

McCarthy Family Farm
Parkdale, Oregon
Food for the Future
Food for All

House Bill 2998 Oregon Soil Health Initiative: Feb 10, 2023

McCarthy Family Farm writes to strongly and enthusiastically support HB 2998. We raise apples, cherries, pears and timber on our farms near Parkdale in the Hood River Valley. We have been a leader in the region in on farm soil nutrient research, especially Phosphorus availability on volcanic soils starting in the 1980's. We continually try to improve sustainable practices in all aspects of our operation. We have worked to improve our soil health for many years (42) with on farm research, trials, cover crops, limited tillage, compost trials, erosion control, mulching, microbial supplements, and organic matter measurements.

The protection of Oregon soils is the basis of Oregon's diverse agriculture. Oregon will be looked to, more and more in the future for food, plant and seed production as lack of water and development destroy farm production elsewhere. Unstated but something that can not be overstated is to first protect soil from being covered by development. In the US, Prime farm acreage the size of Vermont is lost every 3 years.

The Oregon Soil Health Initiative will evaluate and inventory soil nutrients, pH, fungi, bacterial populations and physical characteristics of a broad range of Oregon soils. Once that is completed, financially viable means will be created whereby farmers can improve soil health and replenish nutrients removed from the soil and shipped off as food.

Strategies will be created to replace nutrients, principally elements shipped off of the farm as food products. These are Carbon, Hydrogen, Oxygen, Phosphorus, Potassium, Nitrogen, Sulfur, Calcium, Iron, Manganese, Boron, Magnesium, Copper, Zinc and Molybdenum. Carbon, Hydrogen, Oxygen and Nitrogen containing compounds can be produced by plants on farm to aid soils. However, the other nutrients have to be hauled in. Each pear we ship removes 200 mg of potassium from farm soils. This translates into 50 lbs of potassium removed per acre for every large pear crop. This has to be replaced and can not be created on site. This is the challenge of food production. Elements leave the farm. Composts contain 1-2% potassium by dry weight. This means to restore potassium soil levels, 2500 lbs of composts has to be applied per acre. How do we as farmers get the financial resources and access to compost to meet these needs? Balanced commercial fertilizers have been used by farmers previously to re-balance soils.

The first one hundred years of soil health work focused mostly on balancing the essential mineral elements listed above and pH to promote plant growth. This current second one hundred years will focus on the more complex interactions of minerals, soil organic matter, carbon, bacteria and fungi that all participate in creating healthy soil and also promote plant growth. The Soil Health Initiative will be essential to bring all of the scientist, agencies and producers together to maximize productivity.

Any improvement in soil health on farms and ranches in Oregon first depends on having financially successful operations that have time and capacity to do good work. This is the underlying piece to progress. This has to be a fundamental component of the Initiative work.

Please pass HB 2998. Thank you. Mike McCarthy