

**LAST UPDATED ON:**

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**Disinfesting Potato Storage and Equipment**

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Careful cleaning and disinfestation of potato storage and handling equipment is effective in preventing the spread of pathogens inciting contagious diseases such as ring rot. Cleaning and disinfesting surfaces that seed potatoes come into contact with will reduce the potential for spread of the causal agents of ring rot, black leg and other soft rotting bacteria. Surfaces contaminated with residual spores of many fungal diseases are also sanitized by effective disinfestation practice.

Effective sanitation requires a thorough cleaning of all surfaces before a disinfestant is applied. Soil, clay particles and organic material quickly neutralize the biocidal properties of most disinfestant materials available for use on potato storage and equipment surfaces.

Most disinfesting materials require that treated surfaces remain wet for up to ten minutes to assure the death of residual bacterial and fungal spores. The addition of a wetting agent to the spray solution may aid in keeping surfaces moist for the required period. When disinfecting solutions are used for dipping knives, crates, picking baskets or foot dip tanks, the solution should be changed frequently to avoid neutralization. Residual slime from ring rot has been found to survive for up to seven years on protected wooden surfaces. Therefore, steam or pressure washing prior to disinfesting is critical where exposure to ring rot contamination is known to have occurred. It is very difficult to kill ring rot bacteria in contaminated burlap bags. Preferably, contaminated bags should be burned. Do not reuse contaminated bags for handling seed potatoes.

**Chemical: Other bleach products**

Remarks: Use on machinery only. May be used as a surface disinfestant to precleaned machinery. Soil contamination or dirty water will greatly reduce the efficacy.

**Trade Name Rate of product Comments**

5.25% chlorine bleach 1 gal per 10 gal water

 solutions: Clorox)

**Chemical: Quaternary Ammonium Compounds**

Remarks: Potato tubers are in direct contact with the potato storage building surfaces, so the potato storage building surfaces are considered food-contact surfaces. The same is in effect for bin pilers, conveyers, and anything else that handles the crop. Potato storage areas or agricultural commodity storage areas must be on the label. Labelling for food processing areas does not apply. Potatoes, soil, and debris must be removed before application. The sanitizing use rate for quaternary ammonium is 200 ppm. The use rate for shoe baths is also 200 ppm. The disinfection use rate for quaternary ammonium is 400 ppm. This use rate exceeds the tolerance for food-contact surfaces. This rate requires a follow up rinse with potable water. Quaternary ammonium products are corrosive. They can cause skin burns and irreversible eye damage. Goggles or a face shield, rubber gloves, and protective clothing are required PPE when handling the concentrate from the container. Nothing but water is to be mixed with quaternary ammonium.

**Trade Name Rate of product Comments**

**Ster-Bac** 1 oz. per 2 gal Labelled for sanitizing food handling

 equipment at the rate of 200 ppm or

 1 oz. per four gallons of water.

**Questar QAC** 1 oz. per 2 gal Labelled for sanitizing food handling

 equipment at the rate of 200 ppm or

 1 oz. per four gallons of water.

**Prosan (Nuance Solutions) went into discontinuance January 1, 2019. No new shipments into Maine of Prosan can be made but Maine dealers can sell the product out of their inventory. The product remains registered in Maine for this year, maybe in 2020, possibly in 2021. I don’t recommend stocking up, as any product would not be able to be legally used after no longer has a discontinuance registration.**

**Chemical:** **Sodium hypochlorite products:**

Remarks: May be used as a surface disinfestant to precleaned areas. Soil contamination or dirty water will greatly reduce the efficacy. May be used as a potato surface disinfectant. Apply 4-6 qts. of solution per ton of potatoes. Use 4 to 8 oz./ton when using CDA nozzles

**Trade Name Rate per acre of product Comments**

**Agclor 310** 48 oz per 100 gal.

**Chemical: Hydrogen peroxide and peroxyacetic acid:**

Remarks: May be used as a surface disinfestant to precleaned areas. Soil contamination or dirty water will greatly reduce the efficacy.

**StorOx 2.0 1.3 oz per gallon**

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