USDA grant studies crop efficiencies in Salinas

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A $2.6 million grant to study the efficiency of growing strawberries and vegetables has been awarded to UC Santa Cruz, which will conduct research in Salinas and six other areas.

"One of the fundamental issues is trying to maintain the health of these agricultural systems," said Ann Bartuska, USDA deputy undersecretary for research, education, and economics. She was in Salinas on Tuesday to announce the grant.

The project, headed by UCSC professor Carol Shennan, compares the results from changing conditions of a crop. Researchers will vary vegetable/strawberry rotations, fertility management, weed and disease control, soil composition and treatment, and carbon capturing in the soil. They will measure crop yields, amount of disease, economic efficiency and environmental impact from greenhouse gasses, energy use and nitrogen consumption.

A secondary set of experiments will test the effects of managing nitrogen and using biochar in strawberry crops. Biochar is a charcoal product that may be able to capture carbon dioxide and improve the health of the soil.

A large component of the project is to reach out to farmers, said Shennan.

"We're working with various organic growers in the area," she said. "A lot of the research is going to be done on farmers' fields."

Researchers will work with about a dozen farmers on seven satellite sites to test various configurations of planting, she said. Farmers will choose one of four possible ways to control pests and diseases. They will compare the results with their normal farming practices, she said.

Researchers plan to reach out to other farmers, holding organic farming seminars in the summers of 2012 and 2014 and hosting webinars, workshops and a course through the project's website, eOrganic.info.

They plan to create brochures about crop rotation design, fertility management and biological control agent identification, and to hold workshops for Spanish-speaking and Chinese growers.

"We're really trying to optimize organic production, both environmentally and economically," said Shennan.