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Hazelnut Cultivar "Dorris"

*EATERN 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 'Dorris', is from a cross of 'Delta' and OSU 309.074. 'Dorris' is highly resistant to EFB and has infrequent nut defects. The trees have low vigor, similar in size to 'Clark', with similar nut yield per tree as 'Barcelona', but a much higher yield efficiency. As a dual-purpose cultivar, the larger nuts of 'Dorris' can be sold in-shell and the smaller nuts can be cracked out and sold on the kernel market. The kernels blanch easily and have excellent flavor and texture. 'Dorris' is well-suited for the blanched kernel market, for use in chocolate products, baked goods, and other premium-priced specialty nut food items.*

TECHNOLOGY DESCRIPTION

'Dorris' inherits a gene from the cultivar 'Gasaway', which confers a high level of resistance to EFB; trees of 'Dorris' have remained mostly free of EFB, with only a few cases of small cankers under high disease pressure having been observed. Additionally, 'Dorris' is resistant to bud mite (primarily *Phytoptus avellanae* Nal.). Its nuts mature at the same time as 'Barcelona', have 43% kernel by weight, and a nut yield efficiency that is significantly higher. As a result, 'Dorris' displays versatility as a dual-purpose cultivar, has high gross yields, high nut yield efficiency and excellent resistance to EFB.

STATUS

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



Applications

- Blanched kernel market
- Chocolate products and baked goods
- Specialty products

Features & Benefits

- Excellent texture and flavor and large kernels size merit a premium price
- Resistance to bud mite, EFB
- High nut yields and smaller tree trunk size make for high yield efficiency

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 held tree crop breeding responsibilities at Oregon State University Department of Horticulture 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 in identifying sources of resistance to eastern filbert blight (EFB) as well as DNA markers linked to 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 and suitability for the kernel market.

DAVID C. SMITH

REBECCA MCCLUSKEY

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