

When you hear that the biggest potato grower anywhere and one of California's largest dairy operators have a joint venture on 93,000 acres in eastern Oregon's Morrow County, you probably don't expect environmentalists to be applauding. But Threemile Canyon is proving that big farms can be green too.

Threemile Canyon Farms occupies a large swath of the Columbia River plateau, just west of Boardman. The property is roughly square, with each side running about 15 miles. This naturally arid land sprinkled with juniper and sage looks much like it did when Lewis and Clark saw it. Today, thanks to a \$185 million investment in state-of-the-art farming technology, this former desert sustains 18,000 dairy cows and grows enough potatoes to feed seven million people. The Threemile Canyon Farms' primary products are milk and conventionally-grown potatoes, with compost, mint, organic potatoes, onions, and wheat rounding out the offerings. Energy will likely be added to that mix soon, in the form of methane from cow manure.

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Threemile Canyon Farms functions as a closed loop system where waste is virtually eliminated and off-farm inputs are minimized. What that means in practice is that the cows eat hay, wheat and corn that are grown four out of five years as rotation crops on the potato fields. That diet is supplemented with the agricultural leftovers from the production of French fries and mint extract. Cow manure is flushed twice daily from the huge concrete barns, and processed into fertilizer that is spread back on the fields or marketed to nurseries. The methane digester that is planned will add a step to the manure composting process, producing an even higher value fertilizer product, while also generating enough "green power" for 2,500 homes.

According to Threemile Canyon spokesman Len Bergstein, this chunk of arid eastern Oregon had been slotted for more high-flying ventures in the early 60s. "It was set up by the State of Oregon to be a space-age industrial park. The gleam in everybody's eye at that point was to try and make this a place where Boeing would find it attractive to do their aerospace activities. The legend goes that Scoop Jackson, the Senator from Washington, and President Kennedy had agreed this was going to be the place where the U.S. was going to put its manned moon shot operations." That honor switched to Houston when Kennedy was assassinated, and Linden Johnson, a Texan, assumed the presidency.

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**Aerial view
of Threemile
Canyon Farms**

The space-age industrial park was leased out to farmers instead. Then in 1998, R.D. Offutt Company, a large Midwest-based potato grower became interested in the property. Marty Myers worked for Ron Offutt at that time and is now general manager of Threemile Canyon Farms. He remembers, "What we needed was additional land. We were getting pushed off of a farm that we rented for potato ground, and so we needed to find a home for our potato business. We went to the owner of the farm at that time, and asked him if he'd rent us some potato ground. He said, 'No, but I'll sell you the farm.'" There were some significant hurdles to overcome at first. Explains Len, "We

had an array of problems; one of those being a series of lawsuits by environmental groups because of concerns about water withdrawals from the Columbia River, environmental practices, and the protection of an endangered ground squirrel."

Len continues, "Marty looked at the legal issues that were involved and said, 'This can be settled.' Marty worked with the plaintiffs as a group and solved the problem. Basically what he did was trade land and water for peace." That peace involved giving up two-thirds of the farm's water rights, and putting 23,000 acres aside for conservation, under the management of The Nature Conservancy. Marty describes the settlement succinctly, "They didn't get everything they wanted and we didn't get everything we wanted."

Before R.D. Offutt had even finalized its purchase of the farm, Marty read in the Sunday Oregonian that the Oregon-based Tillamook Cheese Company was looking to significantly expand its production. "In October, prior to us taking over the farm, I went down and visited Tillamook, and we became number 21 on their list of candidates for sites."

Marty explains the components of the deal. "If you look at the negative side, there were no milk cows in Morrow County. The positive

side was that the geographical location provided the most economic freight for Tillamook to do what they wanted to do, which was produce 40 pound blocks of cheese in their new expansion plant and then ship it back to Tillamook to cut and wrap into their brand.”

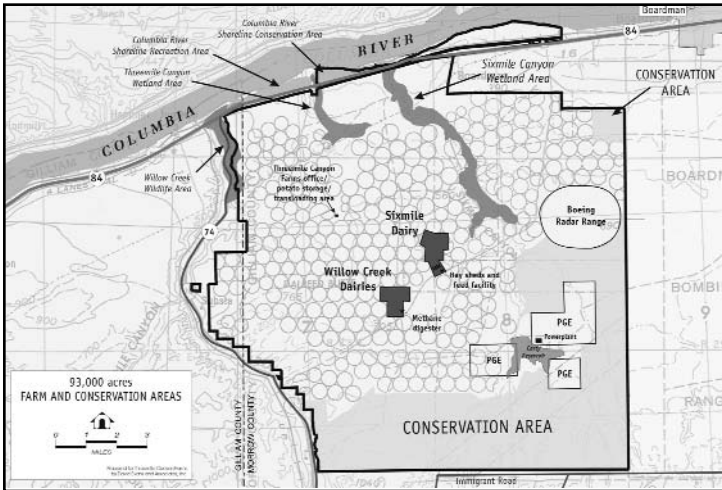
Marty found an experienced dairy partner in the Bos Family from California. Together they pledged to develop one of the nation’s largest dairy operations. Says Marty, “It’s been a very good partnership. In the Spring of 2002, we sold 50% of Threemile Canyon Farms to John and A. J. Bos, and we became 50% partners in the dairy development. So now everything going forward, it’s 50/50. Everybody is pushing behind the same horse.” Tillamook Cheese was convinced to build its new processing plant in Boardman, and now, thanks to Threemile Canyon Farms, there are more cows than people in sparsely populated Morrow County.

The desert is a good place for a dairy operation because there is less potential for wastewater from the dairy to wash into rivers and streams during the rainy season. In fact as part of the closing deal, Threemile Canyon Farms was issued a zero discharge permit, meaning no runoff from their dairy would leave their property or penetrate more than two feet into the ground. Marty explains, “We have 30,000 acres that we can manage this waste on; that’s the key component. We’re composting all of the solid waste that is created. The manure is moved through the dairy facilities with water. It’s all recycled water out of the lagoons, so we aren’t adding water for that purpose. And that water is moved on either concrete alleys or pipe underground. Then the water goes into settling cells to settle out as many solids as possible. The solids are put on clay-lined surfaces to compost, so there isn’t any leaching into the groundwater. The remaining water is irrigated through our center pivots as fertilizer on a growing crop. There’s no rocket science to it. It’s just having the system to do it.”

Threemile Canyon Farms is one of the largest contiguous center pivot irrigation farms in North America. It maximizes water and energy efficiency with precise application and soil moisture monitoring. Crop rotation and integrated pest management are used to minimize use of pesticides and herbicides on all crops. From where Marty sits, the innovations on Threemile Canyon Farms just make good business sense. “We cut all of the freight inefficiencies out of having feed grown off the farm and brought into the dairy, so it’s a very efficient operation. Then the waste management side of it allowed us to get into some niche farming markets.”

The plentiful supply of fertilizer is what got Threemile Canyon Farms into organic potatoes. Says Marty, “I consider organic farming an extension of our waste management system. We wouldn’t be doing organic farming unless we had a cost effective nutrient. That distinguishes us from a lot of organic farmers, because they have to

bring in the nutrient from off-site. There’s a market out there for organics – that’s key – and it’s growing. We’re in the food business, so it was a natural fit.”



The land use layout of Threemile Farms.

change our business plan.” Marty continues, “We aren’t totally dependent on potatoes. We aren’t totally dependent on milk. We’ve been able to find something that’s diversified but very efficient on both sides.

Marty estimates that as many as 250 year-round jobs have been created between the dairy and the cheese plant. Annually the Farms contribute about \$250 million to the economies of Gilliam and Morrow Counties.

Then there is the 23,000-acres of land that is being preserved as native grassland and shrub-steppe habitat for threatened and endangered species. Len explains, “We provide partial support for The Nature Conservancy’s management of the area, with the idea that when they get the money, they will purchase that land and preserve it.” Marty adds, “We have a good relationship. They have made steady improvements to the habitat. There’s a lot of work that they feel needs to be done, and they’ve got the people that can accomplish that and are experts in the area. If that conservation area was under the farm leadership, I doubt that we ever would have gotten back there to do much, because our interests lie elsewhere.”

For the near future, Marty is projecting a bit of a lull. “We’re trying to

go through a stability phase. We've grown enormously in the last four years. We've expended a great amount of capital and we need to take a rest. Now that doesn't mean I don't do little things to try to build niche businesses like the organic potatoes. Also, we think the compost business has a growth period here that doesn't require a lot of capital investment. So, we'll continue with that." The City of Portland is looking at shipping their organic waste out to Threemile Canyon Farms to be composted.

Says Marty, "My definition of sustainability is probably a little bit different than some others: it's about finding markets and having a business plan that complements the marketplace. That's really what drives sustainability, because sustainable businesses need to be profitable."

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