



REPRESENTING CALIFORNIA CITRUS MARKETING ORGANIZATIONS

AFFILIATES

- California Department of Food and Agriculture
- U.S. Department of Agriculture
- California Agricultural Pest Control Operators
- County Agricultural Commissioners
- Educational Institutions
- Related Industries and Services
- Grower Advisory Boards and Committees

A GROWER-SUPPORTED NONPROFIT CORPORATION

1417 98 JUL -2 A9:47

June 25, 1998

Dockets Management Branch (HFA-305)
 Food and Drug Administration
 12420 Parklawn Drive, Room 1-23
 Rockville, MD 20857

Subject: Docket No. 97N-0451-Guidance for Industry

The California Citrus Quality Council (CCQC) represents California citrus growers and their marketing organizations in responding to problems and issues which affect the industry in areas of quality control, technical assistance, regulatory compliance and related areas.

CCQC would like to preface its comments on your agency's April 13, 1998 draft Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables by emphasizing that the California citrus industry has provided a wholesome, nutritious and safe product across America and around the world for over 100 years. The attached paper, California Citrus Industry Microbial Contamination Practices, briefly describes practices that have permitted such success.

CCQC would also like to begin its comments by recognizing the positive nature and value of the subject April 13, 1998 draft guidance document and the many concepts--though general in nature--that can be adapted to specific commodities and their necessarily unique production and handling operations.

The following comments and suggestions are offered from the CCQC perspective.

Section I. Definitions, "applicable to this guidance document."

The definition of SANITIZE states, "for food-contact purposes, sanitize means to reduce populations of representative microorganisms by 5 log or 99.999%."

97N-0451

D
C 90

This level of control appears to be arbitrary and makes the standard meaningless. Populations of microorganisms of concern to human health are already so low in fresh fruit packing houses that the 5 log reduction amounts to a zero tolerance.

Such a low level would be impossible to monitor and therefore be unenforceable. Currently, it is also technologically infeasible to maintain this standard.

It should also be pointed out that this portion of the proposed standard does not use the word “may” as in many other parts of the guide. It is therefore considered to be more prescriptive and restrictive.

Section III. Manure and Municipal Biosolids

The good management practices for growers to consider in guidance provided in parts 2.2.1 and 2.2.2 do not recognize that citrus trees produce year around. Thus, guidance which seeks to maximize time between application of manure and the harvest of the fruit, especially in orchards growing an “organic” crop, may not always be feasible and may not be in line with the trees’ nutrient needs. However, most citrus fruits are not in contact with the ground and thus not in contact with applied manure.

Composting of manure is a general practice followed by many citrus growers using manure and certainly reduces populations of pathogens. Elimination of pathogens in composted manure using good agricultural practices cannot be guaranteed, however.

Sub-Section 3. Animal Feces

Not only is the exclusion of wild animals from citrus groves very difficult, but domestic animals, such as geese, are occasionally used by growers for weed and snail control and deliberately placed in the grove. It should again be pointed out that citrus fruit is a tree crop with most fruit not generally or usually in ground contact.

Section V. Trace Back

While trace back of packed, fresh citrus fruit to its source is favored and--except for lemons--easily accomplished when the fruit is still in, or associated with the coded cartons, some problems exist. Lemons are harvested and initially sorted according to color (maturity). In the process, lemon fruit from several groves can be co-mingled. Their source, however, usually can be traced back to a handful of groves.

Control of the desired trace back ability is also lost when 1) the fruit is sorted and co-mingled by the wholesale or retail produce dealer in preparation of bulk displays, etc., and 2) when fruit is removed from its original coded shipping carton for sorting and not replaced in the same carton.

Summary Comment

A final comment refers to the definition of fresh fruits and vegetables as used in the document and therefore the scope and application of the entire document to include “fresh cut” produce, e.g., pre-cut, packaged, ready-to-eat salad mixes.

While the definition detail recognizes that some fresh produce specialty items, such as fresh cut produce, may be subject to processing and handling requiring use of additional good management practices, it does not fully recognize that, in the process, producers (growers), handlers, etc., lose control of the product as well as ability to trace back identification of their produce.

If microbial contamination occurs during transportation or elsewhere during subsequent handling and processing, it is, sadly, the once clean and wholesome fresh fruit's reputation that suffers.

It is suggested that the published draft guidance document be separated into two documents, one for fresh fruits and vegetables, the other for "fresh cut."

Very truly yours,

A handwritten signature in black ink, appearing to read "Paul B. Engler". The signature is fluid and cursive, with a large initial "P" and "E".

Paul B. Engler, President
California Citrus Quality Council

Attachment



California Citrus Quality Council (CCQC)
1575 S. Valley Vista Drive, Suite 130
Diamond Bar, California 91765-3914
Phone: (909) 861-1340
Fax: (909) 861-2161



California Citrus Mutual (CCM)
512 N. Kaweah Avenue
Exeter, California 93221
Phone: (209) 592-3790
Fax: (209) 592-3798

CALIFORNIA CITRUS INDUSTRY MICROBIAL CONTAMINATION PREVENTION PRACTICES

The California citrus industry has provided a wholesome, nutritious and safe product for consumers across America and around the world for the past 100 years. This paper briefly describes practices that have permitted such success. The microbial prevention practices outlined below relate to normal commercial operations and the handling of fresh citrus which constitutes the overwhelming tonnage produced in California.

NOT ALL FRUIT IS ALIKE

Citrus has the advantage of having a rind surrounding the portion of the fruit normally eaten fresh. The rind protects this portion of the fruit from plant pathogens and it also isolates it from microbes that are of concern from the standpoint of human health. Additionally, the naturally occurring high acid environment within the fruit itself limits the viability of certain microorganisms. This has not lessened efforts to aggressively keep growing, harvesting and handling practices clean and sanitary. For example, the rind of commercially packed citrus is routinely sanitized to eliminate microbial contamination.

GROVE PRACTICES

Water Sources - California citrus is fortunate in that the product originates on trees which minimizes contact with irrigation water in the field. For almost two decades, the industry has been a pioneer in low volume irrigation methods which has reduced the amount of water flow in a grove and concentrates water penetration into the root zone.

Irrigation water used in production of California citrus is usually from one of two sources. One is from water pumped from wells at depths ranging from 50 to over 400 feet. The second source of irrigation water for citrus is "surface water" from streams and rivers which is conveyed to farmers. Both federal and state regulations require specific standards for conveyance and monitoring for this resource. Regulations are also in place which restrict use of reclaimed water in production of food crops.

Field Worker Hygiene - Federal and State laws require employers to provide toilet and hand washing facilities for field worker use. The employer has the responsibility of ensuring that employees understand the importance of and practice good personal hygiene. Logs must be maintained which include average number of employees, number of sanitation units and cleaning frequency.

Harvest Practices - All employees are required to wear gloves during the process of harvest. Gloves have been a staple of the field worker for years and are provided by the employer. The gloves provide another layer of defense against microbial contamination.

Training sessions are held in which workers are instructed not to pick up dropped fruit. There are a number of reasons for this training component. Fruit that has fallen from the tree may be weak and usually will not stand the rigors of handling and transporting to the ultimate destination. This fruit will spoil much more rapidly than companion fruit in the same carton creating decay and resulting in marketing problems as well as consumer dissatisfaction. Furthermore, this fruit may well have begun to spoil and really has no market value. It will only create costs for the grower and handler.

HANDLING PRACTICES

In the citrus industry the term "handling" refers to the process of moving citrus from the field through all the steps necessary to place it in a carton for eventual transporting to a retail outlet. Once removed from the tree, fruit is deposited in field bins that are routinely cleaned after each use. Bin contamination, in this case, ranges from snails adhering to bin walls, to pests, spores and microbials that can cause decay or spoilage. The operations managers at packing houses have an economic incentive to maintain and use only clean bins. Fruit bins are designated for fruit handling purposes only.

From the field to the packing facility the movement of the fruit is handled in large bulk bins mechanically loaded for transport. The fruit is initially rinsed in water containing chlorine or another anti-microbial material to loosen dirt and to sanitize the surface of the fruit. Culls and rots are removed and then the remaining fruit is washed with approved cleaning solutions to further disinfect the surface of the fruit during automated movement over brush rollers to ensure thorough coverage with the disinfectant. As required by law, a potable water rinse follows, providing clean fruit for extensive examination/sorting to eliminate blemished fruit before packing. All these approved cleaning and sanitizing procedures used in the process of fruit handling provide additional assurances in the prevention of microbial contamination. Fruit handling equipment, belts, fruit contact surfaces, storage rooms and buildings are routinely treated with sanitizers to prevent cross-contamination or spread of micro organisms.

Again, the incentive for the manager to inspect equipment, including conveyor rollers and belts, is built in inasmuch as breakdowns lead to a loss of productivity and added marketing costs. Furthermore, it is the cracks, crevices, et al., in fruit that can provide a haven for the presence of microbials. Thus, once again, efficient management at such facilities for quality and other

reasons unrelated to microbial contamination problems have enabled our citrus industry to enhance the attractiveness of its products by also offering a consumer-safe food item.

Worker Hygiene - As the fruit leaves the washing areas it is transported on conveyor belt lines for sorting and grading. The majority of the process is done mechanically with oversight provided by specially trained employees. All citrus packing facilities have hand washing areas in conjunction with toilet facilities. Additionally, periodic training sessions are scheduled in which management instructs employees on the importance of good hygiene and the need to wear gloves. Gloves are provided by the employer and changed regularly. Another incentive for the use of gloves is to prevent inadvertent finger nail punctures on the surface of the fruit during inspection/examination which not only blemishes the fruit but also creates a site for decay organisms and microbial growth.

Hand Sorting Functions - Once the initial mechanical grading and sorting processes are completed, fruit is conveyed to a grading area and visually inspected by employees. Gloves are worn at all times as fruit is handled to complete the inspection process. Fruit with cracks, crevices or other blemishes that could harbor contaminants is discarded at this time.

Packing - The majority of fruit is packed by machine but a portion is still packed by hand and again use of cloth gloves is mandated.

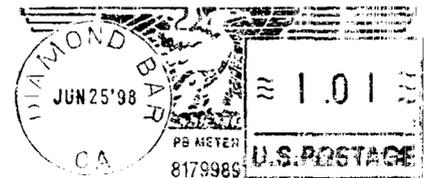
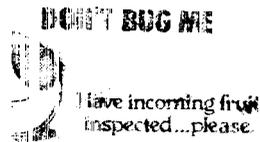
General Maintenance - Approximately 100 California packing houses are engaged in the process of handling citrus fruit. Each maintains a strict cleaning and maintenance schedule and has bin cleaning programs. Storage areas are regularly treated with sanitizers. Equipment is washed and floors cleaned. Routine monitoring of the packing house environment, including fruit handling equipment and fruit storage areas, is performed to ensure that adequate cleaning is taking place. This protects the fruit from exposure to decay causing microbials/organisms. Spore counts are regularly made on a scheduled basis to guard against build up of decay organisms.

Trace Back - In the event of discovery of a contamination problem after fruit leaves the packing house, fruit identification is maintained from the time of harvest to point of sale. When co-mingling or pooling of the product is required, individual identity may be lost. However, the various sources of fruit in the pool can be traced.

Summary - The California citrus industry has never had a known case of microbial contamination resulting from fresh fruit handling. This is strong testimony supporting the industry's stringent practices. Today, because of increased concerns, the industry continually reviews and strengthens its safeguards to insure the continuance of that track record.



3191 TEMPLE AVENUE, SUITE #115
POMONA, CA 91768-3254
Phone: (909) 595-4549
FAX: (909) 595-7102
E-Mail: ccqc@ix.netcom.com



Dockets Management Branch (HFA-305)
Food and Drug Administration
12420 Parklawn Drive, Room 1-23
Rockville, MD 20857