

Request for Support for Registration of OT3132

Crop: Oat (*Avena sativa* L.)
Type: Spring, hulled (Milling)

Proposers: A.D. Beattie
Crop Development Centre
University of Saskatchewan
51 Campus Drive
Saskatoon, SK. S7N 5A8

Test #'s: OT3132 or SA210983
Pedigree: OT5003 x CDC Endure

Area of Adaptation: Western Canada

Description:

OT3132 is a high β -glucan, moderate oil and moderate protein oat line that combines very good groat percentage, good test weight and kernel weight, with high plumps and low thins. It shows excellent and consistent yield potential across all soil zones, shorter height, good lodging resistance and moderate maturity. **OT3132** also demonstrates resistance to smut and moderate resistance to both BYDV and FHB.

Strengths:

- Excellent grain yield (> checks).
- Good resistance to lodging (= best check).
- Short height (= shortest check).
- Plumps and thins (= best check).
- Groat % (= best check).
- Groat β -glucan (= best checks).
- Resistant to smut, moderate resistance to BYDV and FHB.

Neutral characteristics:

- Maturity (similar to AC Morgan).
- Test weight and kernel weight (similar to CS Camden).
- Groat protein (< checks).
- Groat oil and TDF (similar to checks).

Weaknesses:

- Susceptible to crown rust (similar to checks) and stem rust (similar to checks).

Table 1. Grain yield for OT3132 and checks from the 2024 WCORT.

Entry	Black Soil Zone		Black & Grey Zone		Brown Soil Zone		Irrigated		Combined	
	kg/ha	%Morgan	kg/ha	% Morgan	kg/ha	% Morgan	kg/ha	% Morgan	kg/ha	% Morgan
AC Morgan	6539	100	7256	100	4959	100	8845	100	6639	100
Summit	5936	90	6466	89	4729	95	8128	91	6041	91
CS Camden	5835	88	7199	99	4743	95	7989	89	6147	93
CDC Endure	6679	102	7440	102	4752	95	8900	100	6729	101
OT3132	7353	114	7954	110	5362	108	9585	109	7357	111
Station years	7		3		2		1		13	

Table 2. Grain yield for OT3132 and checks from the 2025 WCORT.

Entry	Black Soil Zone		Black & Grey Zone		Brown Soil Zone		Irrigated		Combined	
	kg/ha	%Morgan	kg/ha	%Morgan	kg/ha	%Morgan	kg/ha	%Morgan	kg/ha	%Morgan
AC Morgan	7085	100	8355	100	4775	100	9587	100	7213	100
CDC Anson	7110	100	8084	97	4546	95	8700	91	7067	98
CS Camden	6966	98	7995	96	4943	104	8752	91	7030	97
CDC Endure	7169	101	8179	98	4702	98	9604	100	7206	100
OT3132	7740	109	8770	105	5301	111	10102	105	7787	108
Station years	7		3		2		1		13	

Table 3. Grain yield for OT3132 and checks from the 2024 and 2025 WCORT.

Entry	Black Soil Zone		Black & Grey Zone		Brown Soil Zone		Irrigated		Combined	
	kg/ha	%Morgan	kg/ha	%Morgan	kg/ha	%Morgan	kg/ha	%Morgan	kg/ha	%Morgan
AC Morgan	6812	100	7805	100	4867	100	9216	100	6926	100
CS Camden	6400	94	7597	97	4843	100	8370	91	6589	95
CDC Endure	6924	102	7810	100	4727	97	9252	100	6968	100
OT3132	7546	111	8362	107	5331	110	9844	107	7572	109
Station years	14		6		4		2		26	

Table 4. Agronomic characteristics for OT3132 and checks from the 2024 WCORT.

Entry	Days to Head	Days to Mature	Height (cm)	Lodging (1 - 9)	Test Wt. (kg/hl)	Kern. Wt. (mg)	Plump (%)	Thins (%)	Groat (%)
AC Morgan	59	93	105	2.4	55.9	35.1	82.2	6.5	67.6
Summit	58	93	95	4.0	57.1	33.1	81.7	7.6	70.3
CS Camden	58	91	99	3.1	53.8	34.3	75.3	11.7	69.1
CDC Endure	58	92	105	2.9	55.3	36.4	84.9	6.3	72.2
OT3132	58	93	99	2.5	55.0	34.1	85.3	7.0	72.8
Station years	9	13	13	11	12	12	5	5	5

Table 5. Agronomic characteristics for OT3132 and checks from the 2025 WCORT.

Entry	Days to Head	Days to Mature	Height (cm)	Lodging (1 - 9)	Test Wt. (kg/hl)	Kern. Wt. (mg)	Plump (%)	Thins (%)	Groat (%)
AC Morgan	58	98	99.4	1.7	60.7	40.9	90.6	0.8	73.0
CDC Anson	59	98	81.7	1.9	59.6	40.8	93.9	0.7	77.5
CS Camden	57	94	94.0	1.7	59.4	39.8	88.7	1.1	72.4
CDC Endure	57	96	97.5	1.6	59.7	41.7	93.2	1.0	76.2
OT3132	57	98	93.0	1.7	58.3	40.2	94.0	0.5	76.4
Station years	8	10	12	5	13	13	6	6	6

Table 6. Agronomic characteristics for OT3132 and checks from the 2024 and 2025 WCORT.

Entry	Days to Head	Days to Mature	Height (cm)	Lodging (1 - 9)	Test Wt. (kg/hl)	Kern. Wt. (mg)	Plump (%)	Thins (%)	Groat (%)
AC Morgan	58.4	95.4	102.4	2.0	58.0	37.9	86.4	3.7	70.3
CS Camden	57.2	92.6	96.5	2.4	56.3	37.0	82.0	6.4	70.7
CDC Endure	57.5	93.9	101.2	2.2	57.2	39.0	89.1	3.6	74.2
OT3132	57.6	95.6	96.2	2.1	56.1	37.2	89.7	3.8	74.6
Station years	17	23	25	16	25	25	11	11	11

Table 7. Grain quality characteristics for OT3132 and checks from the 2024 and 2025 WCORT.

Entry	Protein			Oil			β-Glucan			TDF
	2024 (%db)	2025 (%db)	Mean (%db)	2024 (%db)	2025 (%db)	Mean (%db)	2024 (%db)	2025 (%db)	Mean (%db)	2025 (%db)
AC Morgan	15.0	15.3	15.2	5.9	6.3	6.1	4.5	4.4	4.5	9.0
Summit	15.5	-	-	7.2	-	-	5.1	-	-	-
CDC Anson	-	16.3	-	-	6.6	-	-	6.3	-	11.0
CS Camden	16.0	17.6	16.8	7.0	7.0	7.0	5.7	5.3	5.5	9.8
CDC Endure	15.2	16.3	15.8	6.6	6.8	6.7	5.6	5.4	5.5	9.9
OT3132	13.9	14.7	14.3	6.6	6.8	6.7	5.4	5.4	5.4	9.7
Station years	6	6	12	6	6	12	6	6	12	6

Table 8. Disease reaction summary for OT3132 and checks from the 2024 and 2025 WCORT.

Entry	Year	BYDV (1-9)	Smut (%)	FHB DON (ppm)	FHB Rating	Oat Crown Rust										Oat Stem Rust				
						Field		Greenhouse								Field		Greenhouse		
						Ft. Whyte (0-9)	Morden	CR 13	CR 223	CR 241	CR 249	CR 254	CR 257	CR 258	CR 259	Ft. Whyte (0-9)	Morden	NA8	NA28	NA67
AC Morgan	2024	7	0	2.8	R	8	20S	4+	4++	-	-	-	4+	4+	4+	7	15S	34	4	4
AC Morgan	2025	6	0	5.4	R	5	13S	4	4--	4	4+	4+	4+	4+	4-	8	70S	4	33+	4
Summit	2024	6	0	5.3	MR	8	25S	0	0	-	-	-	;	4+	0	8	5MS	;1-	1	34
CDC Anson	2025	5	0	10.2	I	4	7S	0	0	2	0	;	4+	;	0	7	20S	4	34	4
CS Camden	2024	6	0	8.1	I	7	40S	;	0	-	-	-	3	;	;	7	70S	3-3	34	33+
CS Camden	2025	7	0	12.1	S	6	20S	0	0	3+	0	3-	3+	;	2+	7	50S	4	33+	4
CDC Endure	2024	7	0	4.3	MR	7	15S	0	0	-	-	-	4	0	0	7	30S	1-	4	33+
CDC Endure	2025	6	0	19.3	S	4	13S	0	0	4	0	3+	1	;	1	5	40MS	1	34	34
OT3132	2024	2	0	4.0	R	8	25S	;2	0	-	-	-	4+	;(2)	2	6	40S	34	34	34
OT3132	2025	4	0	8.0	MR	1	20S	0	0	4	0	4	4+	;	4-	8	50S	34	33	34