AN IDEA TAKES SEED:

Orchard is raising tamaracks

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LA GRANDE—Jamie Knight is the first to admit the idea behind the Blue Mountain Western Larch Seed Orchard Cooperative isn't a new one. But she's quick to add that it's an idea new in eastern Oregon.

Knight, a forester with the Oregon Department of Forestry, is leading a project that will yield the seeds timber producers need to grow Western Larch.

Root stock is in the ground at the Glen MacKenzie farm near Summerville and in a comparatively short time, Co-Op members will harvest seed-bearing cones. Project managers believe the orchard will start producing in 5-7 years, a much faster rate than trees in the wild.

"The same orchard concept is being done by the Canadian Ministry of Forestry, on a much larger scale, and there are orchards in other places in the Pacific Northwest. We didn't come up with the idea, but we copied it because there was a need to create something locally," Knight said.

Western Larch, commonly called tamarack, grows well in the region and its wood is highly prized. Straight-grained, knot-free, tough, durable and waterproof, the wood is used extensively in the building of yachts and boats. It's also considered ideal for the exteriors of buildings, and for posts sunk in the ground.

For producers, supply is always an issue. Under normal circumstances, obtaining seed cones for planting is a time-consuming and chancy process. Knight said that with larch, hazards like frost and insect infestation dictate cone production. The trees produce seeds about every 7-11 years.

In northeast Oregon, the timber management company Forest Capital Partners plants and grows western larch, and was more than willing to be a part of the orchard project.

Western larch, or tamarack, trees are highly prized for their straight-grained, knot-free lumber. A cooperative effort involving the Oregon Department of Forestry, Forest Capital Partners, U.S. Forest Service and other agencies has started the first seed orchard for tamarack in Northeastern Oregon. The orchard is in Union County near Summerville.

Knight said Forest Capital is paying 51 percent of the project costs and will get 51 percent of the yield. Other partners in the Co-Op include the Washington Department of Natural Resources, Lava Nursery, IFA Nurseries, the Oregon Seed Bank, and the Private Lands Forest Network.

Union County has a small, one percent share. The United States Forest Service is a cooperator in the project, having helped with the cost of the location and selection of parent trees.

Knight said discussions on the orchard got under way in 2008, and that one of the first items of

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business was to find a location. As it turned out, the Oregon Agricultural Foundation had eight acres for lease on the McKenzie farm.

The farm, formerly the home of the late Glen and Jean McKenzie, is overseen by the Foundation, a group founded by Glen McKenzie in the 1990s.

Jean McKenzie died in 1993, and Glen passed away in 2006. According to his wishes, the farm benefits Eastern Oregon University.

In 2007, the Foundation liquidated the cattle, machinery and equipment. Today, the croplands are leased while the Foundation, in cooperation with many agencies, concentrates on environmental stewardship.

The Cooperative secured the location for the orchard by the summer of 2009. The next step was for foresters to go out and select trees from which scion, new growth at the end of branches, could be harvested. Knight said the selection process was painstaking. The larch trees picked for the project had to be tall, healthy, robust and 50 years of age or more.

Once harvested, the scion went into refrigerated storage while the Cooperative worked out details of a grafting program. In the end it was decided that state foresters would do the grafting, using Lava Nursery's facilities near Hood River. Lava provided the root stock to which the scion is grafted.

Knight said grafted trees will grow faster and produce quicker.

"Essentially you end up with a one-year-old tree that thinks it's 50," she said. "In 5-7 years they'll produce cones. We'll harvest them and they go into the Co-Op."

Half of the grafted starts were planted in May, 2011, and the other half is slated for planting in April of this year — provided conditions are right.

"That's what I'm shooting for, but Mother Nature likes to play tricks on me," Knight said.

Knight said the project is a complex one involving a lot of hard work. For one thing, a fence had to be built around the property to keep animals out.

Also, each start has to be identified and tagged with a number, and a whitewash applied to the starts to prevent scalding by the sun. Since no water right came with the property, water is being trucked to the orchard, though there will come a time when that won't be necessary.

"Eventually the trees will establish a good root system," Knight said.

She said that since the trees are growing in a controlled environment, they should turn out to be more reliable producers, giving up more cones more often. They will be protected from frost and insects. Also, they will be topped, not allowed to grow more than 16-20 feet high.

"Research shows that when trees are topped, there is more lateral branch growth, and lateral branches produce more seeds," Knight said.

The tamarack seedlings planted last year had a survival rate of 90 percent.

Knight and her fellow foresters scoured the woods in Union, Baker, Wallowa, and Umatilla Counties looking for the right ones.

"We took GPS points, and measured height, diameter and age. It took us two summers to get 66 trees," she said.

Once the trees were selected, the next step was to harvest their scion. The easiest and most efficient way to do that, Knight said, was to take rifles and literally shoot the branch ends off. The method works well, though it's tricky. Knight said sometimes a branch gets caught on the way down and the process has to be done over.

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Jamie Knight of the Oregon Department of Forestry operates a trencher at the site of an orchard in Union county that will raise seeds for tamarack trees.

Oregon Department of Forestry photo

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Knight said the project is on schedule so far, and that last year’s planting enjoyed a survival rate of 90 percent.

Though several years of careful cultivation lie ahead, the end result should be worth the work. Because larch seed sells for about $450 a pound, timber growers and forest managers in the region will see a big benefit.

“It’s really cool to be a part of this project, because there isn’t anything like it on the east side of the state,” Knight said.

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— Jamie Knight, Oregon Dept. of Forestry