Best Management Practices for Dickeya in Potato Production Fields in the Northeast

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Potato seed tubers harboring *Dickeya dianthicola* are the only confirmed source of this pathogen. It does not appear to be able to survive in soil (including in crop debris) from one growing season to the next. Consequently, rotating with a non-susceptible crop is not a necessary component of the management program. Best management practices listed below are encouraged to minimize potential losses from *Dickeya*.

1. Select certified seed with negligible potential to be contaminated with *Dickeya*. This is best determined by talking with the seed grower about past occurrence on the farm and what is being done to manage it. There are growers who have not had *Dickeya* develop from their seed.
    - Select seed from farms where the pathogen has not been detected and seed marketed in previous years was not associated with *Dickeya* developing where the seed was planted. Check Certificates before purchase to determine if the seed was increased in previous years on a farm where *Dickeya* has been detected and so is at risk for being contaminated.
    - Select seed from farms where zero tolerance is being implemented.
    - Select seed with zero blackleg levels reported on the North American Seed Potato Health Certificates or the Winter Grow Out Test results for presence of *Dickeya* in ANY seed lot from ANY source. Seed lots with field readings of blackleg present should have reports that suspect plant samples were taken for testing and found to be *Dickeya* free. Check Certificates before purchase and require a copy be provided for your records.
    - Select seed that tested negative for *Dickeya*. Note that not detecting a pathogen in a sample of seed does not mean the pathogen is not present in the seed lot.
    - Ask for 'references' to contact: potato growers who purchased their seed in 2016.
    - Avoid seed lots that tested positive for *Dickeya* in previous years.
    - Avoid seed if its Certificate is unavailable. All certified seed has a Certificate.
    - Avoid seed from fields where symptoms of *Dickeya* were observed, even if affected plants were rogued out.
2. Request from supplier (directly from grower or broker) PCR testing for *Dickeya dianthicola* using an independent laboratory.
3. It is recommended that each truckload brought to a farm operation be sampled and re-tested for *Dickeya* once delivered. All results should be reported to your State Department of Agriculture or Potato Growers Association.
4. All equipment during seed piece cutting should be disinfected on a regular basis (at least daily), and also between lot numbers.
5. While it is recommended to rotate where potatoes are grown to manage most pathogens that can survive in unharvested tubers, this practice is not considered important for *Dickeya* because this pathogen does not readily spread in fields (thus a few tubers with *Dickeya* will not result in significant disease outbreak as can occur with late blight) and infected tubers are likely to rot while in soil.
6. Inspect fields for symptoms regularly, starting when skips and affected plants are readily visible. Examine the crop for unevenness (erratic growth) and plants that are unthrifty. *Dickeya* can be present in a plant affecting growth but not causing its typical blackleg symptom.
7. Avoid excess irrigation that results in standing water as *Dickeya* can move in this water. Note that surface irrigation water is not considered to be a possible source of *Dickeya*.
8. Do not apply copper or other fungicide for *Dickeya*. They are ineffective being unable to reach the pathogen, which is inside stems.
9. Growers are encouraged to submit suspect samples for testing promptly to their local extension office.
10. All growers are requested to share information about *Dickeya* occurrence and absence in their production fields. This information is needed to improve understanding about this disease. Include variety, lot number (North American Seed Certificate), field location, and testing results.
11. *Dickeya* has not been observed to continue developing in storage, which is as expected considering high temperatures are favorable, thus there are no management steps to implement after harvest for table-stock potatoes. However, it is prudent to make sure storages and pile temperatures remain cool, also reduce condensation and encourage airflow and exchange.