

Preparation Matters: Get Your Storage Ready for Harvest

With harvest season looming, it's time to make sure your storage facilities will support rather than compromise your tuber quality.

Start with inspection. Ideally, any major issues or necessary repairs were identified and rectified when last year's stored product was removed from storage this spring. If not, repairs must be priority one. Besides fixing obvious issues that could let in pests, moisture, cold and pathogens, check for loose insulation or metal, as well as any broken or jagged edges that could damage tubers.

Second, commit time to cleaning and disinfection. Remove all soil, plant debris and foreign materials. Use a magnet to sweep the floor for any metal debris. Then, use soap and a hot water pressure washer to wash and rinse the floors, ceiling, walls and entire air delivery system. Removing soil, potato juice, bacteria, pathogens, biofilms, etc. via this kind of careful washing is crucial to the success of your next storage season.

Disinfect following the product label instructions. Thoroughly apply the disinfectant, ensuring all surfaces are adequately covered (surfaces must remain wet for ten to fifteen minutes for optimal disinfectant efficacy). Rinse if required by the product label.

Third, ensure the air system is ready for the coming season: check the fans for balance and proper operation, ensure intake and exhaust air systems are operating properly, and calibrate all sensors.

Ideally, physically group the plenum, return, and pile temperature sensors together and check them at the same time against a known and calibrated thermometer or portable digital temperature probe. If it is not possible to place the sensors together, calibrate each sensor in place against a check probe/thermometer.

To calibrate wet bulb/dry bulb relative humidity sensors, remove the wick from the wet bulb and ensure it is dry. Check the 'dry' wet bulb against both the dry bulb and a check probe/thermometer; adjust if necessary. Mount a new wick on the wet bulb before dripping some clean, distilled water on the wick. Clean the wet bulb water reservoir and fill with clean, distilled water.

To calibrate electronic humidity sensors, use a psychrometer or a calibrated portable RH meter to verify the sensor is correct. If necessary, replace the sensing head or return the sensor to the manufacturer for calibration.

To calibrate a low plenum cutout/frost protection sensor, adjust the control knob until you hear a click. Using an accurate thermometer or probe, verify that the click occurs at the temperature displayed on the knob. If the sensor click is not accurate, either use an offset when setting the sensor or replace it.

Next, service your humidification system. Depending on your system, you may need to remove debris and mineral deposits that block the humidicells' airflow, ensure your spinners' motor is balanced and adjust the water flow to the smallest particle size possible, or ensure proper misting of your nozzle system and replace any filter cartridges.

Finally, give the entire system a trial run to ensure every component is running smoothly.

