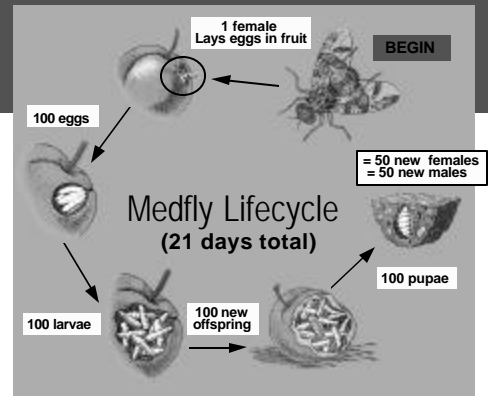
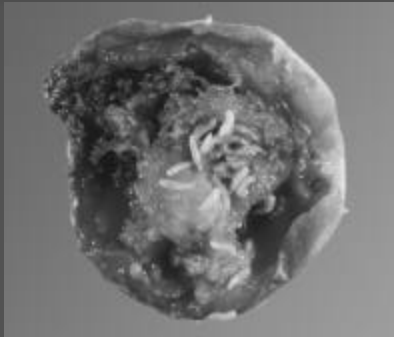


Spanish Clementines and Cold Treatment Issues



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August 29, 2002

MEDFLY



Background



- From November 20 to December 11, 2001, Medfly larvae detections are made in North Carolina, Maryland, Louisiana, California and New Jersey.
- December 5: USDA bans the imports of Spanish clementines.
- December 10: USDA initiates a 17 state recall of Spanish clementines.
 - ✓ Florida destroys 96,075 lbs of fruit.
 - ✓ California destroys 242,465 lbs of fruit.

Technical Review Team Site Visits

- December 9 – 14, 2001:
APHIS – PPQ, IS, and a National Plant Board representative tour the Valencia region.
- January 29 – 30, 2002:
APHIS – PPQ, IS, and CPHST personnel meet in Madrid.

Technical Review Team Site Visits (continued)

- December 9-14, 2001 site visit encompasses a review of fruit fly trapping, bait spray control, harvesting, packing, and port activities in the Valencia area.
- Initial meeting held with Spanish quarantine officials in Valencia to lay the ground work for the visit and receive initial information relative to Spain's export program and fruit fly management systems.
 - ✓ Valencia region is comprised of three distinct citrus production areas; Castellon (clementines), Valencia (early season oranges), and Alicante (lemons) totaling 183,000 hectares or 67% of Spain's citrus production.
 - ✓ 100,000 growers – average individual owner has a 0.5 to 2.0 hectare parcel. Many are members of cooperatives making up 124 registered exporters supporting 15 packing houses.

Spain – Comunidad Valencia



Trapping & Bait Spray Activities

- Trapping and bait spray activities are a cooperative venture between the Ministry of Agriculture and the growers.
- Annual declaration is published requiring mandatory participation by the growers – no penalties for non-compliance.
- Medfly populations develop in mid-May, peak in July and start to decline in September/October.

Trapping & Bait Spray Activities (continued)



Nadal Trap - Based on Temperature and Moisture

- The Ministry operates 700 traps (1trap/200 ha.) throughout the region. In addition, the growers reportedly operate 2 traps/ha. in their own groves.
- Traps are serviced twice a week. Traps are placed May 1st and pulled at season's end.
- The Nadal trap is the primary trapping device, although they are testing the Tephry trap (compatible to a multi-lure / IPMT trap).

Trapping & Bait Spray Activities (continued)



- Bait sprays consisting of malathion and Nulure bait are applied by both the Ministry and growers.
- Ministry conducts 5 area-wide treatments per season from August 1 to mid-November covering 160,000 ha. utilizing both fixed winged aircraft (40% of the control program) and backpack sprayers (60% of the control program).
- Growers initiate ground treatments on a 7-10 day schedule when Medfly trapping levels reach 0.5 flies/trap/day. If the trigger is met and the fruit is still green, then spot treatments are made. If the fruit is mature, all trees are sprayed.

Trapping & Bait Spray Activities Concerns / Issues

- Little or no documentation was furnished on either program.
- No quality control procedures were in place to oversee fruit fly detection procedures.
- Traps are not relocated and trap route books are not used.
- One of two trap site visits showed no lure present in the trap.

Trapping & Bait Spray Activities Concerns / Issues (continued)

- There is no established fruit cutting program to monitor Medfly larval populations.
- Aircraft are only calibrated at the beginning of each season and dye cards are not used for quality control purposes.
- Bait spray formulations are below U. S. standards for fruit fly control.
- Inconsistent information was given by grove production managers regarding the use of malathion only.

Harvesting and Packing Activities

- Clementine varieties are harvested from late September through the end of February.
- Harvesting is conducted by the cooperatives for the individual growers primarily using seasonal labor from Eastern Europe.
- Clementine varieties are a high maintenance crop as the fruit is clipped from the tree to limit damaging the peel at the stem end, and trees are hand-pruned each year to maintain a desirable canopy.



Harvesting and Packing Activities (continued)

- Initial quality control is conducted by the harvesters as blemished fruit is discarded in the field.
- Fruit is placed in 'milk carton' type crates and placed on pallets, which are then loaded by fork lifts on to truck trailers.
- Growers are responsible for destroying discarded fruit.



Harvesting and Packing Activities (continued)

- Fruit is unloaded by pallet at the receiving dock.
- Each pallet is labeled with a 3 x 5 inch card documenting the grove owner, parcel number, and delivery truck trailer number.
- The identification remains with the fruit during the initial grading process.



Harvesting and Packing Activities (continued)

- Fruit undergoes an initial grading process.
- The fruit that makes the initial grade is re-boxed and palletized to await final inspection and grading.



Harvesting and Packing Activities (continued)

- Fruit continues through several grading and quality inspection steps.
- Early season fruit is also graded for color and green fruit is placed in de-greening rooms.
- Throughout the packing process, samples are taken for quality control purposes, juice content, and sugar-acid ratio testing.



Harvesting and Packing Activities (continued)

- Boxes of fruit destined for the U. S. under the pre-clearance program are sequentially numbered for USDA sampling purposes.
- The packinghouse sends copies of inspection documents to the port prior to the arrival of the fruit. This information is maintained in a database to coordinate inspections, initiate cold treatments, and issue export documents.



Harvesting and Packing Activities Concerns / Issues

- The identity of the fruit relative to the grove origin is lost during the packing process.
- There is no procedure in place to clean the packing line between runs, therefore fruit from different groves can be commingled.
- There are no fruit cutting procedures in place to detect Medfly larvae.

Cold Treatment Activities

- 90% of the fruit shipped to the U.S. is break bulk, 10% by containers.
- Break bulk fruit is pre-cooled at the packinghouse or at the port terminal. Containerized fruit is pre-cooled at the packinghouse.
- Fruit can be held in the pre-cooler for 3 days or longer before being loaded on bulk vessels.
- Pre-cooling temperature is 1 degree Centigrade.



Cold Treatment Activities (continued)

- 5 Spanish inspectors and 2 technicians are responsible for initiating the cold treatments.
- Spanish government inspectors conduct ice calibration tests, place probes in the fruit, and document placement in the compartments and containers per the protocol.
- 2 Spanish inspectors monitor loading which can take from 2 to 4 days.
- Spanish inspectors have been given training by PPQ twice since 1984, most recently in 1998.



Cold Treatment Activities Concerns / Issues

- Initiate research of alternative cold treatment schedules, including the number and types of required sensors and locations.
- Enhance accountability relative to the initiation of cold treatments (i.e. calibrations, placement of sensors, documentation, and training).
- Ensure proper procedures are in place at the ports of entry relative to reviewing treatment records, confirming sensor locations, fruit sampling protocol, and record retention by Methods personnel.



System Failure – What Happened ???

- Unseasonably warm weather conditions
- Higher than average fruit fly populations
- High host susceptibility of the early season clementine varieties
- Low trap densities and inadequate bait spray applications
- Pest load potentially overwhelmed cold treatment

Technical Review Team Site Visit - Madrid

- January 29-30, 2002: APHIS – PPQ, IS, and CPHST personnel meet in Madrid with a Spanish delegation.
- Reviewed issues that emerged from the December technical review team trip report.
- Received additional fruit fly program data that was requested but never received by the December technical review team.
- Initiated discussions relative to formalizing requirements for growers to participate in a mandatory pre-clearance program (i.e. maintaining necessary trapping/control documentation, quality control audits, government oversight, product traceability, and penalties for non-compliance).
- Development of an APHIS risk document and new export work plan.

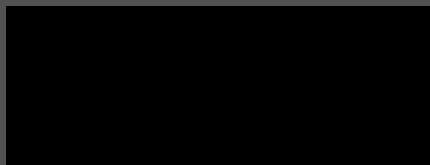
Cold Treatment Review Team

- January 15-16, 2002 meeting composed of PPQ, ARS, CPHST, and State Cooperators to review both the Spanish clementine program and cold treatment certification in general.
- Evaluated pre- and post-harvest activities specific to the Spanish clementine program.
- Identified short, medium, and long term goals relative to research needs, inspection procedures, field mitigation measures, communication, and regulation enhancements for all cold treated commodities.

Proposed Rules

- Federal Register Vol. 67, No. 133
Thursday, July 11, 2002
- 7 CFR Parts 300 and 319, Docket No. 02-023-3
Importation of Clementines From Spain
- USDA is proposing to allow the importation of clementines from Spain to resume if the clementines are cold treated en route to the U. S., and provided that other pre-treatment and post-treatment requirements are met.
- **Comments due: September 9, 2002**

Specifically

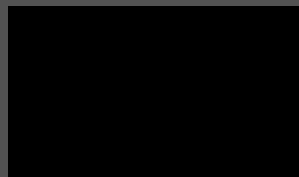


Mediterranean Fruit Fly Management Program

- Production areas must be trapped beginning six weeks prior to harvest and continuing until the end of harvest using 1 trimedlure trap per 20 hectares.
- Bait sprays must be applied every 10-14 days if trap catches exceed .5 flies per trap.
- Trapping and treatment records must be maintained.
- Inspections of the program will be conducted by Spanish Officials and USDA.

Other Requirements

- Cartons must be labeled so that the fruit can be traced back to the packinghouse and the production area.
- 200 randomly selected fruits would be cut by USDA inspectors for fruit fly larvae detection. If larvae are found the fruit is ineligible for export.
- Cold Treatment is required. An additional two days has been added to each treatment schedule as follows:



(continued)

Other Requirements (continued)

- USDA inspectors will verify cold treatment at the Port of Entry.
- A sample of the fruit will be cut and examined for fruit fly larvae when the shipment reaches the U.S. Port of Entry.

<http://www.aphis.usda.gov/oa/clementine/>

Clementines - Proposed rule and supporting documentation:

- Proposed rule: Importation of Clementines from Spain (**pdf**)
- Regulatory Impact Analysis: Importation of Clementines from Spain (**pdf**)
- Risk Mitigation Document for Spanish Clementine Imports
"POSTED July 11, 2002"
- Spanish Clementine Risk Mitigation Analysis, July 5, 2002 (**pdf**)
- Excel Spreadsheet for Spanish Clementine Risk Mitigation Analysis,
June 24, 2002
- Cold Treatment Recommendations "POSTED MAY 2, 2002"
- Cold Treatment Recommendations, 2nd Edition (**pdf**)
- Quantitative Analysis of Available Data on the Efficacy of Cold Treatment Against
Medfly Larvae (**pdf**)

Other Spanish Clementine information:

- Spanish Clementine Backgrounder, January 9, 2002 (**text or pdf**)
- Spanish Clementine Program Technical Review, January 4, 2002 (**text**)
- USDA Suspends Spanish Clementine Imports, December 5, 2001
(Press Release)