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Effects of timing of flowering on fruit quality and incidence of physiological disorders in peach

We are trying to clarify physiological aspects and mechanisms of various problems or improved points in high quality fruit production and to develop their solution.
Stability of fruit size and Soluble solid content (SSC) level is important in high quality peach fruit production. Also, severe flesh disorder causes economic loss. We found that “the fruit from early timing of flowering” shows worst qualities and the severe flesh disorder symptom within a tree awe to inferior accumulation of mineral nutrition and assimilates during the latter half of fruit development. These results are utilized to improve the skill thinned flowers or fruit.

Difference in timing of flowering within a group of bearing shoots


Reddish pulp disorder (Right)

Researches on detection of incidence of internal fruit physiological disorder and estimation of fruit maturity on the tree using an acoustic vibration method


“split-pit” in peach


Ripeness mesurement over fruit bag

To accomplish the stable fruit production, removal of abnormal fruit in orchard during immature stage and information of optimal harvesting was needed. Therefore, it is important to develop nondestructive method which can be utilized on the tree. By using an acoustic vibration measurement, split-pit occurrence could be detected from the ratio of resonant frequencies (f_3 / f_2), and progress of fruit maturity (decrease in flesh firmness) could be associated with the decline of f_3 value measured without removal of fruit bag.