

Museum Volunteers Revived Vintage Engines



Frank Shurman and Vern Yeager (riding the open station) are two volunteers who help maintain and operate the 1912 Peerless U-1 steam engine at the Yamhill County Historical Society Museum.

Visitors to the Yamhill Valley Heritage Center in McMinnville, Ore. are often surprised to discover two restored and working steam

engines dating from the early 1900's.

A 1912 Peerless U1 steel-gear hauling engine was originally used to plow Oregon

fields. The engine was donated to the Yamhill County Historical Society (YCHS) about 20 years ago and it was restored by volunteers.

The second engine is a 1912 Aultman Taylor 20-60 that originally powered a nearby sawmill. The "20" in the name refers to the drawbar horsepower and the "60" is the belt horsepower. The museum has used the engine to power its thresher during three recent harvests.

Keeping the engines running smoothly is a continuing challenge says Eileen Brazil, one of the volunteer caretakers for the engines. "We listen for knocks, look for looseness, and address any problems we find. We must keep them greased and oiled, clean the wood ashes from the firebox, and drain water out of the boiler, making sure the boiler is dry to prevent corrosion and rust."

If the engines must be moved after the water has been drained, Brazil says that's done by using air from an air compressor to provide pressure to move the cylinder and therefore move the engine.

She says the engines don't travel off the grounds because moving them requires a low-boy trailer. They can't drive on paved roads because the steel wheels will damage the pavement.

Brazil became interested in steam power after working with gasoline engines. Her co-caretaker, Vern Yeager, has worked with gas and diesel engines. She adds that a volunteer master machinist, Frank Shurman, has machined and fabricated "countless parts" for the engines, because used parts are hard to find or, if found, are generally beyond repair.

"Working on the engines is fascinating because steam is very quiet and powerful," Brazil says. "When the steam engines are operating, you can still hear people talking and other equipment running, which is helpful during threshing demonstrations at the museum."

She adds that, unlike an internal-combustion engine that only receives power for the downward stroke, the steam engine's steam cylinder receives power on both sides of the stroke. "When a pollution-free heat source is provided, the entire engine is pollution-free. I hope we'll see more use of steam in the future."

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Rye Reclaimed From Chaff Pile In Barn

When Chris Teachout couldn't locate a commercial seed source for Balboa, an old Italian rye, he turned to an old chaff pile in the family barn. The seeds he found there have been multiplied in recent years, enough to seed an acre this past year.

"I remembered our family raising it for grain and straw in the 1980's and earlier," says Teachout. "I remembered it being high quality with a larger stem, early growth in the fall, and an early dormancy break in the spring."

Teachout has tried different varieties of ryegrass in his cover crop program, but none matched Balboa. Finding the seed was the problem. Teachout always seemed to be a year behind. He heard of a seed company that carried it. They told him their supplier quit the year before and retained no inventory.

"I found a distillery in Indiana that advertised a whiskey made with it, but the older farmer who grew it had a neighbor

combine it," says Teachout. "The combine operator did it and a neighboring field of rye at the same time, and the two ryes were blended in the hopper."

Then Teachout recalled the chaff pile that built up when bales were dropped off an elevator onto the barn floor. The chaff was still there, as was a small amount of seed, and it was still viable.

For the past 5 years, Teachout has been planting ever bigger plots. The Balboa is everything he remembers. Until he grew it out, his favorite had been Elbon.

"Elbon tests out at 13 percent protein, and Balboa runs over 15 percent," says Teachout. "Elbon averages around 29 to 30 bushels per acre, and Balboa averages between 50 and 60 bushels per acre."

Teachout admits Elbon, with its smaller seed, has more seeds per bushel. However, he sees other benefits for cover croppers from Balboa.

"It has a larger amount of biomass, which

is why we grew it for straw," says Teachout. "It produces clumps of stems versus Elbon and other newer ryes. Along with the bigger, coarser stem, Balboa roller/crimps better if you are terminating the cover crop."

Teachout believes it's fairly drought-tolerant as well. He planted into very dry soil last fall and had very poor germination. This past spring more germinated, and the rye took off. Unfortunately, his area was very dry this year as well. He got a crop, though not what he had hoped for based on previous years.

"We expected 50 bushels and got around 30," says Teachout. "We'll have enough for around 17 acres while keeping some in reserve. I figure with one more year under our belt, we should have enough seed to begin selling some. Our goal is to promote it and get it back into use."

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Elbon rye (left) and Balboa rye (right).



Transplanter can be set up with a variety of attachments and designs, such as placing a support stake with a bare root tree.

Transplanter Handles Tall Seedlings

Spading in bare-root trees, shrubs and vines isn't necessary if you have a mechanical bare-root transplanter from Spapperi. The Italian company specializes in precision agricultural

and forestry equipment.

"We have many solutions to offer from simple machines to much more complex machines with complete GPS/RTK control

systems," says Andrea Bernicchi, Spapperi.

The TN100 transplants big bare-root trees, up to 6 ft. in height, as well as trees in pots. The TN100 is only one of several transplanters offered by the Italian company that can handle large bare-root seedlings, as well as potted seedlings. It can be set up with a variety of attachments and designs, such as placing a support stake with a bare root tree.

At its simplest, the TN100 TSL consists of an opener, two press wheels that push the furrow closed around the roots and rolling coulters that ridge dirt up around the row of trees. Workers drop the bare root trees into the furrow ahead of the large press wheels. A variation uses the same design, but with one worker placing stakes as the other places the young tree.

A more complex and precise unit is the TN100 TT with its rotating placement mechanism. With it, the worker(s) place bare root seedlings from baskets at their side into retainers on the wheel. As the machine moves through the field, the opener creates a planting furrow, and the wheel rotates the roots into the furrow. Wheels to either side press the roots into the soil while keeping the stem vertical until closing wheels cover the roots with dirt. Press wheels firm up the dirt

around the roots.

The TN100 can be towed or mounted. The mounted version is compatible with Cat. II and Cat. III 3-pt. hitches. Its design allows the transplanter to flex with the terrain. Side support wheels ensure desired planting depth, and the GPS/RTK ensures spacing.

Bernicchi notes that the TN100 can be adapted to all types of trees. Bernicchi emphasizes that prices vary according to options and customization. The TN100 can range in price from \$32,000 to \$38,000 depending on how the machine is set up. GPS/RTK is extra.

Todd Harton is a U.S. distributor for Spapperi tobacco transplanters but notes that he can handle any Spapperi products.

"They manufacture very reliable products that we run on our own farm," says Harton. "I have a 6-row transplanter that has transplanted over 3,000 acres with very few repairs."

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