



Best practices for the handling of seed potatoes

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FOREWORD

Seed potatoes are more valuable than gold – not only because the cost of seed potatoes comprises the greatest proportion of production costs, but also because seed potato quality is a determining factor in yield. The quality of seed potatoes is determined by their disease status, physiological stage, size and vigour.

In the majority of potato-producing countries in the northern hemisphere, potatoes (seed potatoes and table potatoes) are planted in a particular season and harvested in a particular season. In many countries, potatoes are stored in cold rooms during the winter months. Information pertaining to foreign countries is therefore not usually applicable to the domestic situation. In South Africa, potatoes are planted during all four seasons of the year. To ensure mature seed potatoes for cultivation in specific areas, they are planted in both summer and winter. This means that the physiological quality of seed potatoes in South Africa differs, as do the conditions under which they are planted.

It is a given that seed potato growers and table potato growers are exposed to the same climatic risks and that climatic conditions during the seed potato production season have an effect on their physiological condition. Similarly, climate has an effect on the response of seed potatoes after planting during the table potato season. Production methods during the seed potato and table potato seasons, as well as the handling of the seed potatoes from the time of harvesting up until and during planting, affect the quality of the seed potatoes.

Knowledge of seed potato quality, good communication and good handling practices on the part of every individual in the value chain are the foundation of the successful trading and cultivation of seed potatoes in South Africa. Role players in the handling of seed potatoes include: Seed potato grower, seed potato trader, table potato producer, transport contractor, cold storage facilities and processing companies.

This document was compiled by Potatoes South Africa. The concept is not new and documents written by Drs Pierre Nortjé, Niël Theron and Ben Pieterse were used as the foundation to compile the current guide. The valuable contribution of Potato Certification Service, seed growers, producers of table potatoes and seed traders is acknowledged with appreciation.

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THE PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide guidelines for best practices for the handling of seed potatoes from harvesting until planting.

This document is not intended to provide guidelines in respect of any procedure during the certification and testing of seed potatoes, since this information is contained in the South African Seed Potato Certification Scheme.

Due to the fact that the production of seed potatoes and table potatoes takes place under different circumstances and there is no standard handling method for seed potatoes, certain principles are followed and the focus is on the availability of information with regard to production and handling conditions.

This document was compiled with the input of various role players in the value chain, namely seed potato growers, seed potato traders, table potato producers, and the Potato Certification Service. The document was subsequently accepted by the National Seed Potato Committee and approved by the Board of Directors of Potatoes South Africa.

Definition of terms:

- Seed potato grower: Farmer who produces certified seed potatoes.
- Seed potato seller/supplier: A seed potato grower, seed potato trader or other individual who sells seed potatoes.
- Seed potato buyer/receiver: A seed potato grower, table potato producer, seed potato trader or other individual who purchases seed potatoes.
- Table potato producer: Farmer who plants seed potatoes for production for the fresh-produce market or for processing.
- Transport contractor: A person or company contracted to transport seed potatoes on a remuneration basis.
- Cold storage facility: Facility where seed potatoes are stored at low temperature, whether on the farm or at a commercial facility.

WHY PLANT CERTIFIED SEED POTATOES?

The primary aim of the South African Seed Potato Certification Scheme is to supply the potato industry with high-quality certified potato planting material in the following ways:

- By controlling the spread of disease.
- Through improved risk management.
- By promoting the sustainable use of land.
- By making known the disease status of certified seed potatoes.
- By protecting the industry against pests and diseases that may be imported.

Planting certified seed potatoes gives the assurance that the seed potatoes have been grown, sampled, inspected and sealed in accordance with the rules and regulations of the Scheme, and that at the time of being sealed, they were found to be in compliance with the requirements of the Scheme.

An intact certification label on a sealed seed potato bag serves as proof that the seed potatoes are certified.

Any container without an intact certification label is deemed uncertified.



Role of seed potatoes in the control of disease

- Certified seed potatoes comply with the tolerances set by the Scheme for each class and generation. Seed potatoes are not necessarily 100% free of disease. The inspection reports provide information on the diseases observed during the certification process or identified during the testing procedure, thus specifying the occurrence.
- Early-generation seed potatoes carry a lower risk of tuber-borne diseases.

RETENTION OF SEED POTATOES

- The Scheme (South African Seed Potato Certification Scheme) is not an obligatory scheme. As such, nobody is obligated to plant certified seed potatoes. There are, however, certain risks and responsibilities associated with the retention of seed potatoes.
- The Scheme aims to limit the spread of disease through seed potatoes. Retaining seed potatoes increases the risk of contamination by viruses and soil-borne diseases, as well as infestation by insects and nematodes.
- If the intellectual property of the cultivar owner is protected by plant breeder's rights, the licensee (local distributor) of the cultivar is required to pay royalties to the owner. The South African potato industry is dependent on foreign breeders for the sustained development and supply of improved cultivars. Keeping the domestic market attractive to foreign breeders is in the best interests of the industry as a whole.
- Should a farmer retain seed potatoes for personal use, the proper thing to do is to reach an agreement with the licensee regarding the royalties to be paid to the licensee.

RESPONSIBILITIES

The success and satisfactory trade of seed potatoes relies on good communication, honesty and trust between the seller/supplier and the buyer/receiver.

The expectations of the buyer/receiver when purchasing seed potatoes

- A client expects to receive the right cultivar of seed potatoes.
- If a particular source has been agreed upon in advance, then that is the source that should be delivered.
- The seed potatoes should be in the physiological stage that was agreed upon.
- The occurrence of diseases shall be within tolerance for a particular generation.
- Should circumstances make the above impossible, the client would be notified in good time.

Best practices for the seller/supplier

- Seed potato quality is affected by various factors such as disease status, climate and cultivation practices during seed potato production, conditions during storage and transport, etc. The buyer/receiver of seed potatoes must be aware of the above conditions, and therefore the seed potato grower's fields, as well as the sorting and storage facilities should be inspected and negotiations between the parties must be encouraged.
- If there is a possibility that seed potato quality could be affected by climatic conditions (such as untimely rainfall, frost, or unusually high or low temperatures) during the production season or after harvesting, the seller/supplier shall notify the client accordingly.
- Should the delivery of seed potatoes be delayed due to climatic factors, strike action, etc., the client shall be notified thereof immediately.
- Should the certification results differ from the results expected, the client shall be notified thereof immediately.
- Inspection reports and post-control reports are released on request and in a timely manner.
- If seed potatoes have been subject to chemical treatment, the seed potato grower shall provide information on the chemical used, as well as the date and manner of treatment, if requested by the buyer/receiver.
- Should seed potatoes be stored at low temperature, a record of the temperature throughout the storage period shall be made available.
- The seller/supplier shall supervise the loading of seed potatoes on trucks in order to avoid any conspicuous problems.
- On request, the seller/supplier shall notify the client of the truck's time of departure, as well as all relevant observations in respect of the transport.
- The seller/supplier should appoint a representative to inspect the planting in order to gather as much risk-related information as possible.

Best practices for the buyer/receiver of seed potatoes

- The buyer/receiver shall supply the seller/supplier with information regarding the intended planting date, as well as the market, choice of cultivar and locality so that the seller/supplier can recommend and supply the most suitable seed potatoes.
- Timely ordering of seed potatoes and notification of intended planting date, cultivar, seed potato size, stage of maturity and generation, as well as the preferred supplier.
- Seed potato quality is affected by various factors such as disease status, climate and cultivation practices during seed potato production, conditions during storage and transport, etc. The buyer/receiver of seed potatoes must be aware of the above conditions, and therefore the seed potato grower's fields, as well as the sorting and storage facilities should be inspected. Negotiations between the parties must be encouraged.
- In the event of the cancellation of an order, the seller/supplier must be notified without delay.
- The seed potato grower or trader expects the buyer/receiver to make use of transport contractors with the necessary knowledge and experience in respect of the transportation of seed potatoes.
- Should the buyer/receiver not be satisfied with the product delivered, the seller/supplier must be contacted as soon as possible. This would normally be within seven (7) days after delivery, unless otherwise specified in the sales agreement. Timely reporting of any issues allows for problems to be identified and resolved as soon as possible.
- Should the buyer/receiver feel that the seed potatoes do not meet the necessary requirements, the supplier shall be provided with information on the relevant practices and conditions (including conditions during transport and timely storage, soil preparation and planting conditions).

BEST PRACTICES FOR THE HANDLING OF SEED POTATOES

Risk analysis

- Be aware of the benefits and risks related to the planned planting date (for example, the availability of mature seed potatoes, cold/warm/wet soil, frost/heat wave during the growing season, heavy rainfall/drought, duration of growth period).
- Seed maturity is a determining factor in the performance of seed potatoes. Cultivars differ in that some cultivars perform optimally when they are just starting to sprout, while others perform well at an advanced stage of sprouting. It is therefore important to ensure that the chosen seed potato cultivar will be at the optimal stage of maturity at the planned time of planting. If not, it is better to reconsider the time of planting than to plant seed potatoes that are not mature.
- Know which pests and diseases have been problematic in the past, as well as the rotational crops planted previously. The risks related to pests and diseases can then be taken into consideration.
- Consider whether the chosen cultivar is suited to the intended time of planting and production conditions, as well as the intended market?
- Production and storage conditions have an effect on the quality of seed potatoes. It is important to keep records of the performance of seed potatoes acquired from a particular supplier over a number of years. Measuring performance over several years gives a better indication of what to expect from seed potatoes from a particular source, compared to information on the previous season only.
- Unsuitable conditions during the storage and transport of seed potatoes can affect quality. Does the storage facility meet the requirements? Is the transport currently in use suitable for the transportation of your seed potatoes?
- Visit www.potatocertification.co.za to find out more about certification.

Transportation of seed potatoes

- Seed potatoes are often transported over long distances. Due to different planting times, conditions during transportation can vary greatly.
- Since unfavourable conditions during transportation can affect the quality of seed potatoes, the transportation of seed potatoes is an important step and deserves the same attention as all the other steps in the handling of seed potatoes. The same applies to on-farm transportation.
- There are three basic requirements in the transportation of seed potatoes: The seed potatoes must be kept dry, the temperature must remain moderate, and there must be sufficient ventilation.
- Make use of a contractor with the necessary experience in the transportation of seed potatoes. Is the truck driver suitably trained and experienced in the transportation of seed potatoes? Is the truck suited to the duration and conditions of the journey? Is the truck in good condition?
- Make sure that the contractor has insurance coverage.
- Seed potatoes kept in cold storage must be dry when loaded onto the truck.
- Workers should not stand or walk on the seed potatoes, since this causes damage and bruising.
- Where possible, extremely high and extremely low temperatures must be avoided during transportation.
- During the summer, seed potatoes must be protected from rain, hail and direct sunlight. Seed potatoes should be transported overnight in order to avoid the worst heat.
- In winter, seed potatoes must be protected from frost and cold winds. Seed potatoes should be transported during the daytime in order to avoid the worst cold.
- Where seed potatoes are transported overnight and the truck driver has no choice but to stop over, the truck must be parked under a roof.
- Conditions where condensation forms on tubers are to be avoided. High daytime temperatures and low minimum temperatures are common during the autumn, winter and spring, resulting in condensation particularly where seed potatoes are kept covered and with insufficient ventilation. Should condensation be unavoidable, the container should be opened as soon as possible to allow the seed potatoes to dry.
- The truck should be loaded in such a way as to allow for sufficient ventilation. It is recommended that seed potatoes be transported in pallets, since this allows for improved ventilation. Tod liners are recommended, since they offer protection from rain, hail, direct sunlight and wind.
- The transportation of seed potatoes in open trucks is suitable for short trips, for example when driving to the fields on the farm. Where seed potatoes are transported over long distances on open trucks covered with a tarpaulin, the tarpaulin must not be in direct contact with the seed potatoes, and there must be sufficient space for ventilation.

Cold storage

- The purpose of cold storage is to break the dormancy of seed potatoes for early plantings, and to extend the dormancy of seed potatoes for late plantings.
- It is important to remember that even the best storage facilities and practices can simply ensure that the original quality of the seed potatoes is retained – storage can do nothing to improve quality.
- The buyer/receiver is responsible for discussing the seed potatoes' suitability for storage with the seller/supplier. An agreement must be reached before the seed potatoes are transported to the storage facility. Change of ownership must be clearly stipulated in the agreement.
- Not all cultivars react the same to cold storage.
- Seed potatoes kept in cold storage must be planted within 14 – 20 days after being removed from the cold-room, since vigour is reduced in seed potatoes that are planted too long after being removed from cold storage. Be sure of each cultivar's requirements in this regard.

- It is important not to return seed potatoes to cold storage once they have been removed, irrespective of whether or not they have started sprouting.
- Inspecting the cold storage facilities is just as important as inspecting the seed potato fields and sorting facilities.
- The inspection of the cold storage facility should focus on the following:
 - Seed potatoes must be kept dry under conditions of high humidity (90 - 95% RH).
 - The correct temperature must be maintained (3 - 4°C), with sufficient ventilation and under the most sanitary conditions.
 - Take note of any bad odours, as well as any condensation on the ceiling or walls, and ask the manager about the record-keeping procedure.
- Data on temperature and humidity must be available and be produced on request.
- Different lots, sources and generations must be kept separate.
- Certified seed potatoes may not be stored in the same cold-room as uncertified potatoes.
- Take note of how the seed potatoes are warmed prior to being transported. The internal temperature of seed potatoes should be raised gradually to 15°C, and they must be dry. During warming, seed potatoes should not be exposed to direct sunlight.
- Ensure that all responsibilities have been resolved before seed potatoes are transported to a cold storage facility.

Taking delivery of seed potatoes on the farm

- Someone with the necessary expertise must inspect the load immediately on delivery.
- Take photographs of the truck.
- Keep record of the following:
 - waybill
 - departure and arrival times
 - open/under tarpaulin on arrival
 - type of trailer (flatbed/tod liner)
- Question the driver about the conditions during the journey (temperature, road conditions, etc.), whether he stopped overnight and if so, where, and where the truck was parked for the night.
- Make sure that the source of the seed potatoes corresponds with the source as agreed upon.
- Check the certification labels to determine the grower source.
- Take a representative sample of at least 10 bags per load.
- Inspect the seed potatoes in each bag for any deviations or symptoms of disease. Take photographs in support of your observations.
- Take note of the date of packaging when inspecting the bags. The more time that passes between packaging and delivery, the greater is the normal weight loss that occurs.
- Should any irregularities be suspected, take another sample of 10 bags per lot of seed potatoes.
- Should the seed potatoes be covered in so much soil that it is impossible to inspect for tuber symptoms, the soil may be brushed off to allow for closer inspection.
- Should any problems be detected during such closer inspection, the seller/supplier should be contacted without delay.
- Should the buyer/receiver be unsure of the nature of the problem or the impact thereof, the buyer/receiver should collaborate with the supplier in seeking assistance.

- Should the load be found acceptable, the seed potatoes can be offloaded. If the seed potatoes are delivered by a transport contractor and the truck driver is unable to wait, the seller/supplier must be notified that the seed potatoes have been either unloaded or returned. The conditions of sale determine who is responsible for the transportation costs in the event of the buyer/receiver being dissatisfied with the product.
- Purchasing contracts normally make provision for the buyer/receiver to report any problems within seven (7) days. The seed potatoes must therefore be inspected thoroughly before this time period expires.

On-farm storage of seed potatoes

- There are three basic requirements for the storage of seed potatoes: They must be kept dry, they must be kept at a moderate temperature, and there must be sufficient ventilation.
- If seed potatoes are stored on the farm prior to planting, they should preferably be kept under-roof. Enclosed structures with low, flat ceilings are to be avoided.
- There are risks associated with the storage of seed potatoes outdoors, since climate control is impossible.
- Where seed potatoes are stored outdoors, the following are important:
 - Keep the seed potatoes in the shade and avoid direct sunlight.
 - Do not expose the seed potatoes to rain. Should they be exposed to rain, the bags must be opened and unpacked as soon as possible to prevent rot.
 - Seed potatoes should not be exposed to low temperatures, frost or wind.
 - Do not expose seed potatoes to direct sunlight, cold or icy winds, taking particular care along the sides and on top of the stacks.
 - If it is necessary to cover the seed potatoes at night, use a covering that allows for air to circulate (such as hessian sacks).
- Irrespective of where seed potatoes are stored, the following factors are important:
 - Bags should not be packed directly on the ground/floor.
 - Sanitation is essential, especially in areas where black dot/silver scurf and soft rot occur. Ensure that all plant residues are removed once the seed potatoes have been taken for planting. Where seed potatoes are kept in a store, the floor and walls must be thoroughly disinfected.
 - Workers should not stand or walk on the seed potatoes, since this causes damage and bruising. Seed potatoes that have suffered mechanical damage are more prone to rot.
 - The bags of seed potatoes may not be stacked higher than they initially were on the pallet (eight bags high).
 - There must be sufficient ventilation around the pallets. Pallets should be spaced approximately 30 cm apart.
 - There must be sufficient space to allow for regular inspection of seed potatoes.
 - Seed potatoes from different sources must be kept separate.
 - Regular inspections are essential to check maturity, quality, and symptoms of post-harvest rot. It is important to check for possible wet spots caused by condensation or a leaking roof.
 - Any seed potatoes showing symptoms of soft rot must be removed, and the floor must be thoroughly disinfected.
 - The store and/or seed potatoes must be inspected regularly for the presence of insects such as potato tuber moth, which could infest the seed potatoes during storage.
 - The risk of temperatures that are either too high or too low must be determined by keeping record of the temperature around the sides and inside the stacks. The temperature readings should be taken early in the morning and during the afternoon, throughout the storage period.

General

- Remember that seed potato growers and table potato producers are exposed to the same climatic risks and that climatic conditions during the seed potato production season have an effect on their physiological condition. Similarly, climate has an effect on the response of seed potatoes after planting during the table potato season. Production methods during the seed potato and table potato seasons, as well as the handling of the seed potatoes from the time of harvesting up until and during planting, affect the quality of the seed potatoes.
- The value of good communication between the supplier and the buyer/receiver therefore, cannot be overemphasised.
- Record-keeping is crucial in determining the causes of problems and the reasons for success.
- Photographs are invaluable in terms of illustrating records and observations. Photographs can play a major role in improving communication between the seller/supplier and the buyer/receiver in the event of any problems arising. Photographs would also be a valuable resource in the event of an investigation into any complaints related to seed potatoes.
- The certification labels of all seed potatoes received must be retained until the end of the season. The Potato Certification Service offers 100% traceability when it comes to any certification label.
- Where possible, two or three bags from every source should be retained. In the event of problems during the season, the seed potatoes could then be re-inspected.
- Seed potatoes from different sources and sizes should be planted separately, with records kept of where each is planted.
- Meticulous records should be kept of the conditions during planting, for example rainfall, very hot or cold temperatures, time of day at which planting occurred, etc.
- In the event of any problems, the seller/supplier should be contacted immediately.



BEST PRACTICES FOR THE MANAGER OF THE COLD STORAGE FACILITY

- Make sure that the client is aware of the requirements, risks and responsibilities, for example: Who is responsible for the cost of re-sorting?
- Who has ownership of the seed potatoes?
- Inspect the seed potatoes thoroughly before taking delivery. Inspect the seed potatoes for any mechanical damage, as well as symptoms of soft rot, black dot and silver scurf.
- Measure the internal temperature of the seed potatoes and check for moisture.
- Keep record of your observations (take photographs where possible) and contact the owner of the seed potatoes immediately if you find the quality to be below standard.
- Ensure that the various cultivars, lots and generations are clearly indicated on every bag, and make sure to keep the different lots separate.
- Ensure that the cold-room is kept in a completely sanitary condition.
- Keep record of the temperature and humidity levels, and make them available on request.
- Allow clients access to the standard working procedure in respect of conditioning, cooling, low-temperature storage, and warming prior to transport.
- Supervise the loading of the truck transporting the seed potatoes to the buyer/receiver. Notify the receiver immediately should you suspect any problems.
- Preserve records for a period of one year.

COMPLAINTS RELATED TO SEED POTATOES

Due to the cost of seed potatoes, their perishability, and the effect of seed potato quality on the harvest (in terms of both yield and quality) and also soil health, the buyer/ receiver has the right to refuse to take delivery of the seed potatoes purchased and to have them inspected if there is any indication that their quality does not meet the required standard.

On the other hand, the seed potato grower/supplier has the right to supply seed potatoes that meet the minimum standards for seed potatoes of a specific generation, as specified by the buyer/receiver. If, for any reason whatsoever, seed potatoes fail to meet the requirements of the buyer/receiver, the buyer/receiver is notified as soon as possible and alternatives are discussed.

Should a buyer/receiver be dissatisfied with the seed potatoes delivered, the following procedure applies:

- The buyer/receiver contacts the seller/supplier immediately in the event of any dissatisfaction,
- the seller/supplier responds immediately,
- if the parties are not able to reach an agreement, and if the seed potatoes in question have been certified, both the buyer/receiver and the seller/supplier have the right to request the Potato Certification Service to inspect the seed potatoes,
- should the buyer/receiver or the seller/supplier still not be satisfied, it is recommended that an independent person knowledgeable in potato production be approached to conduct an investigation,
- if a buyer/receiver plants the seed potatoes with no problems having been reported, it is assumed that the seed potatoes were found to be satisfactory.

Since it is assumed that good communication exists between the seller/supplier and the buyer/receiver, and that the seed potato grower strives for customer satisfaction, it is assumed that independent investigations into complaints related to seed potatoes shall seldom be necessary.

Any investigation into a complaint related to seed potatoes should be conducted in the spirit of identifying the cause of the problem so that it can be avoided in future.

ROLE PLAYERS DURING INVESTIGATIONS

Potatoes South Africa

- The role of Potatoes South Africa, which acts in the best interests of both seed potato producers and table-potato producers, is to set guidelines for the reasonable investigation of any complaints related to seed potatoes,
- Personnel are not involved in such investigations,
- No funds are made available for purposes of investigating complaints related to seed potatoes,
- Regional officers can provide the producers with support by means of the identification of the disease/deviation in question.

Potato Certification Service

- The Potato Certification Service becomes involved in investigating complaints related to seed potatoes only in proven cases of certified seed potatoes being involved,
- Complaints related to seed potatoes are dealt with as quickly as possible in accordance with specified, internal guidelines of Potato Certification Service,
- Accurate assessments are made during the investigation, after which a full report on the complaint is drawn up,
- External experts can also be consulted regarding the complaint.

Investigator

- Independent persons with the necessary knowledge and expertise to conduct an independent investigation, and who can get input from specialists and put it to proper use.

Responsibilities of the seller/supplier and the buyer/receiver

- If possible, the two parties must agree on the investigator to be appointed and the cost of the investigation.
- Preferably, the purpose of such an investigation should be to identify the cause of the problems concerned so that they may be addressed.
- Compliance with the investigator's requests for support and information.

Responsibilities of the investigator

- The investigator shall at all times act in a professional and independent manner.
- Treat all information as strictly confidential.
- Determine the information required.
- Inspect the relevant fields planted with potatoes..
- Approach the parties concerned for the necessary information.
- Consider all relevant documentation.

GUIDELINES FOR INVESTIGATIONS

General

Information to be gathered and taken into consideration during an investigation:

- Did the farmer contact the supplier with regard to the problem, and is written correspondence available?
- Was Potato Certification Service notified of the problem and was an investigation conducted? If so, is a copy of the Potato Certification Service report available?
- Generation and lot number(s) of seed potatoes.
- Are the certification labels available and does the information correspond with the quantity of seed potatoes planted?
- When was the seed potato order placed and did the client make any special requests regarding the seed potatoes ordered?
- Did the buyer/receiver inspect the seed potato planting at any point during the season?
- Did the supplier make any recommendations in respect of the seed potatoes (size, generation, quality, maturity, seasonal conditions that could possibly affect the seed potatoes)?
- Where were the seed potatoes produced?
- Dates of planting, harvesting and certification.
- Conditions under which the seed potatoes were produced, harvested and stored.
- Did the seed potatoes undergo any form of post-harvest treatment? If so – when, with what chemical, and how?
- How were the tubers prepared for storage, and are there records available?
- Duration of storage.
- Are there records available of the temperature readings during storage?
- Did the buyer/receiver request copies of the certification and post-control reports, and were such copies received?
- Does the lot number correspond with the lot number on the certification label?
- How were the seed potatoes prepared for dispatch?

Transportation of the seed potatoes

- Who was responsible for transporting the seed potatoes (seed potato producer, contractor or client)?
- Type of transport (open/closed truck)?
- When and at what time was the truck loaded, and what time did it depart?
- What were the climatic conditions during transport?
- Are there records available of the temperature inside the truck?
- Date and time of arrival on the farm?
- What occurred at the time of the seed potatoes arriving on the farm?
- How and when was the load inspected, and by whom?
- Records/photographs of observations?
- If any problems were suspected, when was the supplier contacted, and is there a record of communication?

Seed potatoes on the farm prior to planting

- Describe where and how the seed potatoes were stored, from the time they were unloaded from the truck until the time they were transported to the field for planting.
- How long were the seed potatoes stored under the aforementioned conditions?
- Were the seed potatoes re-sorted prior to planting?
- Were the seed potatoes subject to any form of treatment, and if so, with what chemical, how and when?
- What is the history of the land: type of soil, fertilisation, rotational crops, history of problems?
- Description of the tubers and are there photographs available?
- Were all the seed ready to plant?

Planting

- When was the seed planted?
- Were seed of different sources/lots and sizes planted together or separately? Are there records available of where the different lots were planted?
- What was the soil temperature and moisture content at the time of planting?
- Were the seed potatoes planted manually or mechanically?
- What was the atmospheric temperature at the time of planting?
- At what depth were the seed potatoes planted?
- For what period of time were the seed potatoes exposed to sunlight before being covered?
- Rainfall and/or irrigation after planting, when and quantity?
- Date of approximately 75% emergence?
- What were the climatic conditions from the time of planting until emergence?
- Did the plants emerge uniformly? If not, what observations were made (rotting, soil conditions, temperature, photographs, etc.)
- Are there any leftover seed potatoes that were not planted? Have they been inspected?

Report

Once all the necessary information has been gathered, conclusions are drawn and provided to the client.



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