



Available Technology: Agriculture

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Hazelnut Cultivar "Wepster"

EASTERN FILBERT Blight (EFB), caused by the fungus *Anisogramma anomala*, poses a serious threat and imposes a significant added cost to hazelnut production in the Willamette Valley, which produces the majority of US hazelnuts. The hazelnut cultivar (variety) developed at Oregon State, named 'Wepster', is from a cross of 'Tonda Pacifica' and OSU 440.005. The advantage of 'Wepster' is in its resistance to EFB, high yield potential and infrequent nut defects. It is a vigorous tree, intermediate in size between 'Barcelona' and 'Jefferson'. The kernels blanch easily, have very good flavor and texture, and have been well-filled, even when the crop load is heavy. 'Wepster' is well-suited for the blanched kernel market, for use in chocolate products and baked goods, and in other premium-priced food items containing nuts.

TECHNOLOGY DESCRIPTION

'Wepster' inherits a gene from the cultivar 'Gasaway', which confers a high level of resistance to EFB; trees remain mostly free of EFB, with only a few cases of small cankers under high disease pressure having been observed. Additionally, 'Wepster' is resistant to bud mite (primarily *Phytoptus avellanae* Nalepa) and has very few moldy kernels. The nuts of 'Wepster' mature at least one week earlier than 'Barcelona', are small in size and have 46% kernel, by weight. 'Wepster' trees can produce high yields, be harvested early and have high resistance to EFB.

STATUS

A U.S. Plant Patent application has been submitted for 'Wepster'



Applications

- Blanched kernel market
- Chocolate products
- Baked goods

Features & Benefits

- Resistance to bud mite, EFB, low incidence of kernel molds, high yield potential
- Very good texture and flavor combined with small kernel size may merit a price premium, especially in chocolate products
- Trees grow more vigorously than other new OSU varieties, which may be beneficial in certain growing conditions and on particular soil types



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About the Principal Investigators



SHAWN MEHLENBACHER

(1) Academic/Professional: Shawn Mehlenbacher earned his Ph.D. in Plant Breeding at Cornell University in 1982 after graduating from Pennsylvania State University in 1978 with a B.S. in Horticulture. Mehlenbacher has had tree crop breeding responsibilities at Oregon State University since 1986, beginning as an Assistant Professor, and since 2000 serving as an Oregon Hazelnut Industry Professor.

(2) Research: Shawn Mehlenbacher's research consists of plant breeding and genetics. His efforts are to identify sources of resistance to eastern filbert blight (EFB) and DNA markers linked to these new sources of resistance. This in turn enables him to develop new cultivars for Oregon's hazelnut industry with a focus on a resistance to EFB, high productivity and suitability for the kernel market.

DAVID SMITH

REBECCA MCCLUSKEY

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