

## DEPARTMENT OF AGRICULTURE

### Plant Industry Division

#### QUARANTINE FOR LATE BLIGHT

##### 8 CCR 1203-13

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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#### Part 1. DEFINITIONS

- 1.1. "Certificate" means any federal/state, state or other inspection certificate accepted by the government of origin.
- 1.2. "Certified" means certified seed as defined in § 35-27-103(3) certified by a certifying agency as defined in § 35-27-103(4), C.R.S., or certified seed certified by a government of origin.
- 1.3. "Commissioner" means the Commissioner of the Colorado Department of Agriculture, or the Commissioner's designee.
- 1.4. "CPAC" means the Colorado Potato Administrative Committee, Area II.
- 1.5. "Culls" means any forms of waste and off-grade potatoes, including volunteer plants.
- 1.6. "Department" means the Colorado Department of Agriculture.
- 1.7. "Import" means to ship into the San Luis Valley from any state or country.
- 1.8. "Inspection" means an inspection performed at the place of origin by an inspector.
- 1.9. "Inspector" means a qualified fruit and vegetable inspector who is licensed by the United States Department of Agriculture, Agricultural Marketing Service or an inspector who meets all qualifications, licensure or other requirements of the country of origin.
- 1.10. "Late blight" means the fungus *Phytophthora infestans*.
- 1.11. "Nuclear seed stock" means disease-tested, certified seed potatoes produced in a greenhouse.
- 1.12. "Person" means any individual, corporation, government or governmental subdivision or agency, business trust, estate, trust, limited liability company, partnership, association, or other legal entity.
- 1.12. "Quarantine" means the quarantine for late blight imposed by the Commissioner of Agriculture effective September 30, 1996.
- 1.13. "Reinspection" means an inspection conducted by the Commissioner after the potatoes have been shipped from the area of origin to Colorado.
- 1.14. "Repack" means potatoes imported into the San Luis Valley for packaging.
- 1.15. "San Luis Valley" means the Colorado counties of Rio Grande, Saguache, Alamosa, Conejos, Costilla and Chaffee.

- 1.16. "Seed potatoes" means potato tubers or portions thereof utilized as seed.
- 1.17. "Tested or Testing" means performed or performing a scientifically accepted protocol to detect the presence of a specific plant pathogen.

## **Part 2. QUARANTINE FOR LATE BLIGHT**

### **2.1. Imported Seed Potatoes**

- 2.1.1. A quarantine is imposed against seed potatoes imported into the San Luis Valley. Pursuant to said quarantine, seed potatoes may be imported into the San Luis Valley under the terms and conditions set forth in Parts 2.1.2 through 2.1.6.
- 2.1.2. Imported seed potatoes shall be certified and accompanied by 1) a certificate which shows proof of field inspection, 2) a North American Plant Health Certificate issued by the certifying authority for seed potatoes where the seed potatoes were grown, and 3) laboratory results of a 21-day bioassay test documenting that a representative sample of tubers (at least 400) from the lot(s) was tested for late blight.
- 2.1.2.1. Small lots of seed potatoes intended for research must be laboratory tested for late blight as required above prior to entering the San Luis Valley, however the number of tubers can be less than 400 as long as the sample is representative of the lot and is a minimum of 5 tubers.
- 2.1.3. If the inspection certificate, North American Plant Health Certificate or the laboratory test results indicates that late blight was present during growing or loading, or no statement is made on the certificate concerning the presence or absence of late blight, the load(s) to which said certificate pertains shall not be unloaded, and, pursuant to § 35-4-109, shall be removed from the state within forty-eight (48) hours or shall be destroyed by the Commissioner.
- 2.1.4. Any load(s) which are not accompanied by an inspection certificate, a North American Plant Health Certificate and laboratory test results shall not be unloaded, and, if a certificate cannot be produced within forty-eight (48) hours, pursuant to § 35-4-109, shall be removed from the state within forty-eight (48) hours or shall be destroyed by the Commissioner.
- 2.1.5. If the inspection certificate, North American Plant Health Certificate and the laboratory test results indicates that no late blight was present during the growing, loading, or testing, the load(s) to which said certificate pertains shall be reinspected during the unloading process. Random sampling of the load shall be taken and any tubers showing symptoms of late blight shall be tested. Any load(s) showing symptoms of late blight shall be placed in a bin and held at the place where reinspection occurred, or, they shall be placed in a truck owned by the receiver of said load(s) and held at the place where reinspection occurred, pending results of testing. If late blight is confirmed by testing, the load(s) must be removed from the state or destroyed within seventy-two (72) hours.
- 2.1.6. Nuclear seed stock is exempt from the reinspection and sampling set forth in Part 2.1.5. Nuclear seed stock no older than mini-tubers that originates within Colorado and is part of the seed potato certification program may have a sample size of at least 5 tubers sent to the Colorado Potato Certification Service Disease Laboratory for late blight testing. Nuclear seed stock of any size lot that originates outside of Colorado must have laboratory test results as required in 2.1.2 above prior to entering the San Luis Valley however the numbers of tubers tested may be less than 400 tubers provided the sample is representative of the lot; but it must be a minimum of 5 tubers.

2.2. Transportation

2.2.1. From June 1 to September 10 of each year:

2.2.1.1. All cull potatoes must be transported in a vehicle that is constructed and tarped or covered to prevent any potatoes from escaping and minimize the potential for spores to escape.

2.2.1.2. Any potato shipments imported from outside the San Luis Valley must be transported in a vehicle that is constructed and tarped or covered until the shipment is unloaded to prevent any potatoes from escaping and minimize the potential for spores to escape.

2.3. Cull Management

2.3.1. If culls are made permanently nonviable by chemical or mechanical means prior to leaving the storage, processing or packing facility, no further management is required.

2.3.2. If culls are not processed as set forth in Part 2.3.1, one of the following management measures shall be used:

2.3.2.1. From June 1 through September 10 of each year,

All cull potatoes shall be destroyed within seventy-two (72) hours utilizing one of the methods set forth below:

2.3.2.1.1. Composting, under the following conditions:

2.3.2.1.1.1. Any person who intends to use composting as a means of cull management shall notify the Department of such intent, prior to beginning composting;

2.3.2.1.1.2. Composting, as used herein, is the hot aerobic (oxygen-requiring) decomposition of organic materials including culls by microorganisms under controlled conditions. Each compost windrow or pile shall be marked with an identification number. Temperature readings of each windrow or pile shall be taken and recorded daily at a maximum of 50-foot intervals along each windrow. Compost windrows or piles shall reach temperatures of 130 degrees Fahrenheit or higher for a minimum of fifteen (15) separate daily readings to ensure destruction of late blight or other plant pathogens. Written records of the temperature readings shall be maintained for a period of one year and made available to the Department upon request to the compost operator; and

2.3.2.1.1.3. Inspections of the composting operation and records will be performed by the Department at regular intervals.

2.3.2.1.2. Ensiling;

2.3.2.1.3. Processing, such as for starch;

2.3.2.1.4. Burying, if lawful under applicable statutes, rules, or ordinances;  
or

2.3.2.1.5. Utilizing for livestock feed, under the following conditions:

2.3.2.1.5.1 Within seventy-two (72) hours of receiving the culls, the feeder shall feed the culls or cut, chop, or grind them to make them nonviable;

2.3.2.1.5.2. Culls not fed or processed as described in Part 2.3.2.1.5.1 or culls being stored prior to feeding or processing shall be completely covered with a tarp;

2.3.2.1.5.3. The unprocessed culls shall be consumed within forty-eight (48) hours of feeding;

2.3.2.1.5.4. Any person who intends to utilize culls for animal feed during this time period shall notify the Department of such intent, prior to beginning to feed culls; and

2.3.2.1.5.5. Regular inspections of the feeding operation will be performed by the Department.

2.3.2.2. From September 11 to March 31 of each year,

All culls shall be destroyed utilizing one of the methods set forth below:

2.3.2.1. Composting, under the following conditions:

2.3.2.1.1. Any person who intends to use composting as a means of cull management shall notify the Department of such intent, prior to beginning composting;

2.3.2.1.2. Composting, as used herein, is the hot aerobic (oxygen-requiring) decomposition of organic materials including culls by microorganisms under controlled conditions. Each compost windrow or pile shall be marked with an identification number. Temperature readings of each windrow or pile shall be taken and recorded daily at a maximum of 50-foot intervals along each windrow. Compost windrows or piles shall reach temperatures of 130 degrees Fahrenheit or higher for a minimum of fifteen (15) separate daily readings to ensure destruction of late blight or other plant pathogens. Written records of the temperature readings shall be maintained for a period of one year and made available to the Department upon request to the compost operator; and

2.3.2.1.3. Inspections of the composting operation and records will be performed by the Department at regular intervals.

2.3.2.2. Ensiling;

2.3.2.3. Processing, such as for starch;

2.3.2.4. Burying, if lawful under applicable statutes, rules, or ordinances;

2.3.2.5. Utilizing for livestock feed;

2.3.2.6. Spreading uniformly on the soil surface to a depth no greater than three (3) inches so that the culls are made nonviable by freezing or desiccation; or

2.3.2.7. Treating pursuant to label directions with a pesticide effective for the destruction of volunteer potato plants.

2.3.2.3. From April 1 to May 31 of each year,

All culls shall be destroyed utilizing one of the methods set forth below:

2.3.2.3.1. Composting, under the following conditions:

2.3.2.3.1.1. Any person who intends to use composting as a means of cull management shall notify the Department of such intent, prior to beginning composting;

2.3.2.3.1.2. Composting, as used herein, is the hot aerobic (oxygen-requiring) decomposition of organic materials including culls by microorganisms under controlled conditions. Each compost windrow or pile shall be marked with an identification number. Temperature readings of each windrow or pile shall be taken and recorded daily at a maximum of 50-foot intervals along each windrow. Compost windrows or piles shall reach temperatures of 130 degrees Fahrenheit or higher for a minimum of fifteen (15) separate daily readings to ensure destruction of late blight or other plant pathogens. Written records of the temperature readings shall be maintained for a period of one year and made available to the Department upon request to the compost operator; and

2.3.2.3.1.3. Inspections of the composting operation and records will be performed by the Department at regular intervals.

2.3.2.3.2. Ensiling;

2.3.2.3.3. Processing, such as for starch;

2.3.2.3.4. Burying, if lawful under applicable statutes, rules, or ordinances;

2.3.2.3.5. Utilizing for livestock feed; or

2.3.2.3.6. Treating pursuant to label directions with a pesticide effective for the destruction of volunteer potato plants.

## 2.4. Producer Reports

Any person who plants imported seed potatoes in the San Luis Valley shall report to the Commissioner annually, not later than June 1, the location (section, township and range) where such seed potatoes were planted and not later than October 1, as to whether late blight did or did not appear after planting.

## Part 3. RULES PERTAINING TO THE QUARANTINE FOR LATE BLIGHT

### 3.1. Reinspection

3.1.1. Any person who receives imported seed potatoes shall notify the Department whenever a load of imported seed potatoes arrives. This notification may be accomplished by phoning the Monte Vista or Lakewood, Colorado office of the Department.

- 3.1.2. Imported seed potatoes shall not be unloaded until authorized by the Commissioner.
- 3.1.3. The Commissioner shall inspect the certificates for compliance with the provisions of the quarantine.
- 3.1.4. Loads which do not comply with the provisions of the quarantine shall be sealed by the Commissioner.
- 3.1.5. The Commissioner shall take random samples and route the samples for testing as required by the quarantine.
- 3.1.6. The Commissioner shall insure that loads pending test results are held in a bin or a truck at the site of reinspection, as required by the quarantine.
- 3.1.7. After reinspection, the Commissioner shall document the presence or absence of visible late blight and the results of testing, if any.

### 3.2. Investigations

The Division of Plant Industry of the Department shall conduct investigations of all alleged violations of the quarantine and these rules.

### 3.3. Costs

- 3.3.1. The fees for reinspection shall be on file at the offices of the Colorado Department of Agriculture at Monte Vista and Lakewood, Colorado. These fees shall be applicable when such reinspection occurs during normal business hours, 0800-1700 hours, Monday through Friday, excluding state recognized holidays.
- 3.3.2. In the event a person requests reinspection outside of normal business hours, that person shall pay all overtime and mileage for the Commissioner's inspector.
- 3.3.3. Except for the special cost set forth in Part 3.3.2, the cost for all reinspection shall be billed quarterly to CPAC.
- 3.3.4. The full cost (direct and indirect cost) incurred by the Department for activities associated with investigations conducted pursuant to Part 3.2 shall be billed to CPAC on a quarterly basis.
- 3.3.5. The Department shall recover all legal costs from CPAC incurred as a result of promulgating, implementing, and enforcing the quarantine and these rules at the rate charged by the Department of Law to the Department for legal services. CPAC shall be billed quarterly for any such legal costs.

## **Part 4. STATEMENTS OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE**

### 4.1. July 31, 1996 – Effective September 30, 1996

This quarantine is imposed pursuant to the Pest Control Act, § 35-4-110, C.R.S. (1995) and HB 96-1018.

The Commissioner of Agriculture finds as follows:<sup>1</sup>

1. Throughout most of the year, Colorado ranks second in the nation in number of shipments of fresh-pack potatoes. The San Luis Valley of the state has approximately 77,000 acres devoted to the production of potatoes, producing 23,808,000 cwt (1,190,400 tons) of potatoes with a market value of \$132,134,000.
2. The potato industry is the number one agricultural industry in the San Luis Valley.
3. Late blight, *Phytophthora infestans*, is a fungus that is among the most devastating of all plant diseases. All portions of the plant are susceptible. Late blight is commonly recognized as the Irish potato famine fungus.
4. The San Luis Valley is free of late blight.
5. Late blight is epidemic in North America and no other potato production area outside of Colorado is free of late blight.
6. Late blight spores are dramatically explosive and the subsequent disease can destroy whole fields of plants in a remarkably short time. Under favorable conditions, a potato field that had mild and scattered lesions in one week can be nearly destroyed the next week.
7. An exact measure of the actual economic damage from late blight in areas of similar conditions of climate and natural habitat is not yet available, but the cost of protecting a potato field or treating an infected potato field with fungicide throughout a growing season is \$200 to \$250 per acre.
8. Late blight kills the foliage of the potato plant and the spores find their way into the soil and cause rot in the plant tuber. The spores may be present in fresh potatoes or, after harvesting, in potatoes in storage.
9. Importation of seed potatoes infected with late blight would likely result in the introduction of late blight to the potato crops in the San Luis Valley.
10. Introduction of late blight to the potato crops in the San Luis Valley would cause irreparable economic injury to the potato producers in the San Luis Valley.

A quarantine is thus declared against the importation of seed potatoes into the San Luis Valley, unless such seed potatoes are certified and inspected as late blight free.

<sup>1</sup>Sources for this information are: "Colorado Potato Situation and Outlook Report" and "Potato Late Blight Management Plan for Colorado," Dr. Richard T. Zink, Extension Potato Specialist, Colorado State University; "Re-emergence of the Irish Potato Famine Fungus," W. E. Fry and S. B. Goodwin, Plant Pathology Department, Cornell University; "Colorado Agricultural Statistics 1995 Annual Report," Colorado Agricultural Statistics Service.

#### Rules Pertaining to the Quarantine for Late Blight Statement of Basis and Purpose

The rules are adopted pursuant to the Pest Control Act, § 35-4-110 and 116, C.R.S. (1995) and HB 96-1018.

The purposes of these rules are to enforce the provisions of the quarantine for late blight, to recover the actual costs to offset the cash funds expended for services performed by the Commissioner in imposing the quarantine and to specify how such actual costs shall be recovered.

4.2. May 29, 1997 – Effective July 30, 1997

This amendment to the quarantine is made pursuant to the Pest Control Act, § 35-4-110, C.R.S. (1995 and 1996 Supp.).

Section 4.00 concerning producer reports is amended to make the reports received by the Commissioner more complete and useful. Requiring reporting of the location where imported seed potatoes are planted will facilitate detection of late blight should it occur in fields planted with imported seed potatoes.

4.3. April 8, 1999 – Effective May 30, 1999

The amendments to the quarantine are adopted pursuant to the Pest Control Act, § 35-4-110, C.R.S. (1998).

The purpose of these amendments is to enforce the provisions of the quarantine for late blight by further defining cull management to decrease any opportunity for late blight spore transmission.

4.4. April 16, 2009 – Effective May 30, 2009

Statutory Authority

The amendments to the quarantine and rules are adopted pursuant to the Pest Control Act, § 35-4-110, C.R.S. (2008).

The purpose of these amendments is to enforce the provisions of the quarantine for late blight by:

- 1) restricting the timeframe to June 1 through September 10 when cull potatoes must be tarpred or covered when being transported;
- 2) clarifying that cull potatoes must be tarpred or covered as opposed to using other methods to prevent potatoes or spores from potatoes from escaping when being transported; and
- 3) requiring all potatoes being imported into the San Luis Valley be tarpred or covered between June 1 and September 10 to prevent spores or potatoes from escaping when being transported.
- 4) Non-substantive typographical or numbering errors are corrected to clarify the rule and remove duplicate language and definitions.

The factual and policy issues encountered in the proposal of this amendment to the quarantine are as follows:

- 1) The critical time period when late blight can be transferred from potatoes being transported to the current potato crop is during the growing season. The growing season for potatoes in the San Luis Valley is June 1 through September 10. Potatoes being transported outside of this time frame would have minimal or no opportunity to infect the current crop with late blight, so restrictions are not needed outside of this time.
- 2) The current quarantine provides several methods to prevent potatoes from falling off trucks or spores from being blown off the truck during transport. Some of these methods such as "loading the truck to prevent this" are ambiguous and difficult to enforce. This change will make the quarantine specific so that the potatoes must be tarpred or covered to meet the requirements.
- 3) Potatoes being imported into the San Luis Valley pose a threat of infecting the potato crop with late blight. This could be done by infected potatoes falling off the truck or spores escaping from the truck. To prevent this, trucks carrying imported potatoes must be covered or tarpred. The only period when late blight could be transferred from potatoes being transported is during the growing season when potato plants are in the field. Therefore the restriction only needs to be in place between June 1 and September 10.



The purpose of these amendments is to enforce the rules pertaining to the quarantine for late blight:

- 1) correcting the contact information of the Department for notifications and when requesting reinspection.

The factual and policy issues encountered in the proposal of this amendment to the rules pertaining to the quarantine for late blight are as follows:

- 1) The phone numbers for the Department have changed. In addition, the Fruit and Vegetable Inspection Service within the Department is performing reinspections. This will allow the person to call either office.

4.50. November 12, 2013 – Effective December 30, 2013

#### Statutory Authority

The amendments to the quarantine are adopted pursuant to the Pest Control Act, § 35-3-110, C.R.S. (2013).

The purpose of these amendments is to enforce the provisions of the quarantine for late blight by:

- 1) Adding a requirement in 2.00 B that both a North American Plant Health Certificate accompany any seed potatoes imported into the San Luis Valley to document that field inspections were performed and that the lot is free from late blight.
- 2) Adding to 2.00 C the authority to deny unloading of any load of seed potatoes into the San Luis Valley if either the North American Plant Health Certificate or the laboratory test results indicate that late blight was present during growing, storage or loading of the load.
- 3) Adding to 2.00 D the authority to deny unloading of any load of seed potatoes into the San Luis Valley if either the North American Plant Health Certificate or the laboratory test results does not accompany the load.
- 4) Adding to 2.00 E the requirement to reinspect any load if the North American Plant Health Certificates or the laboratory test results indicate that no late blight was present during the growing, loading, or testing of the load.
- 5) Changing the interval at which CDA will bill CPAC to reflect what is currently being done.

The factual and policy issues encountered in the proposal of this amendment to the quarantine are as follows:

- 1) In some instances a field inspection report does not represent the complete field inspection information on the lot. This is the case when more than one field is aggregated into one lot. The North American Plant Health Certificate should provide the disease findings of all field inspections for each lot.
- 2) The North American Plant Health Certificate had not been developed at the time the Late Blight Quarantine was initially adopted in 1995, therefore it could not be required at that time. In addition, the recently implemented Seed Potato Act and associated rules requires imported seed into Colorado to have a North American Plant Health Certificate. Therefore requiring this document places no further burden on the producer, as they must have this document for Seed Potato Act compliance.

- 3) The Department has been billing CPAC on a quarterly basis for past several years. Quarterly billing rather than monthly billing is more efficient for both CDA and CPAC.

4.6. Adopted November 8, 2017 – Effective December 30, 2017

#### Statutory Authority

The amendments to the quarantine are adopted pursuant to the Pest Control Act, § 35-4-110,(1), (2) and (3), C.R.S.

The purpose of these amendments is to enforce the provisions of the quarantine for late blight by:

1. Clarifying the laboratory test required in 2.1.2 for incoming seed potatoes is a 21-day bioassay using at least 400 tubers. And clarifying that small lots of seed potatoes still need the late blight testing as required in Part 2.1.2 but can be less than 400 tubers as long as it is representative of the lot and a minimum of 5 tubers.
2. Clarifying the laboratory test required in 2.1.2 for incoming nuclear seed potatoes is a 21-day bioassay but the sample size may be smaller than 400 tubers for small lots but must be at least 5 tubers.
3. Update numbering system to make this Rule consistent with other Department Rules.

The factual and policy issues encountered in the proposal of this amendment to the quarantine are as follows:

1. The quarantine is currently nonspecific with regard to the required laboratory test for late blight and also the number of tubers that must be tested. New laboratory testing techniques have been developed since the late blight Quarantine became effective in 1996, but after talking with authorities in the field such as Amy Chartkowski at CSU it was determined that the 21-day bioassay is still the best testing procedure for late blight. So we felt like this needed to be specified to meet the requirements of the quarantine. Also it must be clear how many tubers, at a minimum, must be tested.
2. In small lots of seed potatoes, which are typically nuclear stock, 400 tubers may be all or a substantial portion of the lot. The quarantine needs to allow for fewer tubers to be tested but still allow for the test to be representative of the lot to protect against late blight. 5 tubers is the minimum that would be representative. Also, it has been decided that nuclear stock no older than mini-tubers that originate within Colorado from the labs that are already part of the potato certification program pose no threat of late blight and should be allowed to send a sample size of no fewer than 5 tubers to the Colorado Potato Certification Service Disease Laboratory for late blight testing. Nuclear seed stock of any size that originates outside of Colorado must have the late blight testing as required in 2.1.2 prior to entering the San Luis Valley, however the number of tubers tested may be less than the 400 tubers as long as it is representative of the lot and no less than 5 tubers.

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#### Editor's Notes

##### History

Entire rule eff. 05/30/2009.

Parts 2.10, 3.30.C, 4.50 eff. 12/30/2013.

Entire rule eff. 12/30/2017.