

FEDERAL ORDER

Tomato leafminer, *Tuta absoluta* (Meyrick)

April 28, 2010

The purpose of this Federal Order is to prevent the entry or introduction of the harmful plant pest, the tomato leafminer, *Tuta absoluta* (Meyrick, 1917), from foreign countries into the United States. The Animal and Plant Health Inspection Service (APHIS) issued Federal Orders in February, May and December of 2009 that placed additional restrictions on currently admissible tomato fruit (green, pink or red) from the infested countries, Algeria, France, Greece, Italy, Morocco, Netherlands, Portugal (including the Azores), and Spain (including the Canary Islands) to prevent the introduction or the dissemination of *T. absoluta* into the United States. This Federal Order updates the list of countries currently infested with *T. absoluta* by adding countries of the EU (European Union) that were not previously listed, and Syria, Turkey and Israel. Of these additional countries, only Belgium, Cyprus, Israel, Poland, and United Kingdom are currently authorized to export tomatoes to the United States. In addition, the Administrator has determined that it is necessary to prohibit the entry of plants for planting of *Solanum* spp., *Datura* spp. and *Nicotiana* spp, which are also hosts of *T. absoluta*, from all the above countries pending the completion of a Pest Risk Analysis (PRA) and the implementation of appropriate mitigation measures. This Federal Order supersedes all previous Federal Orders relating to requirements for importing hosts of *T. absoluta* from countries that are considered infested with the pest. This Federal Order is effective on May 13, 2010.

This Federal Order is issued pursuant to the authority provided by the Plant Protection Act (PPA) of June 20, 2000, as amended, Section 412(a), 7 U.S.C. 7712(a), which authorizes the Secretary of Agriculture to prohibit or restrict the importation, entry, exportation, or movement in interstate commerce of any plant, plant product, biological control organism, noxious weed, article, or means of conveyance, if the Secretary determines that the prohibition or restriction is necessary to prevent the introduction into the United States or the dissemination of a plant pest or noxious weed within the United States.

This action is necessary because the Administrator of APHIS has determined that the introduction and establishment of *T. absoluta* poses a serious threat to the United States agriculture including certain fruits or vegetables grown in the United States. These restrictions to prevent the introduction and establishment of *T. absoluta* are immediately needed and warranted to address plant pest risks associated with currently admissible tomatoes fruit and plants for planting.

T. absoluta is a small moth in the family Gelechiidae, Order Lepidoptera. Other serious insect pests in this family include: the angoumois grain moth, *Sitotroga cerealella*; the pink bollworm, *Pectinophora gossypiella*, and the potato tuber moth, *Phthorimaea operculella*. *T. absoluta* has a high reproductive potential. The adult female is approximately 7 mm in length and lays about 260 eggs during its lifetime. The oval eggs

are laid on the aerial parts of their host plants. Depending on environmental conditions the life cycle is completed from 29 to 38 days and there may be 10 to 12 generations per year. The larvae feed, and develop on all plant parts above ground. On leaves, larvae feed between the epidermal layers causing irregular mines that may later become necrotic. Larval feeding causes fruits to develop galleries that can be infected by secondary pathogens causing fruit rot. Pupation can be either in the soil, on the leaf surface, or within mines.

The moth is widely distributed in South America including; Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela. In 2007, it was reported in Spain, in 2008 from Algeria, France, and Morocco, in 2009 from Albania, Bahrain, Greece, Italy, Kuwait, Malta, Netherlands, Portugal (including the Azores), Switzerland, Tunisia, and United Kingdom, and in 2010 from the Azores, Cayman Islands, Hungary, Israel, Libya, Russia, Syria, Turkey, and Western Sahara, and the additional EU countries of Bulgaria, Cyprus, and Germany. Because the movement of tomato fruit and plants is not restricted in the EU countries and with the rapid spread of *Tuta absoluta* in the EU, we are now including all countries of the EU in the list of countries infested with this pest. Accordingly, the following countries are currently considered infested with *Tuta absoluta*: Albania, Algeria, Argentina, Austria, Bahrain, Belgium, Bolivia, Brazil, Bulgaria, Cayman Islands, Chile, Colombia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Kuwait, Latvia, Libya, Lithuania, Luxembourg, Malta, Morocco, Netherlands, Paraguay, Peru, Poland, Portugal (including the Azores), Romania, Russia, Slovakia, Slovenia, Spain (including the Canary Islands), Sweden, Switzerland, Syria, Tunisia, Turkey, United Kingdom (all regions), Uruguay, Venezuela, and Western Sahara.

The main host for *T. absoluta* is tomato (*Solanum lycopersicum*), and it is considered a serious plant pest of tomato causing major damage if left untreated. However, it has also been reported to feed on potato leaves (*Solanum tuberosum*), eggplant leaves (*Solanum melongena*), common bean leaves (*Phaseolus vulgaris*), and sweet pepper leaves (*Capsicum* spp.). Nevertheless, since leaves and plant parts are not allowed to be entered with imported fruit, the pest is not likely to be in the pathway on potatoes, pepper or eggplant fruit.

In addition to cultivated *Solanum* spp. host plants, this pest also attacks wild hosts of *Solanum* spp., *Datura* spp., and *Nicotiana* spp., such as black nightshade (*Solanum nigrum*), jimson weed (*Datura stramonium*) and tree tobacco (*Nicotiana glauca*), and therefore plants for planting in these genera are considered a pathway for the entry of this pest.

Currently, Algeria, Belgium, Cayman Islands, Chile, Cyprus, France, Greece, Israel, Italy, Morocco, Netherlands, Poland, Portugal (including the Azores), Spain (including the Canary Islands), and United Kingdom are the only countries infested with *T. absoluta* that are authorized to export tomatoes to the United States, and tomatoes that are harvested green currently are admissible from these countries. In addition, pink or red

tomatoes are admissible from Belgium, Cayman Islands, Cyprus, France, Israel and the Netherlands. APHIS already has regulations in place that enable Chile to export tomatoes, whether green or any stage of ripeness, to the U.S. despite the presence of *T. absoluta* provided they are either fumigated with methyl bromide in an established preclearance program as per requirements listed in 7 CFR 319.56-28(d)(1) or grown in accordance with the systems approach outlined in 319.56-28(d)(2).

Pursuant to this Federal Order, plants for planting of the genera *Datura* spp., *Nicotiana* spp., and *Solanum* spp. (including *Lycopersicon* spp.)¹ are prohibited entry pending a PRA from Albania, Algeria, Argentina, Austria, Bahrain, Belgium, Bolivia, Brazil, Bulgaria, Cayman Islands, Chile, Colombia, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Kuwait, Latvia, Libya, Lithuania, Luxembourg, Malta, Morocco, Netherlands, Paraguay, Peru, Poland, Portugal (including the Azores), Romania, Russia, Slovakia, Slovenia, Spain (including the Canary Islands), Sweden, Switzerland, Syria, Tunisia, Turkey, United Kingdom (all regions), Uruguay, Venezuela, and Western Sahara.

In addition, we will require that shipments of tomato fruit from countries that are infested with *Tuta absoluta* and currently permitted to import tomato fruit into the United States (Algeria, Belgium, Cayman Islands, Cyprus, France, Greece, Israel, Italy, Morocco, Netherlands, Poland, Portugal (including the Azores), Spain (including the Canary Islands), and United Kingdom (all regions)) must meet one of the three following import requirements:

1) Pest-free Area

- Tomato fruit must be imported as commercial consignments only.
- Each consignment of tomatoes must be accompanied by a Phytosanitary Certificate (PC) of inspection issued by the National Plant Protection Organization (NPPO) of the country of origin bearing the following Additional Declaration (AD): “Tomato fruit in this consignment originate from a pest-free area that meets the requirements of 7 CFR 319.56-5, and are free of *Tuta absoluta*”, **or**

2) Systems approach

- Tomato fruit must be imported as commercial consignments only.
- Each consignment of tomatoes must be accompanied by a Phytosanitary Certificate (PC) of inspection issued by the National Plant Protection Organization (NPPO) of the country of origin bearing the following Additional Declaration (AD): “Tomato fruit in this consignment have been produced in accordance with an APHIS approved systems approach, and have been visually inspected and are free of *Tuta absoluta*.” (The APHIS approved systems approach is described below), **or**

¹ Plants for planting of *Solanum* spp. are already prohibited entry pending a PRA to prevent the introduction of the pathogens, Tomato torrado virus and Tomato severe leaf curl.

3) Treatment

- As provided in 7 CFR 305, methyl bromide treatment schedule T101-c-3-1, is an approved treatment for green, red, or pink tomatoes produced in areas infested with *T. absoluta*. This treatment can only be applied in a preclearance program. Of the countries known to be infested with *Tuta absoluta*, only Chile has an established preclearance program. Any country desiring establishment of a preclearance program should contact APHIS, Plant Protection and Quarantine.

APHIS approved systems approach for shipments of admissible tomatoes from Algeria, Belgium, Cyprus, France, Greece, Israel, Italy, Morocco, Netherlands, Poland, Portugal (including the Azores), Spain (including the Canary Islands), and United Kingdom **shall** include **all** of the following:

- Tomato fruit must be imported as commercial consignments only.
- The tomatoes must be grown in a pest exclusionary structure (PES), for example greenhouses or screen houses that are registered and approved by APHIS and the National Plant Protection Organization (NPPO) of the country of origin.
- The PES must be equipped with double self-closing doors, and any vents or openings in the PES (other than the double closing doors) must be covered with 1.6 mm or less screening in order to prevent the entry of quarantine pests into the PES.
- The PES must be equipped with pheromone baited traps for *T. absoluta* at a minimum rate of 40 traps per hectare or equivalent and with no less than two traps per PES.
- The registered PES's must be inspected by the NPPO or its designee throughout the growing season for evidence of *T. absoluta*. The NPPO must maintain trapping records of *T. absoluta* throughout the growing season for APHIS review and to determine which of the following APHIS approved mitigations would apply to tomato shipments from a registered PES:
 - If within 30 days of harvest the trapping records show no *T. absoluta* (0% infestation) and no other life stages of *T. absoluta* are found inside the PES, then the tomato fruit may be shipped with or without calyces.
 - If within 30 days of harvest the trapping records show no more than two *T. absoluta* were captured and no other life stages of *T. absoluta* are found inside the PES, then the tomatoes must be shipped without calyces.
 - If within 30 days of harvest the trapping records show more than two *T. absoluta* are captured or other life stages of *T. absoluta* are found inside the PES, then the tomatoes, with or without calyces, must be fumigated with methyl bromide (This treatment can only be applied in a preclearance program with APHIS.) and safeguarded before shipment. In addition, if more than two *T. absoluta* are captured or other life stages of *T. absoluta* are found inside the PES, then shipments of non-fumigated tomato fruit from the PES will be suspended for a minimum period of 60 days. Shipments from a previously suspended PES may resume after trapping records reveal no infestation within

30 days of harvest and after APHIS and NPPO determine that an appropriate level of risk mitigation has been achieved.

- The NPPO must maintain an APHIS approved quality control program to monitor or audit the program. APHIS must be notified when a PES is removed or added to the program. APHIS will conduct periodic site visits to monitor the program.
- After harvest, tomatoes must be safeguarded by an insect-proof mesh, screen, or plastic tarpaulin while in transit from the PES to the packing house and while awaiting packing.
- Tomatoes must be packed within 24 hours of harvest in a pest exclusionary packing house.
- When the packing house is packing tomatoes for export to the United States, it must accept tomatoes only from registered PES's.
- Tomatoes must be packed in insect-proof cartons or containers, or covered with insect-proof mesh or plastic tarpaulin for transit to the United States. These safeguards must remain intact until the arrival of the tomatoes in the United States; otherwise the consignment may be refused entry into the United States.