

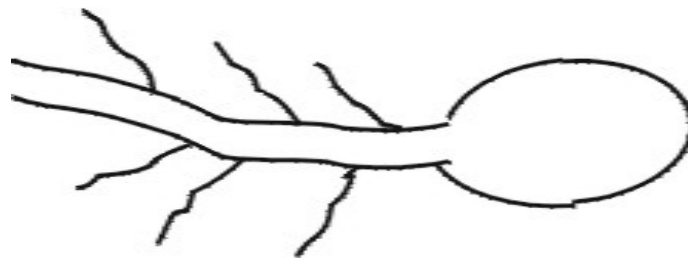


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TUBER CELLS



When tubers form, cell division is taking place. In order for this to happen, the proper ratio of IAA : Cytokinins must be present. If the tuber tissue has too much IAA, cell division stress and hollow heart happens. Calcium controls the amount of IAA.



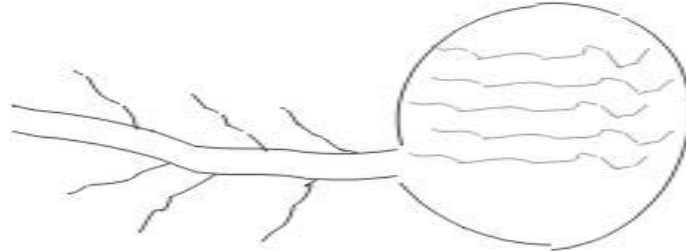
When tubers bulk, cell expansion occurs. This is the period that internal browning and malformation of the tuber occurs, because of cell collapse. Calcium is necessary for strong cell walls so that cells do not collapse.



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Physiologically, old tubers cells experience osteoporosis. Cells will lose calcium and cell walls will collapse. The osteoporosis of a tuber is caused by the enzyme ... polygluacturonase. Starches will turn to sugar. Sugars are food for fermentation ... rotting.

Calcium will inhibit osteoporosis of the old tuber. This, in turn, inhibits polygluacturonase. This, in turn inhibits the conversion of starch to sugar.

STOP osteoporosis of the old tubers with ample amounts of calcium ... until harvest!

Where does osteoporosis begin? In the wet, warm soil? Or, in cold storage?

Tubers are not much different than people. They need calcium early for strong bone development. They need calcium as they get old in order to stop bone loss.

Stoller Middle East