## OPTIMIZE YOUR POTATO STORAGE CLIMATE





## WHAT IS THE PURPOSE

### **OF THE VENTILATION SYSTEM?**



#### TEMPERATURE

HUMIDITY

AIRFLOW





## **REMOVE** The heat of respiration.

HEAT GENERATION = 1 to 22 million BTU / 5,000 Ton / Day

## **REMOVE CARBON DIOXIDE**

### **CO2 Evolution** –

1 to 12 Ton CO2 / 5,000 Ton / Day







#### **POOR QUALITY**

#### **GREAT QUALITY!**

## OTHER THINGS TO CONSIDER

## **POTATO QUALITY -**

- ✓ Shrinkage
- ✓ Disease Pressure
- ✓ Sugar Accumulation
- ✓ Energy Use Efficiency

## **CONTROL PANEL**

#### FEATURES OF THE AGRI-STAR:

- □ Controls plenum Temperature to within 0.1<sup>○</sup>
- Automatic and manual humidity control
  - **Controls both Humidifiers and/or ClimaCell**
- Automatic and manual control of fan speed
- Automatic and manual CO2 control
- Automatic and manual condensation control







# **POST-HARVEST STORAGE MANAGEMENT**



## CRITICAL TIME PERIOD First 2-4 Weeks of Storage

IMPACTS: Disease / Rot Potato Quality Shrinkage Pressure Bruising



#### **KEY MANAGEMENT DECISIONS**



## **POST-HARVEST** STORAGE MANAGEMENT

## WINTER HOLDING

### □ RAMP RATE from CURING TEMPERATURE How Fast? (As fast as the Delta-T will allow) Factors to Consider: **Cooling available** (Outdoor temps) Sugars Final Holding Temp depends on the anticipated end use.

### HUMIDITY MANAGEMENT

- As much as possible without free water or condensation.
- Monitor pile for disease pressure and adjust the humidity management.

### AIRFLOW VOLUME

• Run 24-hrs a day with as little air as necessary.

## **SPRING/SUMMER**

### **TEMPERATURE**

- If you have refrigeration get it started BEFORE you need it.
  - The biggest mistake is to get behind, before you start the refrigeration.
- Watch Delta-T when it gets above about 2<sup>°</sup>, action is needed.
  - Set outdoor air control to use return air as a reference. This will increase runtime.
  - If Delta-T continues to spread, consider raising the setpoint to get more runtime.

## HOLDING

### **HUMIDITY MANAGEMENT**

- As much as possible without free water or condensation.
- Monitor pile for disease pressure and adjust the humidity management.

### AIRFLOW VOLUME

- Run 24-hrs a day with as little air as necessary.
- If running refrigeration make sure the fan speed is set for the optimum speed for the evaporator coils installed.

### **CO2**

• Monitor CO2 levels and set panel up to purge. Either on manual or auto.

## SEASON LONG STORAGE MANAGEMENT

#### Is CRITICAL to SUCCESS!





## Of the Climate Control points, what is the most important?



