

OK12912C-138407-2 (STRAD CL PLUS)

- **Higher yield ceiling than Doublestop CL Plus, especially in central in north central Oklahoma, with only slight lowering of wheat protein concentration and test weight.** A 6-bu/ac difference in statewide yield between OK12912C-138407-2 and Doublestop CL Plus in 2019 breeding trials appeared to be associated with a distinguishable superiority in canopy hygiene throughout the boot and grain filling stages, related in part to natural infections of Septoria tritici blotch and leaf rust, and to some extent, bacterial streak. A similar yield difference occurred in statewide breeding trials in 2020, when canopy hygiene was again observed superior in OK12912C-138407-2. The 2020 wheat variety trials in central OK provided some insight into the extended yield ceiling of OK12912C-138407-2, where it yielded 111 bu/ac, both in the Lahoma-fungicide trial and the Homestead trial (no fungicide). Across all variety trials in 2020 outside of southwest Oklahoma, the difference in grain yield between OK12912C-138407-2 and Doublestop CL+ was 4 bu/ac. Test weight of OK12912C-138407-2 is expected to be 0.5 to 1.0 lb/bu less than Doublestop CL+, yet OK12912C-138407-2 remains in the top tier of OSU releases for test weight and should easily exceed 60 lb/bu in most environments. Wheat protein concentration may differ, when averaged across numerous environments, by about 0.3 percentage units (Doublestop CL+, higher), but both cultivars are above-average.
- **A strong disease package relative to Doublestop CL+.** The latest field and greenhouse ratings reveal improved adult-plant resistance to leaf rust in OK12912C-138407-2. Field ratings for stripe rust in Kansas and Washington indicate slight improvement for OK12912C-138407-2, though both cultivars have desirable reactions. The latest reactions to curl mite-transmitted viruses, reported by University of Nebraska-Lincoln, indicate a moderately resistant to resistant reaction of OK12912C-138407-2 and a moderately resistant to intermediate reaction for Doublestop CL+.
- **Aggressive fall growth habit and earlier maturity relative to Doublestop CL+.** Early canopy closure and a semi-prostrate vegetative growth habit are distinguishing characteristics of OK12912C-138407-2 difficult to quantify with conventional, single-clip forage trials. OK12912C-138407-2 fits an early-September planting date and mid-March pull-off date, based upon breeding nursery observations and dual-purpose yield trials. OK12912C-138407-2 appears to reach canopy closure earlier than Doublestop CL+, and matures about 2-4 days earlier than Doublestop CL+.
- **Functionality equivalent to Doublestop CL+, a standard of excellence in the baking community.** OK12912C-138407-2 should enjoy the same level of success in wheat show contests and preferred variety lists as Doublestop CL+, though one advantage it has shown with industry testing is water absorption, as typically measured by the farinograph. OSU cultivars tend to struggle to exceed the benchmark of 60%, but OK12912C-138407-2 provides the exception to that rule, often exceeding 62% at normal protein levels. Dough strength and water absorption of the HRW class are often criticized by the industry, but OK12912C-138407-2 will set a leading example for both characteristics, and the effort has already been extended to have it placed on preferred

variety lists pending release.

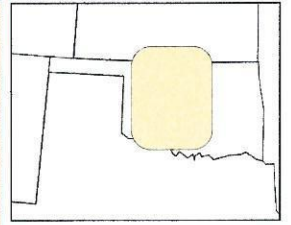
- OK12912C-138407-2 is a moderately tall variety, but with good standability (similar to OK Bullet). Lodging could be problematic in wet environments.

- *Recommended positioning* – early-planted grazing systems for dual-purpose beef and wheat production, and grain-only production systems, throughout the central corridor of southern Plains wheat production.

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Grain-only yield	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Dual-purpose yield	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Early fall forage accumulation	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Test weight	Below-average or susceptible			Average or intermediate			Above-average or resistant		
BYD	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Leaf rust	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Stripe rust	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Powdery mildew	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Septoria leaf blotch	Below-average or susceptible			Average or intermediate			Above-average or resistant		
SB/SS complex	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Hessian fly	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Shattering	Above-average or resistant			Average or intermediate			Below-average or susceptible		
Standability	Above-average or resistant			Average or intermediate			Below-average or susceptible		
Acid soils	Above-average or resistant			Average or intermediate			Below-average or susceptible		
Kernel size	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Protein	Below-average or susceptible			Average or intermediate			Above-average or resistant		
Bread baking	Below-average or susceptible			Average or intermediate			Above-average or resistant		



Below-average or susceptible

Average or intermediate

Above-average or resistant