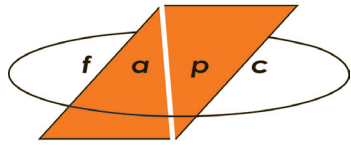


Food & Agricultural Products Center



FLASH!!

OKLAHOMA STATE UNIVERSITY™

April 12, 2005

Proven Technology Eliminates Condensation Problems

STILLWATER, Okla. – Oklahoma food processing plants that use refrigeration, primarily freezers, are faced with moisture condensation on cold surfaces and condensation dripping from high-humidity air.

Proven technology is available that could eliminate the condensation problems and help in the control of high airborne microbial counts. The Food & Agricultural Products Center on the Oklahoma State University campus in Stillwater, Okla. wants to alert Oklahoma food processors of this useful technology.

"Humidity control equipment can be used to remove moisture from air, resulting in dry air that won't condense on cold surfaces," said Tim Bowser, FAPC food process engineer. "Dehumidified air can be swept over surfaces that are normally prone to condensation, drying off any water or frost. Keeping surfaces dry and clean can reduce the potential for mold and bacteria growth."



Eliminate frost near freezer doors.

Food processing plants should consider installing a dehumidifier if they suffer from moisture condensation problems that lead to:

- Frost on freezer doors
- Slippery floors due to frost or condensation
- Rain from ceilings, especially

in USDA-regulated facilities

- Frequent defrost cycles for refrigeration coils
- High airborne microbial counts
- High refrigeration utility costs.

"About five years ago, the FAPC installed a dehumidifier to reduce condensation problems that were occurring in the second-floor processing areas," Bowser said. "The USDA has zero tolerance for condensation in inspected areas."

Dehumidification systems are normally installed near the source of moist air, such as dock doors, where the invading, moist air can be quickly captured and dehumidified, Bowser said.

"Another key location for installation of air dryers is the space between the cook, or process room, and a spiral or walk-in freezer," he said. "Warm, moist air from the product cookers or from the 'kitchen' area can enter the freezer, causing frost on surfaces and frequent defrosting of refrigeration coils."



Food plants are wet environments. Remove moisture with dehumidification.

Dehumidification can eliminate the need for hand-chipping frost, defrosting coils, slippery surfaces and condensation-induced rainfall.

“Humidity control equipment can be used to remove moisture from air, resulting in dry air that won’t condense on cold surfaces.”

Tim Bowser
FAPC Food Process Engineer

“The benefits of dehumidification include USDA compliance, reduced labor, reduced defrost cycles, reduced microbial count and improved temperature control,” Bowser said.

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Ed Miller, Interim Dean and Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of \$140 for 1,000 copies. 0405 MHG.

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