TECHNOLOGY OPPORTUNITY

MTF1435 Forage Winter Wheat

Montana State University seeks partners to license and commercialize a high performing forage variety with dual-use potential

Description:

Montana State University (MSU) has developed MTF1435 as a successor to the popular Willow Creek forage wheat. MTF1435 is a tall, awnless, hard red winter wheat developed for forage production; however, the variety possesses grain yield and quality characteristics that make it attractive as a dual-purpose crop (forage and grain). Compared to Willow Creek, MFT1435 produces 35% higher seed yield and heads out 5 days earlier while maintaining similar forage yield and forage quality. MTF1435 is taller, earlier, and similar in forage yield and forage quality to Ray (MTF1432), a concurrent PVP-protected variety released by MSU in in Montana.

Variety	Field Analysis				Forage Analysis	
	Seed Yield *lb/a*	Heading Date *Julian*	Plant Height *in*	Dry Matter Yield *ton/a*	Protein %	TDN %
MTF1435	3220	162.7	39.4	3.54	11.6	65.8
Willow Creek	2383	168.3	43.8	3.37	11.4	64.9
Ray (MTF1432)	3896	164.5	35.6	3.45	11.2	66.7
LSD (0.05)	*388*	*0.9*	*2.4*	*0.31*	*ns*	*ns*

Benefits:

- **Cost-Effective Seed Production:** 35% higher seed yield than Willow Creek, the current regional standard winter forage wheat
- **High Forage Yields:** Dry matter yield of 3.54 tons per acre (ton/a) is similar to that of Willow Creek (3.37 ton/a) and Ray (MTF1432, 3.45 ton/a) over 20 Montana winter annual forage trials conducted from 2014-2017
- **Cold Hardy:** Bred to perform in the harsh northern climate of Montana
- **Dual-Use Potential:** MTF1435 produced similar grain yields to Northern and Decade varieties over 23 sites in 2017 trials at acceptable quality levels

Opportunity:

- US plant variety protection (PVP) rights available for license and commercialization in all states except Montana and international plant breeder's rights available for license and commercialization outside the United States.
- Additional agronomic information available at plantsciences.montana.edu/foundationseed/varietyrelease/18MTF1435licensed%20release.pdf
- To license, respond before Friday, June 1, 2018, to the licensing opportunity announcement at tto.montana.edu/tech/techopps/MTF1435_Licensing_Opportunity_Announcement.pdf

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