

#### Abstract:

The relationship between vineyard conditions and 'Koryoku' kiwifruit quality was investigated, and methods to predict vineyards producing high quality fruit were investigated. Coefficient of variation (CV) of total soluble solids (TSS) in 'Koryoku' was larger than 'Hayward' throughout several years. Negative correlation was found between soil nitrate level and TSS. Coefficient of variation (CV) of TSS within canopy or within vineyard was relatively small, while CV among vineyards was large. The enzymatic degradation of starch in unripe (two weeks before commercial harvest) fruit was an effective method of estimating TSS in ripened fruit. Near Infra Red Analysis (NIRA) method was also effective. Evaluation of the vineyard by the conditions of management and soil type in summer was very effective to predict the quality of fruit produced in individual vineyard.