Sickly Spuds

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Potato viruses affect the potato farming and production industry each year. Finding tubers with resistance to the viruses is important for potato breeders in order to yield healthier tuber plants. After collecting 11 samples of tubers growing in the University of Minnesota UMORE Park research farm, the samples were tested for potato viruses PVY-n, PVY-o+c, PLRV, PVA, PVS, PVM, and PVX. Three different methods were used to find which tubers were infected with each specific virus; sandwich ELISA (Enzyme-Linked ImmunoSorbent assay), indirect ELISA, and dot blot. It was hypothesized that each sample would be infected with at least one virus of seven. The results from each method were compared. All samples were positive for PVS and PLRV. Samples 1,2,5,8 and 11 were positive for PVX. All samples except for 2 were positive for PVM. All samples were negative for PVA and sample 11 was the only tuber resistant to both strains of PVY.

Awards Won: