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High Tunnel Extends Season for Organic Grower

Maupin, Ore. – Among Eastern Oregon’s first organic growers, Bob Larsell and Laura Coblentz will have a longer growing season thanks to the addition of two high tunnels on their farm. Bob and Laura, who own and operate Seed to Table Farm, are self-taught organic growers and pioneers of organic production in the Wasco county area. Through their enrollment in the Natural Resource Conservation Service’s (NRCS) Seasonal High Tunnel Initiative, part of the Environmental Quality Incentives Program (EQIP),

they have doubled their covered growing space and extended their growing capacity for warm weather crops by nearly two months.

“There are only a handful of organic growers in Eastern Oregon, so it’s great to see the Seed To Table operation thrive,” says Beau Sorenson, District Conservationist for Wasco County. The half-acre organic operation is nestled next to the historic and stately farmhouse in the center of a 1,000-acre traditional Eastern Oregon wheat farm: “It’s like a little oasis,” says Beau.

The Seasonal High Tunnel Initiative is a special initiative that provides financial and technical assistance to landowners for seasonal high tunnels, also known as hoop houses. Seasonal high tunnels are structures made of plastic or metal pipe and covered with plastic or other

Above: Laura Coblentz and Bob Larsell (not pictured) plant peppers, cucumbers, tomatoes and other warm weather crops in two new high tunnel hoop houses on Seed To Table Farm.



Laura selects tomatoes to sell at a farmers market. Seed To Table Farm grows produce for farmers markets, coops and the local hospital. Laura expects her business to increase by 10 to 15 percent with the new high tunnel covers.

sheeting. They are easy to build, maintain, and move, and provide an energy-efficient way to extend the growing season, reduce or avoid pesticide use, and reduce run off and leaching of nitrogen. Unlike greenhouses they require no energy and rely on natural sunlight to modify the climate inside to create favorable conditions for growing heat-loving vegetable and other specialty crops. High tunnels implemented as part of the initiative are restricted to a maximum size of 2,178 sq. ft.

By working with NRCS, Bob and Laura have added two 1,089 sq. ft. high tunnels, covering part of the cropland where they had been actively growing organic produce since 2009.

Crops recently planted directly in the ground under their new hoop houses include cucumbers, six different kinds of hot peppers, four different kinds of bell peppers, tomatoes, lettuce and greens. "I hope to increase my yields by 10 to 15 percent this year," Laura said.

Eastern Oregon is a high desert, which means the potential of freezing weather is always a possibility, even in mid-summer. Bob and Laura have developed several techniques to keep their crops growing even when temperatures dip to dangerously low levels. Since high tunnels are heated by sunlight alone, the growers remain vigilant in monitoring temperatures and will cover crops planted inside the hoop houses with a type of floating row cover blanket or set up chicken brooder lights when nights grow chilly. "If it gets too cold, the blossoms just drop off," says Bob.

To maintain a buffer to prevent drift of pesticides from the adjacent wheat field, a windbreak of silver buffaloberry (*Shepherdia argentea*) has been planted. "The buffaloberry shrubs should grow six feet tall in about four years," says Laura as she checks the drip irrigation emitters dampening the ground cloth mulch around the young plants. Silver buffaloberry is a tall, thorny, thicket-forming native shrub that is a proven windbreak. It is well-adapted to dry Eastern

Oregon climate conditions and soils, and has the ability to capture and use nitrogen from the air. As a bonus, its plump red berries may be used to make jellies.

According to Beau, who has been overseeing the conservation planning on Seed To Table Farm, a pollinator habitat is also being developed. “We are trying to include a wide variety of plants so we can attract as many beneficial bugs as possible.” He explains that different insects are attracted to different colors of flowers, “so we are trying to establish as many different colors of flowers as possible in the pollinator habitat.” To ensure that insects stay around for the entire growing season, both early, mid and late season blooming flowers are planned. “Our goal is to have something blooming for the entire season,” Beau says. “They are right in the middle of wheat country, so it is like a little habitat for bugs,” he adds.



A weed barrier is laid on the ground under the high tunnels to manage weed growth, keep the plants cleaner and capture moisture.

Bob and Laura appreciate the labor-saving practices they gained from their involvement with NRCS. “We are a two-piece band that should be a six-piece ensemble,” Laura explained. One particularly helpful labor-saving technique was the installation of a woven weed barrier over the growing area. “The cloth is made from the same material as PVC pipe, but it’s made into a thread and woven into cloth.” Bob said.

The fabric has proven successful in controlling weeds and disease on Seed To Table Farm. “Not only have we saved the time usually spent pulling weeds, the cloth keeps the plants cleaner,” Laura observed. “They don’t get splashed with dirt so are less likely to contract soil-borne fungus and other disease.” In addition, the cloth warms the soil and gets the plants off to a faster start. They use the weed barrier under their high tunnel houses, and on the areas in between.

A .2 acre field next to the high tunnel houses is one of the next targets for improvement. The soil has recently been prepared and planted with “a witch’s brew of four seeds,” Bob said. The cover crop seed cocktail is an effective way to get ahead of undesirable weeds. Laura has plans to plant potatoes and squash to complement the cover crop. “We are cover cropping because that field is so full of weeds,” she says. “I don’t want to put the weed barrier cloth down now because it is so expensive. It’s cheaper to do a cover crop and rebuild the soil and try to choke out the weeds.”

With NRCS assistance, Bob and Laura have mastered the tools necessary to grow their small organic venture in the high desert of Eastern Oregon. Bob predicts a holistic benefit: “Healthy soils build healthy food that builds healthy bodies.”