Responses of Persimmon Trees to Different Trunk-Scoring Times for Producing Seedless Fruits under Non-pollination

Seong-Tae Choi, Ji-Hye Park, Gwang-Hwan Ahn, Ji-Young Son, Wan-Kyu Joung, and Kwang-Pyo Hong

Sweet Persimmon Research Institute, Gyeongsangnam-do Agricultural Research and Extension Services, Gimhae 50871, Korea, *Research and Development Bureau, Gyeongnam Agricultural Research and Extension Services, Jinju 52733, Korea

Commercial production of seedless fruits in 'Fuyu' persimmon has been difficult in Korean climate due to severe June drop during rainy season. This experiment was conducted to determine effect of different trunk-scoring times on fruit set and characteristics of the seedless fruits and vegetative growth in 'Fuyu' persimmon. After flower buds were thinned to leave one bud per bearing shoot in 13-year-old trees, the trees were covered with insect-proof net before flowering to prevent pollination by honey bees. The trunk was non-scored (control) or scored by a pruning saw in late-April (foliation period), mid-May (7 days before flowering), and early June (10 days after full bloom). Average leaf area was low for mid-May scoring. Late April and mid-May scorings reduced SPAD value and shoot length. Drop of seedless fruits was lowest for early June scoring with 16% and highest for non-scoring with 33%. Different scoring times did not clearly affect weight, coloration, firmness, and soluble solids of the fruits. Concentrations of reserve nitrogen and carbohydrates in dormant shoots of December were not changed depending on different scoring times. Also, number of flower buds and shoot growth the following year were not affected by the scoring treatments the previous year. Our result indicated that trunk scoring before physiological fruit drop after full bloom could help produce stable production of seedless 'Fuyu' fruits under non-pollination.

T. 055-254-1562, stchoi1234@korea.kr