

Keep an Eye on Potato Pink eye

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This past year there were numerous cases of Pink eye. This is a physiological disorder most consistently caused by excessive moisture, warm temperatures, loss of foliar canopy and soil compaction. This syndrome gets its name because it can be expressed as a pinkish color and raised areas on the tuber surface (Figure 1). In some cases, Pink eye can develop into corky areas on the tuber skin, often described as elephant hide or corky patch (Figure 2 and 3). In these cases, a pink color is not expressed; hence, the name change suggestion to Periderm Disorder Syndrome was recently given by Dr. Ed Lulai. This disorder has been described to start at the bud-end of the tuber.

The problem with this physiological disorder is the death of meristematic periderm cells. As a result, this leads to the loss of periderm integrity, causing abnormal internal suberization. Because the periderm does not fully heal, it can be gateway for secondary pathogens and cause tubers to dehydrate quickly. Tubers that are stored with Pink eye can become infected with tuber diseases such as fusarium dry rot or bacterial soft rot in storage.

If this disorder is recognized in fields prior to harvest some steps can be taken to mitigate the effects this could have on the crop. To reduced problems caused by Pink eye use careful handling practices to reduce injury to tubers during harvest and handling. Try not to store tubers or minimize storage length. If storing use cool and dry conditions to prevent the spread of pathogens.

If this is a recurring problem in specific fields or areas of fields, there are some management options that have been identified. Try to minimize water-saturated soils by using deep tillage and planting higher in the hill. Consider not planting areas where there is high compaction, such as field entrances and headlands, and avoid low spots in the field where water can accumulate. Maintain a healthy canopy to keep tubers cooler.



Figure 1. Pink eye expressed in eyes near the bud-end of the tuber.



Figure 2. Pink eye (Periderm Disorder Syndrome) expressed as a pinkish discoloration and corky patches.



Figure 3. Periderm Disorder Syndrome (pink eye) causing corky patches on tuber skin.