

Horizon 321—A New Winter Oat Cultivar for Both Grain and Forage¹

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Horizon 321 is a winter oat cultivar that was codeveloped by University of Florida (UF) and the University of Georgia (UGA). Horizon 321 is a mid-season winter oat with exceptional grain and forage production. It has good test weight and excellent disease resistance. This cultivar originated from a cross between a Coker breeding line (Ck92Ab719) and Horizon 314. Horizon 321 is a novel and a distinct variety that is most similar in appearance to Horizon 314, but it typically heads three days earlier and has a higher test weight. Horizon 321 is an excellent grain and forage oat adapted to the southeastern United States.

Horizon 321 has a winter growth habit with a low vernalization requirement. Horizon 321 is relatively tall with good winter survival, moderate straw strength, and excellent crown rust resistance.

Horizon 321 is resistant to prevalent races of crown rust, and it is susceptible to prevalent races of stem rust. It is also moderately susceptible to barley yellow dwarf virus (BYDV). Since it is aphid vectored, delaying planting until cooler weather tends to alleviate the spread of the virus. When planted early fall for forage, Horizon 321 is considered to be very disease resistant, although BYDV infection may result in some stunting and leaf discoloration.

Grain Production

Horizon 321 ranked highest for grain yield among the 20 entries and had good test weight in the 2001 Elite Oat Trials. It ranked in the top tier of adapted oat cultivars in state variety trials. In the 2002 USDA Uniform Oat Nursery (12 locations, 9 southern states), Horizon 321 ranked first for grain yield, had above average test weight, low lodging, and was resistant to crown rust.

Forage Production

Horizon 321 has been a reliable forage producer and has been recommended for grazing and hay production. This oat also fits well in dairy silage operations where high-quality, cool-season forages are used for green chop or silage. Data from various state variety trials report excellent grain and forage yields for this oat, which makes it suitable for both grain and forage production. Three-year seasonal forage yield for Horizon 321 was 8292 lb./ac. in Georgia. In 2007, it yielded 5449 lb./ac. in north Florida under dryland conditions.

Horizon 321 is sold as a class of certified seed by variety name only. Horizon 321 was released exclusively to Plantation Seeds, Inc. in Newton, GA.

Horizon 321 oat is considered to be an excellent choice for grain and forage use across the southeastern US.

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