

QUARANTINE AGAINST IMPORTATION OF
SYMPTOMLESS CARRIERS OF PEACH MOSAIC
INTO MESA COUNTY, COLORADO

STATEMENT OF BASIS AND PURPOSE

This quarantine is imposed pursuant to the Pest Control Act, § 35-4-110, C.R.S. (1997).

The Commissioner of Agriculture finds as follows:¹

1. Approximately 1500 acres in Mesa County, Colorado are planted in peach trees. Peach production in 1995 and 1996 was approximately 16-17.5 million pounds of utilized peaches per year. The estimated market value for peaches produced in Mesa County, Colorado in 1995 and 1996 was \$4.5-6 million per year.
2. Peach mosaic is a virus-caused disease which affects only Prunus species, including P. persica (peach), and P. persica var. nectarina (nectarine), P. armenica (apricot) and P. dulcis (almond). Hosts serving as inoculum sources for spread of peach mosaic include peach, nectarine and some American plum species; ornamental flowering peach, clingstone peach and native American plums indigenous to the Southwestern United States are particularly good hosts for peach bud mite vector.
3. Symptoms of peach mosaic include bumpy, deformed fruit, retarded bud development, flower color breaking and/or petal deformation, foliar mosaic, foliar deformity and premature leaf drop and severely compressed shoot growth. Infection with the peach mosaic virus also increases incidence of geminate (or twinned) fruit buds; twinned fruit is not salable.

¹ Sources for this information are: Input from Harold J. Larsen, Colorado State University-Orchard Mesa Research Center; Findings of Fact, Conclusions of Law, and Order issued March 29, 1988 In Re the Petition of Richard J. Pobrick for the Establishment of a Quarantine Against Importation of Symptomless Carriers of Peach Mosaic Disease into Mesa County, Colorado; "Impact and Control of Peach Mosaic in North America," H. J. Larsen, Colorado State University-Orchard Mesa Research Center; "Expression of Peach Mosaic Symptoms in Nectarine and Peach Cultivars," H. J. Larsen, Colorado State University-Orchard Mesa Research Center, A. H. Hatch, Utah State University Extension Service, and K. S. Yu, formerly of Colorado State University-Rogers Mesa Research Center.

4. Detection of infection is critical for control of peach mosaic. Some hosts express only very weak symptoms when infected, and infection in such hosts is extremely difficult to detect. These weakly-symptomatic hosts thereby can serve as undetected reservoirs of disease from which peach mosaic can spread via the peach bud mite to other susceptible hosts such as yellow-fleshed freestone peaches and nectarine, causing extensive damage. Tolerant, weakly-symptomatic hosts of peach mosaic include ornamental flowering peach, clingstone peach, Rochester peaches, and some white-fleshed peach and nectarine cultivars.
5. Peach mosaic renders the peaches and nectarines from infected trees unsalable, due to deformation of the fruit.
6. Peach mosaic has caused high levels of economic damage in Colorado in the past.
7. Peach mosaic was initially discovered in Colorado in 1931. The disease spread rapidly and control measures, including removal of infected trees, were instituted. By 1935, 32,163 trees were infected in Mesa County, Colorado and were destroyed. From 1935 to 1964, more than 125,000 peach trees in Mesa County, Colorado were destroyed due to peach mosaic constituting a significant economic loss to the Mesa County, Colorado peach industry.
8. The control measures developed to control peach mosaic consisted of annual orchard tree inspections and destruction of trees with symptoms of peach mosaic and a quarantine against importation into Mesa County, Colorado of trees which could act as symptomless carriers. Other control measures such as chemical control or inoculation have proved to be ineffective.
9. Inspection, destruction and quarantine measures have been effective in reducing the number of infected trees in Mesa County, Colorado. For example, in 1987 through 1990 no trees were infected and in 1991 three trees were infected.
10. Although the incidence of peach mosaic in Mesa County, Colorado has been below the threshold of detection since 1991, it is very likely that it may still occur within the county. Allowing importation of symptomless carriers for planting within Mesa County, Colorado will increase the potential risk that infection could occur and remain undetected until spread to highly symptomatic hosts could be noted. The symptomless carriers of peach mosaic still place

at risk the Mesa County, Colorado peach industry.

11. The absence of a quarantine to protect Mesa County, Colorado peach orchards against importation of symptomless carriers of peach mosaic would increase the risk of undetected infection and potential spread therefrom into neighboring peach orchards, to the injury of peach growers in Mesa County, Colorado.

A quarantine is thus declared against the importation into Mesa County, Colorado of symptomless carriers of peach mosaic.

1.00 DEFINITIONS

- A. "Clingstone" means the seed does not separate readily from the flesh when the fruit is ripe.
- B. "Cultivar" or "Variety" means a named or numbered strain of peach or nectarine grown for its desired characteristics.
- C. "Freestone" means the seed separates readily from the flesh when the fruit is ripe.
- D. "Import" means to ship into Mesa County, Colorado from any county, state or country.
- E. "Nursery stock" means both cultivar grafts and rooted trees.
- F. "Peach mosaic" means the virus caused disease of Prunus species which is characterized by production of the symptoms noted in finding No. 3 above occurring in yellow-fleshed freestone peach and nectarine cultivars such as Elberta and Rio Oso Gem.
- G. "Rochester" means peach cultivars with marbled white/yellow flesh.

2.00 IMPORTED SYMPTOMLESS CARRIERS

A. A quarantine is imposed against importation into Mesa County, Colorado of the following categories of nursery stock:

- (1) All ornamental flowering peach varieties (typically having double flowers and planted for their ornamental flower characteristics, not for fruit production);
- (2) All clingstone peach and nectarine varieties/cultivars;
- (3) All Rochester and closely related variety peaches exhibiting mottled yellow and white flesh color;
- (4) All white-fleshed peach and nectarine varieties unless the variety has been shown to express obvious symptoms of peach mosaic on a routine basis when infected with the peach mosaic virus.

B. This quarantine does not prohibit the importation of:

- (1) All freestone peach and nectarine cultivars with a yellow fruit flesh color; and
- (2) Mosaic expressing freestone white-fleshed peach and nectarine varieties identified by the Colorado State University-Orchard Mesa Research Center.

Effective Date: May 30, 1998