

### **Abstract**

Two sampling strategies were compared and sources of variability in the sampling protocols analyzed to optimize sampling methods for studies of cranberry fruit rot that occurs in the field (i.e., field rot). For the first method, fruit were dry picked by hand from randomly assigned quadrats; for the second method, fruit were scooped from harvest floodwaters. Rot incidence, which ranged from 1.8 to 9.7%, did not differ significantly between upland and lowland sites or, in general, between dry-picked and wet-harvested samples. There were no consistent differences between upland and lowland sites in the frequency of isolation of any fungus from either rotten or sound fruit. The incidence of certain saprophytic and soilborne fungi was greater in wet-harvested compared with dry-picked fruit. In general, rot incidence and incidence of various fungal taxa isolated from fruit varied more among samples within sites than among sites. Site type (i.e., upland or lowland) was never a major source of variability. These findings suggest that if the goal were to assess the occurrence of cranberry fruit rot within a region, intensive within-site sampling would be necessary, but site type would not be an important consideration, at least in Wisconsin, where this study was conducted.