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Is There Strength in Numbers?

Driving a digger for potato harvest, I was able to see the abuse a potato endures during the process. Once in the cellar the real harm starts - depending on the potato's place in the pile.

Pressure bruising does not actually affect the consumer, but it does affect the farmer by harming the potato and cutting its worth to less than half. Now, I am not a potato farmer, but my curiosity was caught. I wondered if there was something in the potato that might lessen pressure bruising.

I wondered if the smaller the cell's size the more resistance it would have. Inquiry behind this thought is: If a house is built using one large beam or many small beams, which is stronger? Usually, the smaller and denser something is the stronger it is.

To research this, potato tubers were: pressure bruised, cored - healthy and bruised tissue, and sliced to 50 um. The slices were stained and unstained, slides prepared, and viewed with a microscope. The slides were photographed and the cells were counted and analyzed.

I found my thought to be not necessarily true. After combining and comparing the data, my hypothesis was not supported. I cannot see an exact correlation in cell size and bruising damage. But next year when I am talking with the farmer at potato harvest, I will be a lot more knowledgeable, but still curious about pressure bruising.