



Horizon 474 - A new winter oat cultivar for both grain and forage¹

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Horizon 474 is a new winter oat cultivar that was co-developed by the University of Florida (UF) and the Georgia Agricultural Experiment Station (UGA) and was released in 2002. Horizon 474 has considerable potential for both grain and forage production in the southeastern U.S. The new oat was selected from material donated by Northrup-King Seed Company to the USDA-ARS. Horizon 474 was derived from a bulk population, which originated from the cross: Coker 84-15/TX84Ab2131. Coker 84-15 is an unreleased advanced line that was tested in the 1985 Uniform Winter Oat Nursery. The TX84Ab2131 is a StateplaceTexas breeding line where the crown rust resistance genes from TAM O-301, TAM O-312, Coker 227, and Coker 234 were combined with the stem rust resistance gene from Alpha (CI9221). This is the same source of stem rust resistance present in Steele, TAMO 386, and TAMO 397.

As with most eastern oat varieties, Horizon 474 is susceptible to Barley Yellow Dwarf Virus (BYDV) infection. 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 474 is very disease resistant although BYDV infection may result in some stunting and leaf discoloration.

Grain Production

Horizon 474 is a white seeded oat. It has excellent test weight, is early maturing, and has good crown rust resistance. In comparison to Florida 501, a very popular older cultivar, Horizon 474 has higher grain yield, higher test weight, stronger straw, better crown rust resistance, and appears to be more winter hardy. Three-year average oat grain yield for Horizon 474 was 120 bu/A in Georgia. Horizon 474 has similar maturity to Florida 501 and it is 7-10 days earlier maturing than Horizon 314, a popular variety released several years ago.

Forage Production

Horizon 474 has been a reliable forage producer and is 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. Three-year seasonal forage yield

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for Horizon 474 was 7645 lb/A in Georgia and two-year yield averaged 4941 lb/A in north Florida under dryland conditions. Horizon 474 was released exclusively to Plantation Seeds, Inc., Newton, GA.

Horizon 474 oat is considered to be an excellent choice for grain, hay, grazing or ensiling in the southeastern U.S.