

Royce Hoffner

Senior Division Plant Sciences

Stage Specific Expression Of Peroxidase Enzymes In Wound Healing Potato Tubers

Suberization is the MOST important part of our world...well, the potato world, that is. Suberization is the healing process of a potato, without it, there is no potato. Think for a while on all of the things you enjoy eating. How about a nice BLT with some salted potato chips? Or a bucket of KFC chicken with that great potato salad? Without Suberization you would be left with a dry old sandwich or some cold chicken. Suberization is one of the most crucial parts of storing potatoes. The hypothesis was that different types of cultivars would take different amounts of time to Suberize. To find this, the following procedures were completed: Potatoes were cut into 8 pieces and then left at specified heat and humidity for specified times. RNA was isolated using a Phenol: Chloroform method. Then First Strand was synthesized using a thermocycler. The pure RNA was then placed with different genes on an agarose gel and electrophoresed for one hour and a half. The gel was then exposed to UV light and a picture was taken. It was found that the Purple Majesty began Suberizing immediately after cutting the potato, whereas the Yukon Gold did not begin until 36 hours after cutting into pieces. Therefore, the conclusion is that different potatoes do, in fact, Suberize at different times. So the next time you eat some kind of potato product, be thankful that it has Suberin.