



Horizon 314 -- A New Winter Oat Cultivar for Both Grain and Forage¹

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Horizon 314 is a new winter oat cultivar that was co-developed by University of Florida (UF) and University of Georgia (UGA). Horizon 314 is an excellent grain and forage oat adapted to the southern U.S.

Horizon 314 winter oat was derived from a single cross of Florida 502/Coker 84-15. This oat is early maturing and high yielding with moderate lodging resistance. At the time of its release in 2000, Horizon 314 exhibited excellent resistance to prevalent races of crown rust and was moderately resistant to *Helminthosporium* leafspot. Horizon 314 is susceptible to prevalent races of stem rust and is moderately susceptible to barley yellow dwarf virus. Delaying planting until cooler weather prevails tends to alleviate the spread of the virus since it is aphid vectored. When planted early fall for forage, Horizon 314 is very disease resistant although BYDV infection may result in some stunting and leaf discoloration.

Horizon 314 has a winter growth habit, with a low vernalization requirement. Horizon 314 is relatively tall in height, with good winter survival,

moderate straw strength and excellent crown rust resistance. It has short, moderately plump seed with the white color of Florida 502. It is similar in appearance to GA-Mitchell, but matures about 5 days earlier.

Grain Production

The mean grain yield for Horizon 314 has generally exceeded or equaled other oat cultivars in multiple location-year trials. In the USDA-ARS Uniform Winter Oat Yield Trials conducted at a number of locations throughout the southeastern USA, Horizon 314 was among the highest in grain yield of the experimental lines and it exceeded all the commercial varieties in 1994 and 1995. Across 17 locations in 1994, it had an average yield of 3046 lb/A and ranked second in the trials. Horizon 314 averaged 2380 lb/A across 18 locations and ranked sixth in 1995. A severe crown rust epidemic in 1995 greatly reduced yields of most commercial varieties in the trial, but Horizon 314 exhibited excellent field resistance. Among the entries, Horizon 314 had the highest grain yield in Florida, Georgia, and Alabama with average grain production outside these states.

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Forage Production

In forage trials conducted in Florida, Georgia and Alabama, it had a mean yield of 3898 lb/A, considerably above the overall test mean of 3552 lb/A. Horizon 314 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 utilized for greenchop or silage.

Horizon 314 is sold as a class of certified seed by variety name only. Horizon 314 was released exclusively to Plantation Seeds, Inc., Newton, GA.

Horizon 314 oat is considered to be an excellent choice for grain and forage use across the southeastern U.S.