



# Walnut PI 159568 - Early Harvest

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Due to over-concentration in a single, relatively late-harvesting cultivar and increasing regulatory pressure on chemical pesticides, the California walnut industry seeks high quality cultivars with earlier harvest dates and genetic host-plant resistance to bacterial blight. PI 159568, an introduction from Afghanistan with early harvest date, large light-colored kernels, smooth shells, and low blight incidence, has been used by the UC Davis Walnut Breeding Program to generate and release six new cultivars for the California walnut industry.



Photo by Davin Norene

'Wolfskill' walnut trees grown by Norene Ranches.

## PROJECT GOALS

- ✓ Develop walnut cultivars with high yields, large kernel weight, disease resistance, and with earlier harvest dates

## Problems Addressed

California walnut production has become highly dependent on a single relatively late-harvesting cultivar, 'Chandler', grown for its excellent kernel color and yield, but its commercial popularity has led to serious compression of the harvest period throughout the walnut production industry. Cultivars with a diversity of earlier harvest dates enable more timely and efficient utilization of harvest equipment and drying capacity. Ability to harvest in a timely manner improves kernel quality and earlier harvest enables marketing to begin sooner, contributes to better pricing, and avoids late fall rains.

## Solutions Developed

Walnut accession PI 159568 was collected as seed from Afghanistan in 1937 and planted at the USDA Plant Introduction Station in Chico, California. This accession was later obtained by UC Davis walnut breeders and used as a parent because of its large, plump, well-filled nuts, relatively light shell and kernel color, low blight incidence, and early harvest date. PI 159568 is a parent of several important walnut cultivars including 'Serr' and 'Durham' and is in the pedigree background of 'Ivanhoe', 'Solano', 'Wolfskill', and 'Tulare'. 'Tulare' is now the second most grown walnut in California, after 'Chandler'.



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