

The Effect of Interstocks on the Growth and Productivity of the Japanese Persimmon Cultivar Maekawa-jiro

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INTRODUCTION

The cultivation of Japanese persimmons is a high-cost and labor-intensive undertaking because of the large size of the trees. Dwarfing the trees will reduce labor costs and the use of dwarfing rootstocks is one method employed. Much research has been done on dwarfing rootstocks and the results have been published. In this paper, we will report on the dwarfing of Japanese persimmons using interstocks.

MATERIALS AND METHODS

Japanese persimmon cultivars Shidaregaki, Nishimura-wase, Shakokushi, Fudegaki, and Maekawa-jiro were used as interstocks. In 1984, interstocks of each cultivar were grafted onto seedlings of 'Fuyu'. In 1985, shoots of these interstocks were cut to 40 cm in height and 'Maekawa-jiro' was grafted onto the interstocks.

RESULTS AND DISCUSSION

The trunk girth of scions on 'Shidaregaki', 'Nishimura-wase', and 'Shakokushi' was 80% of the control 'Maekawa-jiro'. The height of 12-year-old trees was 2.6 to 3 m when 'Shidaregaki', 'Nishimura-wase', and 'Shakokushi' were used as interstocks and the area and volume of the tree canopy was 70% of the control cultivar. These interstocks, therefore, have a dwarfing effect and this effect was evident 5 years after grafting and increased in proportion to the age of the tree.

The productivity of the trees using 'Fudegaki' was the highest and that of 'Shidaregaki', 'Nishimura-wase', and 'Shakokushi' was 65% to 75% of the 'Maekawa-jiro' control, however, production per area of tree canopy was 110% to 120% of the control cultivar for trees on 'Shidaregaki' and 'Nishimura-wase'. There was no difference in harvesting time.

From these results, we decided that 'Shidaregaki' and 'Nishimura-wase' were good for use as dwarfing interstocks because the trees on these interstocks had reduced trunk girth, tree height, and volume of tree canopy as well as increased productivity.