

New Inspection Station Improves Seed Testing at OSU

By JOHN SCHMITZ For the Capital Press

CORVALLIS, Ore. — Analyzing grass seed for undesired extraneous matter eight hours a day can be a real pain in the neck — literally.

It can also do a number on your back, shoulders, arms and wrists.

But seed inspectors don't have to put up with that anymore, thanks to a new inspection station now being used by Oregon State University. Called the MAT-OSU Ergostation II, the all-purpose system features a number of advancements that not only take the strain out of what can be a very tedious job but increase productivity as well.

The "MAT" in the name stands for the inspection station designer, Jean Mater, who has been working closely with OSU for several years to develop the purity testing units.

Essentially, Ergostation II is a modular seed inspection lab that can be "accessorized, like with clothing," said Brad Whiting, owner of OEM Inc. in Corvallis, the company that engineers and assembles the units.

So far, it has worked wonders at OSU's seed testing lab, said Adriel Garay, lab manager.

Before the new workstations were in place, the lab became overwhelmed with work in August and September, which is when grass seed is harvested in the Willamette Valley. As Oregon's grass seed industry has grown, this put even more pressure on not only on the OSU lab but on several private labs in the valley as well.

"The technology we had was not really capable of delivering timely testings," Garay said. "As a consequence we had backlogs and really long delays."

To add to the frustration, more than a few seed inspectors were complaining of neck, shoulder and back problems, said lab purity supervisor Sherry Hanning. "We had several people out with surgery on their backs. This new equipment has alleviated all of that."

Mater said that for years seed analysts have had to adjust their bodies and work styles to the equipment at hand. "Now we're accommodating the equipment to the analyst."

Playing an important role in the development of the new equipment was OSU senior seed analyst Richard Triplett. “Anything I didn’t like about it (the old as well as developing equipment), I worked with them (Mater International) to get it changed.”

Mater said that Triplett’s input was critical, to include some “small things that we never thought about, like the size of the (sample holding) tray.”

Before joining the OSU Seed Lab Triplett had had a back fusion, which didn’t stand up well to the old way of doing things, he said. “I don’t think I missed one day of the busy season this year. I stayed right with it every day, sometimes seven days a week.”

The boost in productivity that Ergostation II has brought to the seed lab has been immense, Garay said.

With the same number of analysts working this year as last, the lab has reduced its backlog from 20 days to less than five days this year, and sometimes in just three days, he said. This with no drop-off in analytical accuracy.

What this shorter testing turn-around means is that growers and/or handlers can not only move seed faster but will also have time to reclean it and ship on time at non-docked prices should impurity tests run high.

Triplett said that some common tests, such as for noxious weeds, take less than half the time, about 20 minutes, as they did before.

No doubt one of the biggest improvements in the Ergostation II is the incorporation of a microscope, which eliminates the need for analysts to bend over and peer through a magnifying glass to enlarge the seed.

Another big improvement is a hooded, stereo viewing device called the Mantis, which allows seed inspectors to sit up right, as opposed to hunching over, and also look down on seeds.

One of the big selling points of the new station is that it is designed to inspect seed while it is in motion. Instead of moving little bunches of seed around with a forceps, seed inspectors now watch as seed is moved slowly under their microscope or stereo viewing device by means of a vibrating feeder flanged on both sides.

A unique feeder feature is that it can be adjusted, depending on the size of the seed being inspected and the complexity of the inspection.

Yet another feature is the arm rests that stretch out on either side of the unit. “They’re adjustable, down or up, to the length of the person’s arm,” Triplett said.

Earlier in the evolution of Ergostation II, Mater International had developed a video feature for workstations that let analysts view magnified seed in motion. This is used primarily today as a teaching aid.

The seed lab itself has undergone upgrades, to include partitioned workstations and more ergonomic chairs, to make seed inspection a more enjoyable job.

Mater, a Columbia University graduate who earned her doctorate at OSU, has been helping the school improve its seed testing facilities for 30 years. She said that it has only been until recently that there has been major concern over the effects that repetitive operations have on workers.

OSU now has 11 Ergostation IIs in use, all used solely for purity analysis. Each inspection station cost around \$9,000 to \$10,000, depending on the modular equipment used.

While the new Ergostation II is being used for grass seed, Garay said that the inspection station has application in lots of other kinds of seeds, such as vegetable and flower.

“Anything that needs to be examined under a microscope on continuous flow to increase productivity can use this technology.”

Mater said development of the Ergostation II has been a good example of how private industry and universities work hand in hand. “And this is only the beginning.”

Mater International soon hopes to have an informational website up and running.

Because OSU played such a vital role in the development of the equipment, the school will be receiving a royalty from Mater International on each Ergostation II sold.

Mater and Garay will be introducing the new inspection station at the annual meeting of the Oregon Seed League in Portland in December and at American Association of Seed Analysts Convention in Seattle in 2003.

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