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Effects of Root Pruning and Uniconazole Treatment Induction in Peach Seedlings of the Current Year

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Root pruning, uniconazole treatments, and early sowing were performed of the current year in order to hasten flower bud induction. Early sowing increased the growing period and node number, and resulted in induction. In 'Yaguchi', root pruning in early to middle July increased the number of buds and the numbers of the flower buds, although its effects varied. In 'Hokimomo', root pruning in early July slightly increased the number

buds. In 'Yaguchi', treatments with uniconazole significantly increased buds and numbers of flower buds. Moreover, uniconazole significantly increased the number of nodes with flower buds, mean node number with flower buds and maximum node number with flower buds. Although root pruning induced flower buds only on nodes formed before uniconazole induced flower buds on nodes that had been formed before root pruning, uniconazole induced flower buds that ranged from the node at treatment with root pruning while uniconazole formed flower buds from the lower 16th node to the 70th node. Combined treatment with root pruning and uniconazole tended to increase the number of flower buds, which were distributed in intermediate parts of the two treatments. These findings suggest that it is possible to promote phase transition of nodes from the juvenile phase to the transition or reproductive phase by early sowing and to accelerate growth and accelerate flower bud differentiation by root pruning and uniconazole in nodes at the transition phase on seedlings of the current year. Since uniconazole induced flower buds at about the 70th node, 'Yaguchi' seedlings of the current year could attain the transition phase around the 70th node at 6–7 months after sowing.

Key Words: [juvenile phase](#), [phase transition](#), [reproductive phase](#), [transition phase](#)

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