Agriculture and the Corps of Discovery

What the Lewis & Clark Expedition meant to Oregon agriculture

By Bruce Pokarney

All the elements of modern day Oregon agriculture—from its diversity and abundance to its trade value and processing—were present in one form or another some 200 years ago when Meriwether Lewis and William Clark took that bold journey into the unknown west as part of an expedition that shaped the future of the United States. From the time the explorers set eyes on the arid eastern part of the state to their overwintering at Ft. Clatsop on the Oregon coast, Lewis and Clark took great care to document flora and fauna as well as the agriculture practiced by the native tribes. Their direction and inspiration came from an agrarian leader—President Thomas Jefferson, a farmer from Virginia.

A visionary president

“Jefferson loved farmers because they were truly independent,” writes humanities scholar and author Clay S. Jenkinson—a noted expert on America’s third president. “By growing their own food, building their own homes, and gathering their own fuel, they reduced their dependence on outside institutions to a minimum.”

Jefferson was curious. One of the great purposes of the expedition, which began in 1804, was to find an agricultural paradise for a country that would eventually expand, according to Professor James P. Ronda, a well known author on the Lewis and Clark Expedition.

“The combined with Jefferson’s almost naive faith in agriculture, which he envisioned as spreading gradually westward, this personal need to know the world of plants would one day be a further incentive to promote western exploration,” writes Ronda.

Indeed, specific instructions given by Jefferson to Lewis in the summer of 1803 included information the president wanted regarding the people and land that existed west of the Mississippi:

“You will therefore endeavor to make yourself acquainted, as far as a diligent pursuit of your journey shall admit, with the names of the nations & their number, the extent & limits of their possessions, their ordinary occupations in agriculture, fishing, hunting, war, arts, & the implements for these, their food, clothing, & domestic accommodations, and articles of commerce they may need or furnish, & to what extent. Other objects worthy of notice will be the soil & face of the country, it’s growth & vegetable productions, especially those not of the U.S., the animals of the country generally, & especially those not known in the U.S…”

William Clark’s personal list of questions focused on agriculture. Clark, originally a Virginia farmer like Jefferson, was to join the expedition from his Kentucky farm. Among his questions for the journey:

“Do they obtain by the Cultivation of the soil their principal maintenance? What species of grain or pulse do they cultivate? What are their implements of husbandry and in what manner do they use them? Have they any domestic animals & what are they? Do their men engage in agriculture or any other domestic employments?”

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**Board of Agriculture profile: A parting interview**

**Rick Gustafson and Pat Wortman** will each finish their second four-year term at the end of July and will retire from the State Board of Agriculture. Both Gustafson of Portland and Wortman of Enterprise have seen many changes in their eight years with the board. The Agriculture Quarterly recently asked a few questions of the two outgoing members.

**What are your thoughts on serving the board past eight years?**

*(Gustafson)* I’m really sorry I’m leaving. Agriculture is so important to the state and it’s been really great to be a part of it. (Wortman) I would echo that. The experiences, the education, and the overall worth that the agricultural communities bring to this state, it’s just hard not to put anything but a tremendous value on it. It has been a tremendous experience for me. I hate to be going off the board. But, at the same time, there’s a new crop of people coming on that will certainly take my place and maybe bring a different perspective.

**What significant changes to the board during your eight years come to mind?**

*(Gustafson)* The industry is growing and the Board of Agriculture has grown with it. The board has taken on a much higher profile for policy in this state with regard to agriculture. That’s extremely important. The future success of agriculture is going to be the ability of people not in agriculture to understand how important it is to support the direction the industry is taking.

*(Wortman)* I would build on that a little bit. I’ve seen a greater connectivity with urban folks to the landscapes, to the watersheds, and to the health and vitality of our agriculture industry. The board reflects some of that change.

**What is one of the first tourist attractions that comes to mind when you think of Oregon?**

*(Gustafson)* Pike Place Market, where Oregon agriculture could have access to that big city audience? *(Wortman)* That’s easy. The recent legislation to name the Board of Agriculture a policy board. It gives the board a higher profile and increased stature in dealing with policies and issues important to agriculture.

*(Wortman)* Once again, I have to agree. The board is now taking on many more issues, and the legislature was important in allowing us to take on more in the future.

**What issue is perhaps the most important facing the board today?**

*(Gustafson)* Land use. Protecting the viability of agriculture and its performance does relate to land use. We have a lot of good information. We have a very sophisticated way we can approach it. We have a good foundation built with our land use and planning. Now we need to turn our attention to the business of making agriculture effective and viable in the state. We can do that by preserving the most productive lands and therefore, the lands they operate most effectively.

*(Wortman)* I see the challenge of trade barriers, nationally and internationally. I don’t think there is one person in a thousand that understands some of this. I know I don’t. There could be a day just hearing about the ramifications and some of the things that are going to be affecting our state and our agriculture here in Oregon.

**Do you have any words of advice to those who follow on the Board of Agriculture?**

*(Gustafson)* The advice to the board is to rely on your colleagues, work very hard to build that relationship, and preserve that relationship. I believe the board can assert that role of setting a better policy and better leadership for agriculture.

*(Wortman)* I see that as paramount — holding the board together, using the knowledge that exists throughout the state, throughout the different segments of our industry. It has to be something that is high on the board’s priority list.

**Director’s column**

What is one of the first tourist attractions that comes to mind when you think of Seattle, Washington? Pike Place Market of course! This incredible public market is located in the heart of Seattle where agriculture has a chance to showcase its products and access an incredible direct market of consumers. And what is a major goal of many Oregon agricultural associations? Oregon agriculture wants the opportunity to better educate and connect with our urban cousins. Wouldn’t it be wonderful if Portland had a public market like Pike Place Market, where Oregon agriculture could have access to that big city audience?

A group of diverse citizens has been tenaciously working towards developing the Portland Public Market and the vision is about to become a reality. Individuals representing such groups as the Portland Farmer’s Market, the Portland restaurant industry, the City of Portland, the Oregon Department of Agriculture, the State Board of Agriculture, and our federal delegation have been working diligently to identify a location, fund a feasibility study, begin a capital campaign, identify the kinds of tenants that would be recruited, and develop educational opportunities. The concept is incredibly exciting and agriculture needs to be actively involved. The Portland Public Market would be a permanent, year round market that would compliment, not replace, the existing Portland Farmers’ Market. The Portland Public Market would offer fresh foods as well as a wide range of prepared local foods and restaurants. The public market would also spotlight local agriculture for residents and tourists and offer educational opportunities for children and adults.

Public markets have been a part of Portland since it was founded in the mid-1800s. Markets were located in Ankeny Square, Yamhill Street between First and Fifth avenues, and on the eastside in the Albina and Buckman neighborhoods. But for over 60 years now, Portland has been without a true public market. Now is the time to bring back this opportunity to showcase Oregon agriculture in downtown Portland. Please join the Oregon Department of Agriculture in supporting this effort. As we continually look for marketing and educational opportunities for Oregon agriculture, a Portland Public Market provides a chance to fill many needs. Log onto <portlandpublicmarket.com> and find out more about this vision and how you can help. Then, plan to join with our urban friends as we create a greater presence for Oregon agriculture in the heart of downtown Portland.

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Director's column

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**What is your perspective on serving the board for eight years?**

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Lewis and Clark...

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So as the Corps of Discovery began its journey up the Missouri River in search of a Northwest Passage, its members were taking notes on agriculture and its practices.

“They found a number of sedentary, permanent Indian villages larger than St. Louis or Philadelphia at the time,” says Ken Karsmizki, executive director of the Columbia Gorge Discovery Center in The Dalles and Lewis and Clark researcher.

“The reason those villages existed was agriculture. The tribes didn’t have to embrace the nomadic tradition of following the buffalo herd to feed themselves. They had domesticated food and crops.”

That, of course, was important for Lewis and Clark as they were able to obtain food for their journey from the natives.

Oregon is “discovered”

Any modern traveler retracing the steps of Lewis and Clark will see a lot of high, dry land along the way—whether it is part of the Dakotas, Montana, Idaho, Washington, or Oregon. When the expedition finally traversed the Rockies in late September, 1805, they saw the arid west after a hot, dry summer. They could not imagine the land east of The Dalles might someday be agriculturally productive.

“Had they known what would happen within 100 years with dry land farming, they might have looked at Eastern Oregon very differently,” says Karsmizki. “In the early 1800s, U.S. agriculture was at its easy stage. The country had not been populated for very long. Crop rotation was in its infancy. As land wore out, farmers would move to the next piece. The thought was that when everything east of the Mississippi wore out, people would move to the other side and keep on farming.”

Lewis and Clark essentially wrote off eastern Oregon as a place for agriculture. As they proceeded west, things began to change. They saw more trees and animals. In general, every mile west of The Dalles translates into an additional inch of annual rainfall. Finally, the explorers could envision a more suitable place for agriculture.

Once again, the local people cultivated the land and helped sustain the travelers.

“At Fort Clatsop, Lewis and Clark did not hunt for food,” says Karsmizki. “It was more efficient to buy it from the local farmers, who happened to be Wasco, Wishram, or Chinook Indians. It’s very much like today’s consumers. Most of us don’t grow our own food, we buy it from somebody who has cultivated and harvested that food.”

A supply of berries and a potato-like root called wapato provided the nourishment needed to keep the expedition moving westward. Another significant commodity along the Columbia was salmon, still harvested today by descendants of the native people who helped feed Lewis and Clark 200 years ago.

Lewis and Clark began to observe quality pasture land. They were not just on the lookout for crops, they were thinking about livestock.

“The expedition also looked for potential commercial centers—where was the water and where could you build the mills?” says Karsmizki. “If farmers were going to grow wheat, they would need mills powered by water.”

All along the way, Lewis and Clark continued writing in their journals, cataloguing the best places for agriculture. They specifically found areas in the Columbia Gorge that sustained fruit production. Today, those areas are teeming with pear, apple, and cherry orchards. Further west, the berries they found might have indicated a future haven for grapes made into wine.

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Lewis and Clark essentially experienced an early version of the agricultural potential of the valley, says Karsmizki. “They kept asking the Indians how far the river went and got the sense that it was a good valley for farming.”

Today, the Willamette Valley represents the most productive agriculture in the state.

When the expedition made it back to The Dalles in April, they found the Columbia River too hard to paddle because of too much water. Lewis and Clark had come down the river in the dry season, they were going back up following the wet season. They knew that livestock was available and traded for horses to expedite the trip home.

The expedition officially ended when the travelers returned to St. Louis in late September, 1806.

The next 200 years

President Jefferson was anxious to receive journals from the expedition, knowing they would be powerful in encouraging a western migration. Lewis, in one of his letters to Jefferson, essentially said if America did not aggressively settle the west, it was going to be lost to others—perhaps the French, the Spanish, or the British. Jefferson thought it would take several hundred years to settle and populate this huge piece of land.

He didn’t realize that in less than 90 years, the frontier would essentially vanish.

Meanwhile, the course was set for the growth of Oregon’s agricultural industry.

“In 1829, Ft. Vancouver was established as a major hub for the Hudson’s Bay Company,” says Karsmizki. “Food was grown in the Willamette Valley and transported north to supply fur trappers all the way to Canada.

As in the present day, most of the agricultural production in Oregon was leaving the area.

The early stages of the Oregon Trail movement began in the 1830s. Agriculture was the main attraction to those willing to move all of their belongings to the west. Interstate commerce of agriculture exploded in 1849, when gold was discovered in California. Large farming operations in Oregon fed the miners down south.

Everyone in California seemingly gave up the plow and took up the pick,” says Karsmizki. “More people got rich feeding the people who were trying to get rich. The commodity of food was getting scarce in Northern California because so many people jumped from the farms to the mines.”

Oregon agriculture had found itself. It’s productive farm land and great potential, first observed by Lewis and Clark, was firmly established, paving the way for the multi-billion dollar industry it is today.

As Americans continue celebrating the Lewis and Clark bicentennial, it’s important to remember that at the root of it all is a heritage of agriculture.
Farm stands offer Oregon’s agricultural bounty

Like hundreds of other Oregon agricultural producers, John Zielinski is ready for another busy season of selling fresh, local food products grown on his own farm to a steady stream of devoted customers. But he never has to leave his own property. Farm stands—also known as roadside stands—share with farmers’ markets the direct sale of locally grown food by the people who produce it. There is no middleman as with retail stores or restaurants. Where they differ from farmers’ markets is the fact that instead of the farm going to the consumer, the consumer comes to the farm.

“People like having access to so many local items in one location and having a chance to meet the people who grow the food they eat,” says Zielinski, whose family-owned E.Z. Orchards Farm Market in the Salem area offers a variety of products including apples, peaches, pears, and berries. “The majority of our products we sell come from our own farm or other local farms, so the people who visit our farm market often complement us on the freshness of the produce. People also express their appreciation for our farm and market being family-owned and operated.”

According to the Oregon Department of Agriculture, there are 412 farm stands statewide. Most of them are located in the Willamette Valley, where much of the state’s agricultural production takes place, and not far from Oregon’s population centers. Marion County leads the way with 53 farm stands with Lane County reporting 42. But consumers can find a number of farms, ranches, or orchards in nearly all 36 counties that offer direct sale of what is produced on site.

For E.Z. Orchards and the Zielinski family, establishing a farm stand was part of the plan to expand and diversify. When the family had the opportunity to purchase property ideally suited for a farm direct enterprise, they jumped at it.

“There are advantages to farm direct marketing,” says John Zielinski. “The middleman is eliminated, which gives the farmer a better profit margin. When we first looked at farm direct marketing, we felt it could provide a better return on investment than purchasing more land and expanding farm operations.”

The story is similar for Kiyokawa Family Orchards, a 107-acre commercial fruit operation in the Hood River Valley. Numerous varieties of pears, apples, cherries, and peaches are grown for nearby packers, but the family has enhanced the orchards by selling farm direct. Their stand opens in September.

“We started our fruit stand in the late 1980s to diversify and have supplemental income other than from the packing house,” says Randy Kiyokawa. “There are many advantages of selling directly to the customers, including better price, getting the money sooner, and not losing fruit due to the sorting out of the imperfect ones. Our customers also get better prices, ranging from 15 to 79 cents a pound, great selection, better flavor, and a way to get back to where the apples are grown. Visitors can’t believe the price and selection. I get the biggest kick from the ones that take a bite of an apple and say it is the best they ever had.”

The Kiyokawas also offer orchard tours and a u-pick block that allows families to make a day of driving the scenic Hood River loop while picking their own apples. Not too far down the road, in the Hood River Valley, is Rasmussen Farms.

“Our is a destination farm, beginning in the spring with flowers and ending in December with gift pack fruit and wreath shipping,” says Dolly Rasmussen. “This is our 60th Anniversary. Originally, we operated as a general farm selling eggs, milk, and fryer chickens directly to the public. Starting in the 1960s, strawberries were added. Presently, there is a huge variety of products. We offer many family activities including Pumpkin Funland™, which has been nationally recognized as one of the 10 best places for Halloween.”

The Rasmussens have noticed a change in the consumer over the years.

“At least here in the west, they seem to show a great deal of interest in buying direct from the farm,” says Dolly. “I think the old concept of shopping this way is making a comeback, mostly for freshness and knowing where the food is coming from.”

Operations such as Gathering Together Farm in Philomath have added a dining experience along with some value-added, niche food products.

“We get lots of praise from customers who appreciate the direct connection with the place where their food comes from,” says Stacey Couch. “They really enjoy the atmosphere of our farm stand and patio eating area, and they love the food from our kitchen.”

The menu includes homemade baked goods, like organic potato doughnuts made from scratch, something seldom found in the doughnut world. The Garden Room is available for seasonal lunches, brunches, and Saturday breakfasts that feature the farm’s fresh produce.

Some farm stands open year around, but most are seasonal and reflect what is growing in the area at the time of the year. Salad greens and nursery starts are usually the first to make an appearance. Many farm stands have been offering fresh berries over this summer—transitioning from strawberries to blackberries or raspberries to blueberries. A lot depends on what part of Oregon the stand is located. In Eastern Oregon, it might be more melons and fewer berries. The selection may be greater at farmers’ markets because so many vendors travel relatively great distances to sell their goods. But farm stands, exclusively, give the consumer the experience of visiting the site where the product is grown.

The opportunities to buy directly from the farm—either at farmers’ markets or at the farm itself—are plenty this summer, no matter which direction you turn in Oregon.

Visit the aglink Web site for a list of roadside stands near you. aglink.org/consumer/wheretobuy/farmdirect.php.

ODA names two new administrators

Oregon Department of Agriculture Director Katy Coba has named two members of the agency’s management team. Gary Roth has been hired as administrator of ODA’s Agricultural Development and Marketing Division while State Veterinarian Dr. Don Hansen will assume the position of administrator of the Animal Health and Identification Division, effective September.

Roth returns to ODA after five years in the private sector operating his own company. From 1988 to 2000, he worked as an international trade manager and the department’s industry development manager. Prior to coming to ODA, Roth worked as a lobbyist and as director of the Commodity Division for the Oregon Farm Bureau. He fills a vacancy created when Dalton Hobbs was promoted to an assistant director at ODA.

Dr. Don Hansen will continue his role as state veterinarian, a position he has held since May 2004, but will add the responsibilities of division administrator. Prior to joining ODA last year, Hansen served as extension veterinarian at Oregon State University, beginning in 1984. He replaces Rodger Huffman, who has requested to serve as field operations manager for Eastern Oregon while relocating his family.

ODA celebrates 75 years

Get ready to celebrate a milestone for the Oregon Department of Agriculture, as the agency turns 75 in 2006. Several events and features will take place next year to mark the occasion, including:

• The annual Agricultural Progress Awards Dinner, Thursday, March 23, 2006 at the Oregon Garden in Silverton. This popular event will be held as part of National Agriculture Week.
• Special public tours of the Oregon Department of Agriculture during National Agriculture Week.
• A photo contest of Oregon agriculture.
• A commemorative calendar.

Circle the dates and make plans to help ODA celebrate 75 years of service to Oregon. More information will follow in upcoming issues of the Agriculture Quarterly.

Focusing on the farm: the consumer in the direct market

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Calm weather, extremely low tides, and an abundance of wonderful tasting Oregon razor clams just waiting to be dug from the beaches. Conditions at times this spring and summer have been almost too good to be true for die-hard clammers. But a naturally-occurring marine toxin called domoic acid has presently put razor clams off limits to both recreational and commercial harvesting and, in the past, kept other types of filter-feeding shellfish from being harvested. A frustrated public can only sit and wait for future test results from the Oregon Department of Agriculture that trigger whether or not the beaches open back up.

While there are still unanswered questions about domoic acid and what leads to its presence, the biotoxin is well known to ODA's Food Safety Division and the agency's regulatory laboratory located in Portland. Countless times over the past decade, ODA has closed areas of the Oregon coast to shellfish harvesting because of elevated levels of domoic acid. Currently, razor clam harvesting is prohibited on all beaches and bays in Oregon. Levels of domoic acid exceeding 20 parts per million (ppm) are considered above the alert level. Levels have reached as high as 200 ppm in some razor clams sampled and tested from the central coast.

"Clams and other mollusks are filter feeders, so the domoic acid concentrates in their tissue," says Deb Cannon, manager of ODA's Shellfish Program. "So when we consume the shellfish, we take in the acid too. We are going to have to understand seafood risk associated with natural toxins."

Domoic acid is produced by marine phytoplankton or algae in the ocean. Eating shellfish contaminated with domoic acid, even at low levels, can cause minor illness within minutes to hours after consumption. Cooking, adding baking soda, or any other method does not destroy this toxin. In mild cases, symptoms can include vomiting, diarrhea, abdominal cramps, and headache. Severe cases can result in memory problems and even death.

Since the 1950s, Oregon health officials have monitored shellfish toxins because of the many documented cases of people getting sick after consuming clams and mussels. Paralytic shellfish poisoning (PSP)—often referred to as "red tide"—has been a known problem for years. There is even evidence that populations of Native American tribes became sick and died back in the 1700s after eating clams and mussels tainted by PSP off the Oregon coast.

"Domoic acid was only hinted at as being a problem for west coast shellfish because we knew the algae responsible for producing the toxin was present in our waters," says Cannon. "But in 1991, tests run in the State of Washington for PSP in clams showed atypical symptoms. What they saw was amnesiac shellfish poisoning."

In November 1991, ODA began testing for domoic acid and found levels exceeding 100 ppm in razor clams. Samples of frozen clams, harvested several years earlier, showed high levels existed back then as well. Soon, ODA found domoic acid in Dungeness crab harvested off the Oregon coast, although the toxin is concentrated only in the viscera, or guts of crab—a part of the animal not often consumed. Commercial and recreational harvesting of clams was closed until levels dropped back below the safe range for domoic acid.

"For PSP, the first indication of a toxic bloom is often found in mussels, the sentinel species," says Cannon. "However, because mussels can purge domoic acid quickly, they are not a reliable indicator for that type of marine toxin. As a result, we need to directly sample and test the razor clams, which retain more of the toxin."

Nine months of the year, ODA samples mussels each week at up to nine sites along the coast. Harmful algae blooms can occur during spring, summer, and fall. Samples of mussels, clams, or other shellfish are immediately shipped to the ODA lab in Portland where chemists may need up to two or three days to process the results.

Meanwhile, the industry and the clam-digging public anxiously await the news.

"We are aware of the potential impact to the public based on our analyses and that’s why we first focus on doing the test correctly. We get wrapped up in properly conducting the test and procedures," says ODA chemist Virginia Palomo.

On testing days, ODA lab personnel can often be found shucking clams and mussels to get to the meat of the animal. It takes about half an hour to prepare a homogenous representative sample.

Lab equipment preparation requires another 30 minutes. That’s after the instrument has taken about four hours to warm up—a step that is often done well before the samples arrive. Knowing the schedule and need to test well in advance makes for a shorter process.

Taking into account standardization, the number of samples that need to be run, and other associated steps, the analysis will take up to two additional hours. The machine does most of the work and the chemist can walk away and do other things while the test is running, with an occasional check during the process.

"In relation to other tests we run, this one is fairly quick," says Palomo.

The all-important machine is called a high pressure liquid chromatograph (LC), which is the method of choice in that it provides a relatively quick turnaround. The machine sends information to a computer and provides ultraviolet detection. If domoic acid is present, the chromatograph will show a specific wavelength at 242 nanometers. To the layperson, it sounds complicated. But to ODA chemists, it’s simple, reliable, and expedient.

Peer review of the analysis by another ODA chemist is the final step before the results are official and sent down to Deb Cannon and the Food Safety Division. Cannon then makes the ultimate decision on whether areas and species are open or closed for harvesting.

It appears the public has heeded the closures, even though people are often frustrated. Tourism is important to the coastal economy, and in some places, clamming is important to tourism. But domoic acid is not something to ignore. One outbreak in Canada in 1987 came from mussels harvested from Prince Edward Island and resulted in three deaths, 153 illnesses, and nine people with permanent short term memory loss. "We don't want Oregon to be a part of that kind of story," says Cannon.

High domoic acid levels can drop without much warning or stay elevated for years. As of now, there is no way to predict. So the sampling and testing continues.

For the latest on shellfish closure information, call ODA's shellfish safety hot line toll free at 800-448-2474 or 503-986-4728 (Salem area). Current shellfish safety information is also available on the ODA Web site at <coregon.gov/ODAFSD/shellfish_status.shtml>.

(Below) Oregon’s coastline has been closed to harvest of razor clams this year, due to domoic acid.

(Middle) A high pressure liquid chromatograph (LC) is used by ODA to detect the presence of domoic acid in shellfish.

(Left) Chemist Virginia Palomo interprets the data on domoic acid at ODA’s Portland laboratory.
Specialty crop grants update

Editor’s note: The Agriculture Quarterly is featuring selected summaries of projects funded through the Specialty Crop Grants Program. ODA and the State Board of Agriculture distributed $3.2 million in federal funds to dozens of proposed projects in 2002. These selected summaries highlight the accomplishments of the 54 projects that received support through this grant (no further funds are available at this time). A complete listing and description of all 54 projects can be found online at: <oda.state.or.us/dbs/crop_grants/hitlist2.lass>

Project profile: Market expansion plan for Marionberries

Total grant applied toward project: $45,000
Total provided by other entities: $0
The Marionberry Marketing Association (MMA), in cooperation with RainSweet, initiated this project to target the greater Phoenix market area for specialty Marionberry products. Lower yields from thrip damage, this area was felt to be an ideal market in which to introduce the unique taste and quality of the Marionberry. The project provided samples of products, printed promotional materials and displays, and sample tasting in retail stores, resorts, hotels, restaurants, caterers, bakeries, and food service distributors.

Results: A retail program targeted consumers with a product line of Marionberry jam, jelly, and syrup in shelf-stable glass jars. Country Heritage Farm was able to place product in AJ’s Fine Food Stores in Arizona. Frozen Marionberries in an elegant sauce was the product selected for trials with resorts, hotels, restaurants, bakeries, and food service distributors. Some 3,360 individual three-pound tubs were used as free samples, equalling more than 160,000 servings. An experienced food service sales manager was contracted to make initial presentations. RainSweet representatives followed up with distributors to arrange for transportation and warehousing of sample product. MMA feels the project has successfully generated brand awareness for Marionberries and introduced quality products to the target market. MMA is hoping for over $1 million in new sales in 2005 to benefit Oregon’s 100 Marionberry growers, and local processors and distributors.

Project profile: Matching potato production to processing market opportunities

Total grant applied toward project: $40,000
Total provided by other entities: In-kind use of fields by growers
Malheur County Experiment Station, OSU Extension, provided research for this project that evaluated a number of new potato varieties for early harvest, processing quality, yield, grade, and resistance to late blight.

Results: Ten varieties were evaluated. Planting date was key to adequate yields over all harvest dates. A delay in planting from April 5 to April 25 resulted in yield loss of about 75 cwt/acre. April 5 appears to be the earliest safe planting date to avoid frost damage. Shepody and Ranger varieties are not well suited as early harvest crops. Results of the varietal tests can be found online at: <cropinfo.net/AnnualReports/2002/EarlyHarvProcVars.htm> <cropinfo.net/AnnualReports/2003/PotatoEarlHarvBulling.htm>

Project profile: Malheur County over-winter onion project

Total grant applied toward project: $100,000
Total provided by other entities: $16,220 cash outlay; grower’s time donated.
Five producers conducted in-field production of “over-winter” onions that have a different growing/harvest/marketing period than the traditional yellow onions produced in Malheur County. The objective was to have a product that would enable marketing of the crop when imports from Mexico are not coming with local production. Over-wintering onions also can provide an opportunity for growers to utilize their existing equipment and spread the cost over additional units in a different season.

Results: The development of viable cultural and agronomic production practices is critical to this strategy. The growers discovered that pests, primarily thrips, were a significant challenge to producing onions over the winter months. It is imperative to control thrips in the early stage of growth. Producers experimented with a variety of onions, including reds and yellows. One farm had a reasonable stand and can manage for pests and market the crop. On another farm, the 2002 emergence was 95%, with 5% of yellows and 10% of reds lost to thrip damage. Yields were acceptable, but prices deteriorated after harvest and the grower is evaluating whether to plant over-winter again. A third farmer was unable to control thrip damage and did not harvest the crop. A fourth farm had reasonable success and yields with yellows, but substantial loss on reds. Additional cultural practices, planting date information, and more options on thrip control are sought by the grower. One final grower experimented with sprinkler irrigation to control thrips, theorizing that this would wash the thrips off. This approach did not prove successful. Overall, the combined project’s crop yielded 12,293 cwt, and generated $74,977 in sales. Most growers did not generate profits, due to processing yields and lack of thrip damage. However, they learned significant management and control strategies for thrip and will continue to build their knowledge regarding this new crop and its marketing effort.

Project profile: Effective management of choke disease in orchardgrass seed production

Total grant applied toward project: $45,000
Total provided by other entities: $4,125
The spread of choke disease in orchardgrass is not well understood. This project provided field research to examine the impacts of choke disease on yield loss in orchardgrass, and test various cultural and chemical controls. The Orchardgrass Commission assisted in disseminating the findings and educating producers about the results. Field plots were established for testing cultural practices that may affect choke disease development. A survey of 45 fields was conducted on the 2002 crop and 65 fields were surveyed in 2003. Data analysis was done by Oregon State University.

Results: The data show that levels of choke disease in Oregon can range as high as 38% in severely affected fields. The average disease level in the 65 randomly selected fields is 9%. This translates into a direct loss of 9% of the potential seed crop, or approximately $1 million. It was discovered that spring-planted orchardgrass plots irrigated in June had remarkably high levels of choke disease in the first year of production. Replicated field studies testing irrigation as a disease factor continued in 2004. Several fungicides that are registered for use on orchardgrass were tested for their ability to inhibit disease development and all were determined ineffectual for this purpose. This information provided growers with the knowledge that using fungicides to suppress choke development, once present, is not effective. However, fungicides may be effective before infection occurs. Further testing and evaluation continued in 2004.

Project profile: Develop and test market of Oregon green beans in glass jars

Total grant applied toward project: $10,000
Total provided by other entities: $10,000
The project was initiated to develop a premium glass-pack of green beans for a major retailer. Product development, production line setup and test marketing were initiated. The prospective buyer did not like the packing in bottles when demonstrated. A second effort was made with pouch containers. The retail chain also declined the second packaging design. The project has proven that there is a market out there for this product and the growers have the ability to quickly and economically convert production practices to satisfy this market.
Conservation projects make a difference in 45 districts

Farmers and ranchers throughout Oregon are continuing to do their part in protecting the state’s natural resources with an assist from 45 soil and water conservation districts. Successful on-the-ground projects made possible by funding and direction from the districts are proving to all landowners in Oregon that conservation is good business.

The Oregon Department of Agriculture oversees the districts while funneling $2.4 million in technical assistance funds provided by the Oregon Lottery. That is just one source of the overall funding for SWCDs. Most of the money ends up helping individual landowners with on-the-ground projects in all 36 Oregon counties.

“There is a higher public expectation for clean water, environmental enhancement, and watershed protection,” says Larry Ojua, ODA’s program manager for soil and water conservation districts (SWCDs). “Districts are becoming conservation leaders in each of their communities.”

For 56 years, SWCDs have had the mission of promoting the conservation and wise use of natural resources. All geographic areas of Oregon continue to see the value of SWCD projects funded by ODA’s technical assistance grants or funds from other sources such as the Oregon Watershed Enhancement Board (OWEB), the U.S. Department of Agriculture’s Natural Resources Conservation Service (NRCS), and from private sources or the district’s own fund raising activities.

“The money pays for technical assistance in the field,” says Ojua. “Conservation experts are able to walk the land and talk to producers about the kinds of practices that can make a difference.”

Following last November’s election, there are now six SWCDs that have permanent tax rates: Yamhill, Polk, Benton, Marion, East Multnomah, and Wasco County. Local voters have seen the value of funding SWCDs to help educate, promote, and actually implement effective conservation efforts.

SWCDs often help landowners with grant proposals, which, in turn, pay for the design, installation, and materials used for a conservation project. Materials can include fencing, piping, shrubs, trees, or seeds. In other cases, SWCD funds are used for outreach and education — paying for workshops that teach landowners a variety of ways to take care of the land and water that sustains agriculture.

In any event, the diversity of Oregon is often reflected in the variety of projects undertaken by the state’s 45 soil and water conservation districts. Among the highlights:

• SWCDs in Wasco, Gilliam, and Sherman counties achieved an historic biological opinion signed by federal officials this past year which provides local agricultural producers protection under the Endangered Species Act when implementing approved conservation plans. This is the first biological opinion of its kind on private lands anywhere in the U.S. and is seen as a win-win for both fish and farmers.

• Tualatin SWCD and partner agencies designed new programs to relax some requirements and increase payments to landowners who plant native trees and shrubs along streams. Once installed, these programs will provide buffers along streams, improve fish and wildlife habitat, lower stream temperature, and stabilize the stream bank.

• Siuslaw SWCD, in collaboration with other local groups and organizations, won the prestigious Theiss International Riverprize — a kind of Nobel Prize in the field of river shed management — for a successful partnership that has greatly improved conditions in the Siuslaw Basin.

• Faced with continued water shortages in the basin, Klamath SWCD has helped farmers and ranchers plan and install more than $500,000 of USDA contracts for water conservation measures under the Environmental Quality Incentives Program (EQIP). In addition, more than 1,350 landowners and residents have received information and technical advice from the district regarding conservation and water issues.

• Baker Valley SWCD, partnering with other agencies, completed the Powder River Water Quality Enhancement Project, which allowed area landowners to remove 6,000 cattle from access to the river by installing 10 miles of riparian improvements, 110 watering troughs, and riparian fencing.

• Jefferson County SWCD replaced some 4,500 feet of open irrigation delivery ditches and canals with pipeline to stop erosion, nutrient and chemical seepage to streams, and loss of topsoil and water.

• Illinois Valley SWCD coordinated the planting of 26,000 native trees on 105 acres of private lands scorched during the devastating 2002 Biscuit Fire in Southwest Oregon.

• Douglas SWCD has been part of the effort to install water ponds and tanks to help in fire succession efforts throughout the county. Helicopters and tanker trucks will be able to draw upon these water sources during fire fighting season. The water sites also provide habitat for wildlife.

• East Multnomah SWCD has worked with other partners to establish the Naturescaping for Clean Rivers program which teaches mostly urban workshop participants the benefits of natural landscapes using native plants and water-friendly gardening practices.

• Wheeler SWCD helped a landowner replace a deteriorated and unsafe culvert with a new bridge and bottomless arch culvert. The new design eliminated the risk of a fish barrier and sediment entering the stream.

Each of the 45 SWCDs in Oregon have success stories to tell. Projects are not always visible to the general public, but the list is growing as farmers and ranchers around the state are helping to take care of the land and water that takes care of Oregon agriculture.

Fact sheets and profiles for all 45 SWCDs in Oregon can be found online at <www.oacd.org>.

Some hot topics we are watching…

BSE

USDA announces BSE test results and new BSE confirmatory testing protocol. For the most current information watch the USDA Web site. <www.aphis.usda.gov/lpa/issues/bse/bse.html>

West Nile virus

This mosquito-borne virus is expected to return to Oregon this summer. Now is the time to take precautions.

• Vaccinate horses

• Control mosquito breeding sites

• Protect yourself <oregon.gov/ODA/AHID/ahid_wnv.shtml>

Biotinix levels on Oregon beaches

Domestic acid levels have been elevated this spring and summer. For the latest on shellfish closure information, call ODA’s shellfish safety hot line toll free at 800-448-2474 or 503-986-4728 (Salem area).

Biofuels in Oregon

The state of Oregon is involved in the development of a biofuels industry and other alternative energy sources. For more information on this topic visit the ODA Web site: <oregon.gov/ODA/energy.shtml>
Announcements

September 7-8
Board of Agriculture, Newport

October 15
Ag in the Classroom Fall Harvest Dinner, Linn County Fair & Expo Center
<aitc.oregonstate.edu/events/dinner.htm> 541-737-8629

March 23, 2006
Ag Progress Awards Dinner
The Oregon Garden, Silverton

Get Oregonized
Oregon Agriculture in the Classroom Foundation (AITC) is very proud to announce the printing of “Get Oregonized: Oregon’s History, People, Natural Resources, and Agriculture.” Single copies $20 plus S&H • Boxes of ten $18 each plus S&H • Teacher’s Guide $25 each.
Oregon Agriculture in the Classroom Foundation, 105 Ballard Extension Hall Corvallis, Oregon 97331 • 541-737-8629
<aitc.oregonstate.edu/resources/oregonized.htm>

Field burning season
The 2005 Willamette Valley field burning season has begun. Grass seed and cereal grain growers frequently use field burning as a management tool to eliminate disease and reduce the need for pesticides and herbicides. The ODA Smoke Management Program regulates this practice in the Willamette Valley, with a few other areas of the state managing their own programs. The goal of the program is to allow growers the opportunity to burn, while protecting the public from smoke impacts. The public is encouraged to report any smoke they may be experiencing as soon as possible by calling one of the ODA “complaint lines.” The complaint line numbers are 503-986-4709 and 541-686-7600. Growers line: 503-986-4755.

Premises ID Program
The state of Oregon is taking the first step toward a nationwide program designed to identify all livestock, as well as track their movement and location. State Veterinarian Don Hansen encourages Oregon producers to participate in the voluntary premises registration program.


To register: <oregon.gov/ODA/AHID/animal_health/national_id.shtml>, or call Tracy Junge at 503-986-4694.