

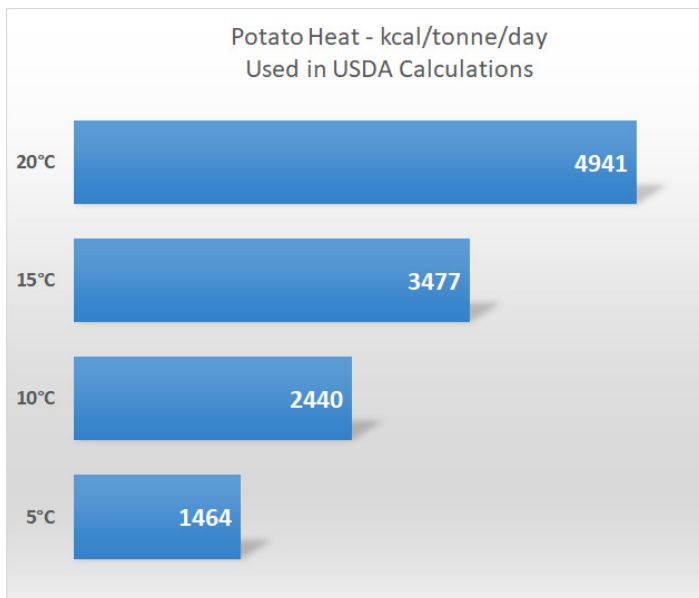
KOOLJET – a Potato Story

For more than 16 years KOOLJET has worked with potato farmers and processors across the globe. We pioneered many important developments in correct cooling methods and energy-efficient approaches.

Why are Potatoes Different?

Tubers may be stored up to a year. In the storage pile, temperature is the single most important factor for product quality. Respiration, sprouting, water-loss, humidity, surface healing and disease are all greatly influenced by uniform temperature.

The USDA data below demonstrates that potatoes generate vital heat in direct proportion to temperature. And controlling heat affects freshness, sell-able weight and the appearance of potatoes.



The Potato Cooling Profile

Potatoes must be cooled correctly for the sugar level desired. Some varieties and end-products require very slow cooling. Freeze damage and shock can result from too rapid a cooling regime, resulting in excessive sugars and a reduction in acceptable product quality.

Evaporators and Fans for Potatoes

Any refrigeration system dehumidifies the air. KOOLJET controls air velocity across a specially designed coil with minimal temperature difference between the coil temperature and potato pile. This prevents water drop-let carry over and condensation on the product while assuring maximum relative humidity. The coil and fan design results in less water loss and higher tuber quality. Further, if sprout-Inhibitors are used, KOOLJET can provide **Hypoxy** coated coils to avoid aluminum attack by the Inhibitor Chlorides.

Uniformity of pile temperature and humidity is vital. KOOLJET pioneered multiple, redundant variable-speed fans to assure correct temperature, humidity and air movement are maintained. A well positioned array of Through-the-Wall packages is an effective approach to pile cooling, and is cost-effective to install and maintain.

The Potato Curing Process

Potatoes that will be stored require a curing process upon harvest where tubers are kept at 20 °C (68 °F) with humidity between 90-100%. Curing is commonly recommended to stimulate suberization, promote wound healing and reduce respiration. KOOLJET equipment can be programmed for Curing-Mode and Slow-Pull-Down Mode for these requirements.

Potatoes harvested in fall may already be cooler than the curing temperatures. Respiration in storage will release heat and moisture and KOOLJET manages this vital period of control using sensors, fresh-air dampers and ample air flow.



Proven Refrigeration Technologies

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