

Kosovo: A Developing Market with Export Opportunities

A key part of the mission of WFLO is to build the technical capabilities of cold chain operations around the world to foster increased import and export trade of perishable foods.

In Kosovo, which recently claimed independence from the Republic of Serbia, the opportunities in this area are particularly evident.

The country is one of the world's leading producers of mushrooms, and growers and food companies are working diligently to improve facilities and cold chain operations to extend the shelf life and export capacity of this and other produce grown in Kosovo.

WFLO recently participated in a U.S. Agency for International Development (USAID) project in Kosovo, where it conducted a complete evaluation of cold chain operations at 12 companies.

WFLO also led a technical seminar in January 2008 that helped educate growers and food companies about ways to improve their operations.

Hank Bonar and Casey Carter (now Casey Bonar) of Bonar Engineering and Construction Company, based in Jacksonville, Florida, USA, conducted the seminar and evaluation of cold chain facilities and delivered their findings to

IARW-WFLO.

"Currently, the efforts of entrepreneurs in the harvest of mushrooms, fruits and vegetables vary widely," Bonar reported. "The facilities being used to accomplish the process also vary significantly."

Report findings included the following observations:

- **Physical facilities:** These vary from very small receiving areas with no cold storage and stores with no formal sanitation policies to fairly well laid out rooms with processing rooms, storage, and freezing tunnel rooms. All the facilities reviewed were placed on grade (not dock height). Some of the facilities had provisions for amenities such as floor drains, lights, etc.
- **Freezing capability:** Most facilities did not have freezing capability. Those that did had a room set up that would generally freeze products overnight or in 4-6 hours. Freezing was normally done in trays, stacked in front of, or below, air units. Frozen product would then be placed in plastic bags, or plastic lined boxes for shipping.
- **Product grading ability:** Grading of mushrooms was common. Some



A "freezing box" used for blueberries at a handling facility in Kosovo.

sizes and species were selected for fresh, while others were sliced, dried and/or frozen.

- **Market opportunities:** It would appear that almost all products which lend themselves to freezing could enjoy better market prices if frozen goods sold during "off-growing season" times of the year.
- **Production capabilities:** While most perishable products in Kosovo are season-dependent, mushrooms can be grown year-round. This can provide year-round employment.
- **Packaging capability:** To provide a finished product future facility construction would need to address such things as grading, washing, and sanitation standards. Product packaging could be a continual source of revenue, where frozen product can be packaged and moved to market continually.
- **Distribution capacity:** Some processors had refrigerated trucks. Depending on the market, the capacity to deliver may be a desirable value-added service.
- **Facility sanitation:** For "collectors" of fresh product, this may not be a concern. However, as value-added services are provided, the facilities may need to consider requirements for sanitation standards.
- **Storage capacity:** Storage rooms would be needed to provide processing storage capacity so yearly production can be packaged throughout the year. Overall efficiency of processors can be enhanced by year-round operations.

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At this house, the owner serves as a "collector" of fresh produce such as mushrooms, which are then picked up by trucks and transported to retail outlets.



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Availability of electrical power will affect the efficiency of freezing operations. Generators can be used when power is not available, but this will increase operating costs.

The report noted that while all producers buy from local “pickers” and harvesters, availability of labor fluctuates. Generally, harvest occurs when school students are available to assist with the exception of one company that is able to employ local people year-round.

Freezing of perishable products, generally a seasonal occurrence, could be provided at all facilities, although some would require significant changes or the construction of new facilities for both freezing and storage.

Bonar advised those producers thinking about constructing new facilities about best practices for wall construction, as well as general concepts, such as sani-

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tary advantages of dock height.

“These changes are all achievable for the processors,” Bonar said. “The basic designs we reviewed in the seminar, such as dock height facility, process flow pattern, freezing rooms and basic amenities would put the processors well on the way to providing efficient operations including freezing, handling, and storage.”

Finally, one of the missions that WFLO pursues is establishing associations for manufacturers or others in cold storage business in nations such as Kosovo. While Kosovo does not yet have a national association, growers and food companies agreed one should be created. A few of the companies participate in annual meetings and programs in Yugoslavia held by an organization called KGH, where they learn about various topics such as climatization, ventilation, and heating/cooling. 