

New Porthole Device Eases Inspection and Cleaning of Combines

We all know that keeping equipment clean can greatly increase its lifespan, and this is especially true for the complicated machine known as the combine. With thousands of moving parts combines create lots of areas for seed and crop residue to lodge and eventually choke the system. And getting to these areas through the provided access panels is often difficult and time consuming.

Adding to this gunk-filled problem is a mess called crop residue.

Crop residue contains moisture and, if left in a combine, this moisture leads to corrosion. This corrosion can attract rodents that cause a variety of problems from disease to chewed-hydraulic hoses and frayed-electrical wiring.

“Cleaning combines is important for those interested in harvesting a variety of crops,” said Jerry Longren, a biological science technician at the Manhattan, Kansas, Plant Materials Center (PMC). “To aid in the cleaning of the combines at the PMC, I developed the “porthole” to provide access into hard to reach areas.”

These ‘hard to reach’ areas may not be as important to a farmer who only harvests wheat and corn, but to those harvesting a variety of small grains, native grasses, or native forbs, it becomes especially important, simply because leftover crop residue contains a substantial amount of seed material. And since all the National Plant Materials Program’s 26 PMC’s strive to produce the highest

quality seed for distribution to commercial growers, any device that can improve this process is welcomed and can be put to good use.

“It is critical that this material be removed to avoid contamination between crops, and is imperative when harvesting foundation seed as well as seed increase, and for scientific yield studies,” said Longren.



Installed Port Hole

source: Manhattan, Kansas Plant Materials Center

Many species of native plants mature at roughly the same time, creating a short window of opportunity for harvest. A faster turn-around time between harvests will increase yields by decreasing the amount of crop losses from ‘shattering’ (the process of seeds falling out of a seed head before harvest), and by

avoiding unfavorable environmental conditions that inhibit harvest.

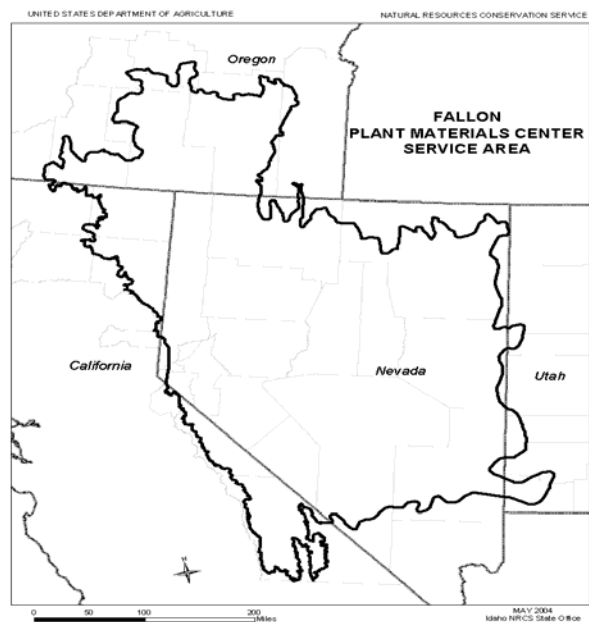
“These portholes can be placed strategically on the combine to aid in the inspection and cleaning, before and after harvest,” said Alan Shadow, an agronomist at the Manhattan Kansas, PMC. “This increases efficiency by decreasing the amount of down time for cleaning in between harvests, and allows for a more thorough cleaning, which decreases cross contamination between crops.”

For more information on constructing portholes contact: Jerry Longren, Jerry.Longren@ks.usda.gov, or Alan Shadow, Alan.Shadow@ks.usda.gov, Manhattan, KS PMC

Great Basin Plant Materials Center in Fallon, Nevada Closer to Reality

A proposed Great Basin Plant Materials Center, to be located at the University of Nevada, Reno's Newlands Field Laboratory, is one step closer to reality.

A lease agreement and memorandum of understanding between the University's Nevada Agricultural Experiment Station and the USDA's Natural Resources Conservation Service (NRCS), which will operate the center, were signed in December. The agreements define the terms of the lease and operational details between the University and NRCS.



Fallon, NV Plant Materials Center Service Area

"This agreement is very good news," said Senator Harry Reid (D-NV). "It will allow us to move forward on projects that will protect the fragile and

beautiful environment in the Great Basin and across Northern Nevada."

The existing PMCs that serve Nevada are too far away and too overloaded to provide adequate and timely assistance. Having a PMC located in Nevada will accelerate the revegetation, restoration and environmental enhancement efforts taking place in the Great Basin.

"We are pleased to be working with the University and other partners to build this plant materials center," said Richard Vigil, state conservationist for NRCS. "This center will focus on keeping the Great Basin ecosystem healthy."

Plant materials generated by the center will be used for purposes such as restoring lands after fires and preventing the spread of invasive weeds.

The Great Basin Plant Materials Center is the first plant materials center to be opened by the NRCS in 17 years. Sen. Reid secured federal appropriations to help create the center.

The University is working with NRCS to hand over the property. The University will retain the use of 28 acres of the property for its own use. The Plant Materials Center is in the planning stages. Though a lease agreement has been signed, it may take some time before the center is fully operational.

For more information on the new PMC go to:
http://www.nv.nrcs.usda.gov/Great_Basin_PMC.html

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