improve soil is plant perennial crops like alfalfa and mint. You can see the worm population increase with perennial crops," says McClelland.

Idaho in 1945. Now their daughter, Carol and her husband George own and operate the farm.

Carol, George, and farm manager, Jon Fabricius, all agree – they want to improve the farm's sustainability. And McClelland believes boosting soil health is essential to that goal. "The key to the survival of the farm is building healthy soils. But building soil the conventional way, we haven't been able to get past 1.5 percent organic matter."



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During the past decade Hamanishi Farms made changes to improve their soil through composting, cover crops, and no-till farming. They make their own compost from mint hay, onions, dairy manure, and plant residues. The compost is also amended with soft rock phosphate, gypsum and inoculants. They apply the finished product to their fields to boost organic matter and micro-nutrients.

Cover crops are significantly improving soil at Hamanishi Farms and they are working toward having something planted on every acre throughout the year. "As the cost of petroleum and fertilizers increase, it is getting more important to start taking advantage of Mother Nature and the nutrients that can develop that way. We've actually eliminated the purchase of potassium and phosphorus," McClelland says.

Their commitment to cover crop use prompted them to pursue a Conservation Innovation Grant in 2011 for a cover crop demonstration project. The project examines using cover crops to alleviate nutrient and weed problems in mint production. It also evaluates annual legume cover crop mixes to determine the amount of available nitrogen each mix supplies.

"George was the first person to work with the field office to install drip irrigation in onions," Raymond said. With funding through the Environmental Quality Incentives Program (EQIP), Hamanishi Farms installed drip systems on their onion fields to more efficiently water the crops and eliminate runoff.

The key to the survival of the farm is building healthy soils.

- George McClelland, landowner



Hamanishi Farms started composting 7 or 8 years ago. Creating and applying compost to the fields is one way they are increasing the soil organic matter.

In 2012, Hamanishi Farms installed a permanent buried drip system on an organic alfalfa field with financial assistance from the EQIP Organic Initiative. The buried drip system works well with no-till farming because there are no furrows to deal with. It also eliminates water runoff which keeps sediment out of waterways. "The no-till fields are just a lot more alive with worms and soil microbiology," McClelland says.

"I've always been interested in soil health. For all the years I've gardened, I never thought about using commercial fertilizer on a garden, we did everything the natural way," he says. "I didn't make the connection to commercial farming until recently. I went to a few sustainable seminars and the light came on," McClelland says. "I saw how much potential there was to improve our practices. We're not there yet but we're working at it."

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