

Building maintenance in sweet potato storages by ACT/BTU- simple guideline, (we assume no responsibility of any kind).

End of storage season:

- 1) Drain climacells/evaporative coolers (if present), clean inline filters- pump upstream line
- 2) Check nozzle operation, drain high pressure filter system and replace filters as needed (please check system recommendation with the manufacturer or installer of the equipment)
- 3) Preferably drain humidifiers if water tanks are installed, clean tanks from debris
- 4) Turn off variable speed drives if present, they can be damaged in the summer time due to power surges and lightning strikes (direct hit would be most damaging)
- 5) Clean electrical rooms from dirt/dust and debris, do not wash as you can damage el equipment
- 6) Keep storage closed to prevent bird migration or install bird nets in loading doors to keep storage open and use ventilating system to dry it off (this may be done when outside temperatures are higher – June/July/August), you can source bird nets online inexpensively
- 7) Wash and disinfect storage floor and walls if possible
- 8) Remove bins and stack outside, let them bake in the sunlight and possibly wash them out if disease/breakdown/dirt was rather excessive, place bins back in the storage after a while
- 9) Clean refrigeration drain pans (if any), water drain lines and storage drains- if needed
- 10) Vent out fan house to dry it off during dry/warm weather
- 11) Set the refrigeration systems to “pumpdown” mode or have refrigeration technician shut it down and disable the power (if present)
- 12) Inspect ventilation fan guards check for breakage – it may be an indication of the fan being out of balance, that situation can also cause fan frame damage in some cases or fan housing can crack in places

Storage/Building maintenance- post storage:

- 1) Inspect the building structure for holes, dents, rips due to high wind
- 2) Inspect ceiling/side walls for holes and rips, repair if necessary
- 3) Check roof (especially if had roof leaks during storage) for broken off screws- screw heads) seal off with roof patch if needed, if too many are broken off may need to re- fasten as well
- 4) If no cavity system is present there are roof vents that need to be checked for operation(if present)
- 5) Outside side walls and perimeter of the building - check and clear any dirt build up against the building to minimize side panels/wall rusting due to dirt immersion, weed control is important around the building to keep rodent present down and minimize fire danger in dry months
- 6) Inspect structural part of the fan house- walls, frames, check for detached sheets of metal, refasten if needed
- 7) Wash fan house walls and floor – this will free them up from chemical residue, bugs, if possible wash storage and plenum walls as well- hot water preferred, clean ceiling from spiders/ nets

- 8) Inspect frames, beams and walls for rust, use rust inhibiting chemicals and seal with paint or other sealing materials (urethane foam)
- 9) Wash refrigeration coils- preferably hot water near steam wash – this can be done by an outside contractor – low pressure nozzle should be used to produce low pressure hot water to remove chemical and organic residue
- 10) Condensing unit outside is a steel coil and regular water wash with a flat stream nozzle can be used to comb out condenser coil, wash should be started from top, then bottom then top again to remove all the dirt from the inside of the coil
- 11) If dirt floor level/correct/ bring new layer if possible
- 12) Once climacell tanks are dry clean out all dirt with dust pan/finish with dry vac, if cannot dry it out use wet vac to clean (if present)
- 13) Inspect the loading/walk in doors for faulty hinges and door latches, repair as needed
- 14) Often in sweet potato storages sensors are placed below the ceiling (they need to be dusted off and all spider nets should be removed- use care)
- 15) If wooden air walls are present check for warped wood, refasten or replace once wood is dry
- 16) Inspect all electrical systems or have your electrician inspect them for you, most warehouse fires are electrically related and could be prevented by maintaining electrical system correctly, if conduits need to be replaced preferred is PVC conduit
- 17) Sweet potato storages with high storing temperature and high humidity provide ideal conditions for rust to develop, all equipment should be non- metallic, galvanized, with baked paint if possible
- 18) Check any belt driven fans for tension, broken/ripped belts, replace if needed or tighten
- 19) If any electric motors need to be replaced please use totally enclosed type if available
- 20) Clean heatsink of variable speed drives – please check with your ventilation specialist how to

Pre storage maintenance:

- 1) Have your ventilation company check your system and correct any issues prior to start up
- 2) Run floor magnets to pick up any metallic matter, check for any glass or debris if present
- 3) Spin humidifier head by hand before starting (if present) they tend to seize when not in use
- 4) Re-humidify building, run system for 2-3 days prior to storage start, this will also assure that all equipment is operating correctly, run refrigeration system if necessary
- 5) Storage disinfection of the storage can be done using some type of fogger system/ orchard sprayers work well to drive thru bays or spray walls with water/disinfectant mixture
- 6) Refill climacells/humidifiers with water and check for any water leaks- water lines and water tanks
- 7) Check operation of any overhead fans or circulation fans, any slow speed fan with installed fan guard can have small plastic ribbon tied – good indicator to assure that fan is operating
- 8) Please note that ventilation technicians check storage for short period of time and address any issues found, running storages for few days especially in in storage like conditions may bring up other issues that may not show during regular check – such as – moisture affecting electrical (such as motors) or electronic equipment (sensors – temperature, humidity,CO2, other)