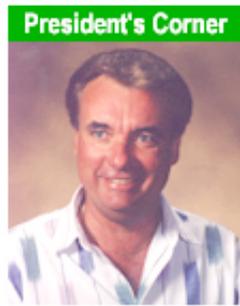




*Learning proper ethylene management is like most any other area of agriculture - it requires a gradual education process. In fact, packers, shippers and retailers who handle fresh fruits and vegetables on a regular basis are discovering rather quickly that keeping ethylene levels down through the entire shipping and storage process is critical to maintain freshness and quality of their goods. Our team is available at any time to help you with your ethylene management program or questions. Call us at 1-(800)-200-1909.*



#### Upcoming Events

**PMA Convention & Exposition** - Oct. 11-15 World Congress Center - Atlanta, Georgia

**Food Processors Int'l Exposition** - Oct. 20-23 Moscone Center - San Francisco, California

**Eurofruit Congress** - Oct. 23-25 Royal Lancaster Hotel - London, England

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## Engler Is EC Specialist For Chilean Imports

Mike Engler, president of the Engler Corporation based in Post Falls, Idaho, has more than a dozen years experience in the Chilean fruit business. After several years of representing exporters and importers of Chilean fresh fruit, Engler now works exclusively as a consultant and management specialist to address the ethylene problems encountered by those who ship and store Chilean fruit in the United States.

"I made a transition about two years ago to focus on ethylene control," said Engler. "Almost all Chilean fruit is destined for export and ethylene control becomes an important issue. EC concern must begin with the farmers, and be followed closely by the packer, shipper and the receiver. It is similar to the temperature issue - if the cold chain is broken, the fruit quality suffers."

About 50% of Chilean fruit goes to the U.S. The remaining supply is shipped to the Far East, Europe, the Pacific Rim and the Middle East.

Engler works with between 15 to 20 Chilean fruit companies, most with corporate offices in Santiago. Valparaiso is Chile's major port servicing the fruit industry. As a Southern hemisphere country, Chile supplies fresh fruit to Northern hemisphere countries during the off season.

"Chileans are going through a major period of adjustment to update some of their older fruit varieties and are finding ways to improve fruit quality for consumers," said Engler. The majority of importers in the U.S. use ethylene control technology and many exporters in Chile require that their fruit be stored in environments where ethylene management is taken into consideration once it arrives in the U.S.

Before starting his own firm, Engler worked in Philadelphia and Los Angeles as a representative for David Del Curto S.A., the largest Chilean-owned fruit company; for Frutexport and Frucentro; and for C & D of Chile.

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## Lubbock Packer Sees Banana Bonanza

Watson Food Service, Inc., of Lubbock, Texas is devoting a full year to celebrating its 50th year in business, an ongoing observance which will culminate in a big food show in October '96.

H.C. Watson started his company in 1946, carrying only bakery goods. Today, William H. Watson, son of the founder, runs the firm, an employee-owned broad line food service distributorship with 150 employees, servicing accounts with fresh produce, fresh and frozen meats, fresh dairy, bakery goods and all dry grocery and non-food products. They run 22 trucks per day across Texas, Southern Oklahoma and Eastern New Mexico.

George Hardwick, produce manager for Watson, said through the years, they have had their problems with spoilage of fruit in storage, but solved it a couple years ago when they discovered Ethylene Control.

"We cut our spoils down 65 to 70 percent. Because of our warehouse situation we have to keep all our produce in two rooms, one at 52 degrees and about 70 humidity, for our tomatoes, bananas, citrus and such," said Hardwick. "Spoils in that room have gone from about 6 percent to less than 1 percent, a drastic change that has made a big impact on our bottom line."

Watson's has a 195,000-square-foot warehouse and 4,000-square foot produce room. Hardwick took about 15 pounds of green bananas and set them on the far end of the room from the EC-3 machine and put a date on them. They were in the cooler for two weeks before we had to throw them out. Before we had the machine, the bananas would have lasted about three days.

"At times, I threw away more bananas than I sold and that's the honest to God Truth," Hardwick declared. "I had to order bananas everyday because they ripened so fast. Now I place orders about three times a week. It makes it easier to manage and we've increased our volume more than four times in the past year."

"Customers noticed the difference. Sometimes we had to write credits on as much as 50 percent of the bananas we shipped. The only credits I write now are because they might receive them too green.

Watson couldn't keep tomatoes very long either. Now they handle about 800 cases of tomatoes a week, up about 30 percent. They no longer handle gas green tomatoes; only vine ripe, he said.

Hardwick noticed certain times of the year there was nothing they could do about gray mold rot in lemons, a malady that usually hits toward the end of the crop year. With proper ethylene management, however, he reported having only one or two moldy lemons. Without EC he said he would have nearly two dozen spoiled lemons.

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## New Products & Uses

**A recent Brogdex Company tech service memo outlined the effectiveness of Ethylene Control products in overseas shipments of citrus fruit. In open-hold situations, a 9-gram sachet in each carton was very successful for Central California navel shipments last season. For container shipments, 18 by 7-inch filters are placed in the unit. While the filters are more economical, sachets have the advantage because they remain with the carton all the way from the packinghouse to the retail market.**

**According to the memo, stand-alone filtration units greatly, reduced the ethylene level in citrus storage rooms and pre-coolers. The units have been successful in maintaining ethylene levels at levels equal to or lower than those achieved by more expensive competing methods. In addition, independent tests**

show the EC system destroys airborne mold spores.

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## Controlling Brown Rot In Stone Fruit

Stone fruit is susceptible to brown rot diseases caused by *Monilinia fructicola* and *M. laxa* in North America. The disease occurs on peaches, nectarines, plums, prunes, cherries, apricots and occasionally apples, according to a report by University of California plant pathologist Themis J. Michailides and James E. Adaskaveg in the [Central Valley Post harvest News](#).

Proper crop management before, during and after harvest is important. Growers should keep orchard floor free of vegetation by discing. Researchers have determined that the more nitrogen applied the more brown rot will develop. Applying the recommended bloom sprays (Funginex, Rovral or Bravo), can lower the incidence of blossom blight and thus reduce the spore inoculum produced. A second or third spray may be required depending on the weather. Spring and early summer sprays of green fruit reduce both the incidence of disease in the field and post harvest. Apply preharvest sprays (91-2 weeks or 1-3 days before harvest) as recommended for registered fungicides.

### Harvest Procedures Critical To Protecting Fruit

Since mature fruit is the most susceptible to infection, don't delay harvest. Avoid bruises on fruit during harvest, transport and packaging. Use clean picking bags and bins that have protective pads on the sides and bottom. If it rains, allow fruit to dry on the tree before picking it.

Following harvest, fresh fruit should be cooled as soon as possible. Most packing facilities use forced-air or hydro cooling systems to precool the fruit before post harvest treatment and packaging. Fruit should be washed thoroughly with chlorinated water to remove dust, disinfect fruit surfaces and prevent contamination of other fruit with fungal inoculum which may be in the wash water.

### Applications Registered Post harvest Treatments

Currently, no post harvest fungicide is registered for brown rot control since the cancellation of iprodione (Rovral 50WP). Iprodione, however, can be used for brown rot control until existing supplies are exhausted. Dicloran (Botran or Allisan) is the only fungicide currently registered for post harvest use against Rhizopus rot and gray mold on stone fruit crops.

Authorities suggest using boxes for packing fruit with the necessary ventilation openings to help maintain the fruit in cold storage without excessive loss of moisture.

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## Ethylene Table provides guidelines

[Ethylene Table provides guidelines](#)

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*"At certain times, we would throw out more bananas than we would sell. The fruit simply ripened too fast and*



What People Are Saying...

would not hold."

**Watson Food Service, Lubbock, Texas, George Hardwich, produce manager**

*"After seeing the EC-3 filtration system working in California, we installed our own unit and are already seeing a big difference in the holding quality of our pears."*

**Pride Packing Company, Wapato, Washington, Sherry White, warehouse manager**

*"Adams County Five Star School District in Colorado used EC filters in their walk-in cold box and discovered they no longer had to throw away large amounts of produce on Monday morning because it didn't spoil over the weekend as it had in the past."*

**Shamrock Foods, Denver, Colorado, Don Middaugh, produce manager**

**Which one would you rather eat?**

Without Ethylene Control FreshPak      With Ethylene Control FreshPak

**Ethylene Control puts you in control**

Fruits and vegetables last much longer when shipped or stored with Ethylene Control products. Help assure that arrivals will be fresh while stretching the shelf life.

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