

## **Ripe Revolution**

Kathryn Murphy and Dennis Khilstadius

California Avocado Commission, 1251 E. Dyer Road, Suite 200, Santa Ana,  
CA 92705, USA

The purpose of this seminar is to describe the objectives and techniques of the Ripe Avocado Program promoted by the California Avocado Commission (CAC). The national Ripe Program is designed to enable retail and foodservice accounts to achieve a consistent degree of ripeness in their avocados throughout the season. Accomplishing this goal represents an important opportunity for accounts to increase their sales and maintain their customer base.

Prior to the development of the CAC Ripe Avocado Program, the ripening process of avocados was initiated by avocado packers at their packinghouses. The packers recognized the importance of the market for ripe avocados, a market that was largely being ignored up until then.

The packers knew that the process of ripening avocados with ethylene gas was not difficult and is very similar to that used for ripening bananas and tomatoes. At CAC we added some marketing and merchandising tools to formalize the program and to enhance its effectiveness at the retail level.

Please note that while all varieties of avocados can be ripened with ethylene gas, we only recommend that it be used with the 'Hass' and 'Pinkerton' varieties. Other thinner-skinned varieties break down quickly and tend to show a lot of bruising and scarring at the retail level after ripening.

Whenever we present the Ripe Program to an account, we are faced with a variety of questions about its effectiveness and implementation. We are sure that most of you have exactly the same questions, so we thought we would begin by answering them.

The first question is why accounts, both retail and foodservice, should participate in a ripe avocado program. The primary reason is that no account that handles avocados has control over or knowledge of all of the many factors that affect the quality of the fruit purchased. For instance, a shipment may contain fruit from a number of different groves, each with its own set of growing conditions. There is simply no way to determine the amount of rainfall the fruit received, how long it remained in the field before harvest or the temperature at which it was transported. Alone and in combination, each of these factors makes it difficult, if not impossible, to determine when the fruit will ripen on its own. Using ethylene gas to initiate the fruit's ripening process as part of the Ripe Avocado Program provides an effective and profitable

means of controlling ripeness and increasing sales velocity for both food-service and retail accounts.

Maintaining consistency of ripeness at retail is important because avocados, like all fresh fruits and vegetables, are purchased largely on impulse. When the fruit looks good and is ready to eat, more consumers will purchase it on the spot. In fact, current research indicates that the availability of ripe avocados at retail simplifies the buying process for the consumer and helps to "close the sale". This is increasingly true in the current economic situation, as two-income families shop more frequently for immediate or near-term use. If a ripe avocado is not available when today's shopper is looking for it, the sale is lost.

Perhaps a more compelling reason for an account to participate in a Ripe Program is that the addition of ripe avocados to the produce section has been consistently shown to increase sales by at least 30%. This significant increase in volume not only improves profitability for the retailer, but also benefits the grower, shipper and distribution center by moving the fruit through the system faster.

The effectiveness of a Ripe Avocado Program can be improved by labeling the fruit with ripe stickers. Indeed we have seen situations in which ripe avocados, identified with "Ripe" stickers ~ priced higher than nearby unripe fruit, outsold the unripe avocados by a solid margin. Consumers prefer and respond well to clearly marked ripe fruit, even when it is priced at a premium to unripe fruit. We believe this is due to the fact that "Ripe" stickers help both frequent and infrequent purchasers of avocados. Those buyers less skilled in buying avocados use the stickers to guide their purchase selection, while those more skilled appreciate the time saved by an account designating ripe fruit for them.

The issue raised most frequently is inventory shrink or the amount of fruit that may have to be discarded due to over-ripeness or damage. This concern is especially common in our developmental markets, the Midwest and the east coast. In these areas retailers are not as familiar with avocados as they are in the western United States. As a result, they are concerned that the fruit will become too soft too quickly, making it unsuitable for selling. Our response to this concern is a solid "no problem". The Ripe Avocado Program does not create shrink.

In fact, the Ripe Program enables the trade to control when and how quickly the fruit will ripen. An account familiar with the Ripe Program can order avocados with great confidence about the degree of softness and the quality of the fruit to be received. They know the fruit will not pile up in the backroom. They also know that the availability of ripe fruit at retail stimulates consumer purchases, increasing the speed at which the inventory is turned and eliminating the threat of shrink.

As discussed, the Ripe Avocado Program benefits every link in the freshness chain: the grower, the shipper, the distribution center, the retailer and finally, the consumer. As a result, the California Avocado Commission has made the Ripe Program an integral part

of its merchandising efforts. The CAC provides program participants with all the tools they need to make the program work, including: pulp thermometers, manuals detailing ripening procedures, retail handling charts and ripe stickers. Accounts receive retail-training seminars and individual training sessions as needed to educate key personnel in the proper handling, ripening and merchandising of avocados. In addition, CAC offers promotions and incentives such as national display contests to the trade to encourage ongoing involvement in the program.

The success of these efforts speaks for itself. Less than 10 years ago the Ripe Avocado Program was nearly non-existent. Avocados were merchandised in their hard, unripe condition to avoid any threat of shrink. Today, there are more than 130 accounts in the United States on the Ripe Program, and the number is still growing. The positive results experienced by those in the program are often reason enough for new accounts to join. By way of example, we would like to share with you two short case histories of the success of the CAC Ripe Avocado Program. In the early stages of the program two major supermarket chains, Kroger and Safeway, were approached with the concept of merchandising' ripe avocados. Tests were subsequently set up with the Safeway division in Landover, Maryland and the Kroger division in Cincinnati, Ohio.

At the outset, the Safeway stores on the east coast received avocados that were ripened with ethylene gas by packers in California. But Safeway soon found the condition of the fruit too difficult to control when ripe fruit was shipped across the country. This prompted them to start ripening the avocados in their banana ripening rooms at the local distribution center. With the help of in-store merchandising, avocado sales increased, and the program was expanded to other locations. Today, nearly all Safeway divisions are on a ripe avocado program.

Kroger handled their Ripe Avocado Program a little differently, as they chose to have a local wholesaler ripen avocados shipped unripe from California. Strong merchandising activities were used in support of the ripe fruit, and the pilot program led to a 25% increase in sales of California avocados. Based on this success Kroger developed a Ripe Program for each of their divisions, modifying it to suit each area's needs and capabilities.

There is a strong relationship between current market conditions and the response from produce buyers to precondition avocados.

When market prices are high, buyers are afraid of the fruit ripening too fast and of the increased spoilage and waste that results. In a "down market" the attitude swings in the other direction to one that says "preconditioning costs us time and money. If we lose a couple of avocados by doing it, it won't cost us as much." There are flaws in both of these common attitudes. We firmly believe that preconditioning should be seen as the foundation for an effective avocado merchandising program, whether it be for retail or foodservice operations.

It is important, of course, to take into consideration the logistical and technical problems involved in participating in a Ripe Program. These issues vary according to the characteristics unique to each market. We would like to take a moment now to review how they can be addressed in the context of a successful Ripe Program.

There are three ways for an account to obtain preconditioned fruit for a Ripe Avocado Program:

1. Purchase preconditioned avocados from a shipper in California
2. Ripen avocados at their own distribution center; and
3. Arrange for a local wholesaler to precondition the fruit.

Having a shipper in California precondition the fruit represents an additional cost of about US \$0.50 to US \$0.75 per carton. In a time of high prices, this is a very small cost for avocados that are ripened consistently and are consequently easier to manage at retail. In fact, preconditioning usually works out to between US \$0.01 to US \$0.03 per avocado. Such a small cost pays out handsomely in increased revenues and profits.

Preconditioning avocados is especially important during the early months of a new crop, when 1 to 4 pieces of fruit per carton can be saved. The ethylene process allows the ripening to take place when the fruit still has most of its flavor. If left out at retail to ripen on their own, these early season avocados may become dehydrated and ripen poorly, particularly when subjected to handling by customers seeking ripe fruit. Foodservice accounts also find preconditioning very helpful early in the season, as they are always in need of ripe fruit, and the expense of preconditioning is minimal compared to the potential lost sales.

As you can see, there is a strong economic reason for preconditioning avocados throughout the season. For some accounts, obtaining fruit preconditioned in California is the ideal option, but sourcing fruit from California has some logistical issues that make it inappropriate for other accounts. For example, most accounts cannot take a full truckload of fruit direct from the shipper, meaning that avocados must ride with other commodities. If the temperature in the vehicle is too warm, the avocados will ripen too quickly. When the temperature is too low, there is a risk of chill damage.

In those instances where California preconditioned fruit is not feasible, accounts may choose to ripen avocados at their own distribution center. Indeed, if an account has existing ripening rooms, it is usually best to bring the program in-house. Doing so maximizes the account's control over the process and allows for optimum handling.

The third option is for an account to have a local wholesaler ripen the fruit for them. This is usually easily accomplished, as produce wholesalers who are ripening bananas and/or tomatoes are generally both capable and willing to ripen avocados as well. The particular needs of an account will dictate which of these options is chosen, and the California Avocado Commission's Ripe Program is designed specifically to help find the program right for each participant. Anyone interested in learning more about examples

of operations in which each of these options works should write the authors in care of the California Avocado Commission.

Ripening is a time/temperature relationship. The higher the temperature, the shorter the ripening process. However, if the temperature is allowed to exceed 26.67C, the fruit may be damaged.

The ripening room should be vented so that the level of carbon dioxide does not exceed 5%. Unlike bananas, avocados need to be vented twice daily even during the gassing cycle. Humidity control is becoming more of a factor than in the past. It is important to use some type of humidification technique during the preconditioning process to maintain a level of 90 to 95% relative humidity. Wetting the floor in the ripening room is a simple way to add humidity to the room. However, there are many systems now available on the market that provide controlled humidity.

The fruit is triggered when the stem end gives way from the fruit with gentle pressure. When this happens, it is time to turn off the ethylene and cool down the fruit. Cooling the fruit will slow down the ripening process and help make the fruit more manageable. A room's cooling ability is enhanced by having the fruit restacked in an open air stack for standard banana ripening rooms or by using a forced air system.

Checking the stem ends in several different cartons provides a good idea of how all of the fruit has reacted during the process. This step is very important. In the past many people waited until the fruit had turned color or was soft. Waiting this long produces guacamole in very short order. Properly preconditioned fruit is still firm and may be green when triggered. The only difference is that the stem end button pops off when subjected to gentle pressure. At this stage the fruit can be stored at 5C for 7 to 10 days. If the fruit is held at 13C, it should be firm ripe in 4 to 5 days. If held at 18C, it should be firm ripe in 2 to 3 days.

The transportation of avocados can create some unique problems. If the fruit is shipped at a temperature above 7C, the chances of the fruit ripening in transit are increased. If the pulp temperature drops below 5C during shipping, the greater the chances of chill injury. This is especially true for loads that travel for more than two days.

Another transportation issue is that avocados themselves produce ethylene, and they do not ride well with other commodities, such as flowers, lettuce and other ethylene sensitive items. When a mixer load is used to transport avocados, it is important to place avocados in a location in which temperature and ethylene will not pose a problem. Citrus makes a good shipping companion for avocados. As with temperature, the commodity mix is more critical the longer the transport time. When the fruit arrives at the retailer, handling practices become very important. Most retailers receive shipments daily, and in some situations avocados should be ordered this way. The temperature at which the fruit is stored before being put on display is very critical: ripe avocados are best stored at 5 to 7C.

To provide further ripening avocados should be stored at 15 to 18C. Fruit stored at temperatures of 1 to 2C is in danger of chill injury.

Avocados should be displayed at retail on a dry rack, preferably with tomatoes or a similar complementary item. The fruit should be rotated and the pieces of marginal quality removed. Remember, avocados are an impulse item. The piece of fruit into which little Johnny poked his finger should be taken out of the display.

It is also important to keep in mind that produce personnel who are educated about avocados are the best salespeople. They have direct contact with the customers and therefore influence purchase decisions. Store clerks must also be educated so as to avoid situations in which avocados from Florida are rung up as avocados from California and vice versa. This is very critical with today's P.L.U. codes and ordering that is done by computer printout. It is important to remember that avocados are a leader in the produce department. When an avocado is purchased, there are two or more other produce items purchased to go with it. Every avocado sold means solid produce sales across the board.

In conclusion, as the avocado market in the United States has expanded into the Midwest and east coast, the need for preconditioning avocados has grown dramatically. These markets, less familiar with the fruit, were at first very cautious with avocados because of concerns associated with ripening. But the Ripe Program has been a tremendous success with a number of accounts in these areas, on occasion increasing avocado sales by 300%. Based on our experience with the Ripe Program, we can tell you that with proper training, the Ripe Program can be implemented with little difficulty in any account. The results of doing so will make the program more than worthwhile.