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North Dakota
Barley, Oat and Rye

Variety Trial Results for 2020 and Selection Guide

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Barley, oat and rye varieties currently grown in North Dakota are described in the following tables. Successful production of these crops depends on numerous factors, including selecting the right variety for a particular area. Characteristics to evaluate in selecting a variety are: yield potential in your area, test weight, straw strength, plant height, reaction to problematic diseases and maturity.

Selecting varieties with good quality also is important to maintain market recognition. Because malting barley usually is purchased on an identity-preserved basis, producers are encouraged to determine which barley varieties are being purchased by potential barley buyers before selecting a variety. When selecting a high-yielding and good-quality variety, use data that summarize several years and locations. Additional data from county sites are available at *www.ag.ndsu.edu/varietytrials* and from each Research Extension Center.

Yield is reported on a 14.5%, 14% and 14% moisture basis for barley, oats and rye respectively. Protein is reported on a 0% moisture basis for all crops in this report. The agronomic data presented in this publication are from replicated research plots using experimental designs that enable the use of statistical analysis. The LSD (least significant difference) numbers beneath the columns in tables are derived from these statistical analyses and apply only to the numbers in the column in which they appear. Differences between two varieties exceeding the LSD value mean that with 95% or 90% confidence (LSD probability 0.05 or 0.10), the higher-yielding variety has a significant yield advantage.

The abbreviation NS is used to indicate that no statistical difference occurs between varieties. The CV is a measure of variability in the trial. The CV stands for coefficient of variation and is expressed as a percentage. Large CVs mean a large amount of variation could not be attributed to differences in the varieties.

Presentation of data for the entries tested does not imply approval or endorsement by the authors or agencies conducting the test. North Dakota State University approves the reproduction of any table in this publication only if no portion is deleted, appropriate footnotes are given and the order of the data is not rearranged.

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Fargo, North Dakota
November 2020

List of Tables

Table 1. 2020 North Dakota barley variety descriptions.

Variety	Use[1]	Origin[2]	Year Released	Awn[3] Type	Rachilla Hair[4] Length	Aleurone Color	Height (inch)	Days to Head	Straw[5] Strength	Reaction to Disease[6]			
										Stem Rust	Spot-form Net Blotch	Spot Blotch	Net Blotch
Six-rowed													
Tradition	M/F	BARI	2003	S	L	White	23	58	3	8	6	3	7
Two-rowed													
AAC Connect	M/F	Meridian	2017	R	L	White	21	62	3	4	5	4	5
AAC Synergy	M/F	Syngenta	2015	R	L	White	21	63	5	4	3	4	4
CDC Bow	**M/F**	**CDC**	**2016**	**R**	**L**	**White**	**22**	**64**	**3**	**NA**	**NA**	**NA**	**NA**
Conlon[7]	M/F	ND	1996	S	L	White	23	57	7	8	4	6	3
Explorer	M	Secobra	NA	R	L	White	20	61	4	NA	NA	8	4
ND Genesis	M/F	ND	2015	S	L	White	24	61	5	8	4	4	6
Pinnacle	M/F	ND	2006	S	L	White	22	60	6	8	8	4	6

Bolded varieties were tested for the first time this year, so some ratings may change as new data become available.

[1]M = malting; F = feed.

[2]BARI = Busch Agricultural Resources Inc.; CDC = Crop Development Centre, University of Saskatchewan. MN = University of Minnesota; ND = North Dakota State University.

[3]R = rough; S = smooth.

[4]L = long.

[5]Straw Strength scores from 1-9, with 1 = strongest and 9 = weakest.

[6]Disease reaction scores from 1-9, with 1 = resistant and 9 = very susceptible, NA – not available.

[7]Lower DON accumulations than other varieties tested.

Table 2. Yield and test weight of barley varieties at three locations in eastern North Dakota, 2018-2020.

	Fargo			Carrington			Langdon			Avg. eastern N.D.		
	Test	Yield		Test	Yield		Test	Yield		Test	Yield	
Variety	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.
	(lb/bu)	-----(bu/a)-----		(lb/bu)	-----(bu/a)-----		(lb/bu)	-----(bu/a)-----		(lb/bu)	-----(bu/a)-----	
Six-rowed												
Tradition	48.5	114.5	107.2	46.9	85.9	91.7	46.4	118.7	123.7	47.3	106.4	107.5
Two-rowed												
AAC Connect	48.5	81.3	--	47.1	84.1	--	45.5	127.0	--	47.0	97.5	--
AAC Synergy	49.8	85.3	93.7	47.5	84.8	86.0	46.2	131.9	133.7	47.8	100.7	104.5
CDC Bow	50.1	84.4	--	48.8	74.9	--	48.6	129.9	--	49.2	96.4	--
Conlon	50.3	90.3	83.5	48.1	78.7	77.4	48.4	108.8	110.0	48.9	92.6	90.3
Explorer	48.0	87.4	81.8	48.1	83.3	77.9	43.6	99.4	115.7	46.6	90.0	91.8
ND Genesis	44.3	102.5	100.0	47.3	77.1	72.6	46.7	131.2	131.2	46.1	103.6	101.3
Pinnacle	48.1	94.1	88.5	48.8	83.4	72.2	45.3	105.9	121.2	47.4	94.5	94.0
Mean	48.2	98.6	92.5	47.3	85.1	79.6	46.3	124.1	122.6	47.5	97.7	98.2
CV %	--	8.9	--	0.9	8.6	--	0.9	4.2	--	--	--	--
LSD 0.05	--	14.6	--	0.6	10.4	--	0.6	7.5	--	2.8	22.1	9.5
LSD 0.10	--	12.2	--	0.5	8.7	--	0.5	6.2	--	2.3	18.1	7.8

Table 3. Plump and protein of barley varieties at three locations in eastern North Dakota, 2020.

	Fargo		Carrington		Langdon		Avg. eastern N.D.	
Variety	Plump	Protein	Plump	Protein	Plump	Protein	Plump	Protein
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Six-rowed								
Tradition	80.4	11.8	97.3	14.1	89.8	12.9	89.2	12.9
Two-rowed								
AAC Connect	73.1	11.9	97.5	13.4	77.0	12.5	82.5	12.6
AAC Synergy	86.7	11.4	97.6	13.7	85.8	12.1	90.0	12.4
CDC Bow	90.9	11.6	98.5	14.1	92.4	12.5	93.9	12.7
Conlon	94.7	11.8	99.1	13.6	90.2	11.9	94.7	12.4
Explorer	86.3	11.3	98.2	13.7	75.7	12.4	86.7	12.5
ND Genesis	84.4	10.3	97.7	12.5	91.8	10.6	91.3	11.1
Pinnacle	87.8	10.3	98.2	11.8	85.0	11.5	90.3	11.2
Mean	86.5	10.6	98.1	12.9	88.5	11.5	89.8	12.2
CV %	--	--	0.5	2.9	2.4	3.6	--	--
LSD 0.05	--	--	0.7	0.5	3.0	0.6	9.7	0.7
LSD 0.10	--	--	0.6	0.4	2.5	0.5	7.9	0.6

Table 4. Yield and test weight of barley varieties at four locations in western North Dakota, 2018-2020.

	Dickinson			Hettinger			Minot			Williston			Avg. western N.D.		
	Test	Yield		Test	Yield		Test	Yield		Test	Yield		Test	Yield	
Variety	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.
	(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---	
Six-rowed															
Tradition	48.6	40.7	77.6	47.6	34.4	74.7	46.5	100.4	101.7	50.2	27.9	51.7	48.2	50.9	76.4
Two-rowed															
AAC Connect	49.1	49.5	--	49.1	43.0	--	45.9	109.2	--	51.4	38.1	66.6	48.9	59.9	--
AAC Synergy	49.4	50.3	88.5	48.9	41.3	82.4	46.7	113.3	107.9	51.4	36.4	69.5	49.1	60.3	87.1
CDC Bow	49.6	47.7	--	49.3	48.7	--	45.4	110.7	--	51.6	36.2	--	49.0	60.8	--
Conlon	49.2	45.7	62.1	47.6	26.5	63.7	48.5	83.7	90.5	51.1	35.5	--	49.1	47.9	--
Explorer	49.1	52.4	91.3	47.9	43.1	76.2	45.5	107.2	106.8	51.7	37.7	65.2	48.5	60.1	84.9
ND Genesis	49.8	50.5	84.7	48.4	47.6	87.5	45.2	119.3	109.0	51.3	40.8	68.3	48.7	64.6	87.4
Pinnacle	50.3	49.2	86.5	49.3	39.2	70.2	45.1	107.5	106.8	52.3	40.2	69.1	49.3	59.0	83.2
Mean	49.4	48.3	81.8	48.5	40.5	75.8	46.1	106.4	103.8	51.4	36.6	65.1	48.8	57.9	83.8
CV %	0.9	7.2	--	1.1	11.5	--	1.5	6.1	--	0.6	10.9	--	--	--	--
LSD 0.05	0.6	5.0	--	0.7	6.8	--	1.1	11.0	--	0.5	6.8	--	1.0	5.9	5.3
LSD 0.10	0.5	4.2	--	0.6	5.7	--	0.9	9.2	--	0.4	5.7	--	0.8	4.9	4.4

Table 5. Plump and protein of barley varieties at four locations in western North Dakota, 2020.

	Dickinson		Hettinger		Minot		Williston		Avg. western N.D.	
Variety	Plump	Protein	Plump	Protein	Plump	Protein	Plump	Protein	Plump	Protein
	----------(%)----------									
Six-rowed										
Tradition	94	13.3	95	16.8	95	13.9	85	14.6	92	14.7
Two-Rowed										
AAC Connect	96	12.9	96	15.1	91	13.2	95	13.9	94	13.8
AAC Synergy	97	11.9	97	14.8	93	12.5	95	13.6	95	13.2
CDC Bow	96	11.8	97	14.7	94	12.8	95	13.4	96	13.2
Conlon	98	12.2	97	15.6	94	13.2	97	13.0	96	13.5
Explorer	97	11.8	98	16.7	90	13.3	95	13.8	95	13.9
ND Genesis	97	10.7	94	12.8	95	10.8	96	11.4	95	11.4
Pinnacle	97	11.4	97	13.4	95	11.5	95	11.5	96	11.9
Mean	97	11.4	96	14.3	94	12.1	95	12.7	95	13.2
CV %	0.8	4.7	0.9	2.5	1.7	4.3	1.0	3.1	--	--
LSD 0.05	1	0.8	1.2	0.5	3	0.9	1.5	0.6	2.6	0.6
LSD 0.10	1	0.6	1	0.4	2	0.7	1.3	0.5	2.2	0.5

Table 6. 2020 North Dakota oat variety descriptions.

Variety	Origin[1]	Year Released	Grain Color	Height (inch)	Straw Strength	Days to Heading[2]	Reaction to Diseases: Stem Rust[3]	Reaction to Diseases: Crown Rust[3]	Reaction to Diseases: Barley Y.Dwf[4]	Test Weight	Protein[5]
Beach	ND	2004	White	35	M.strg.	63	8	4	6	V.good	M
CDC Dancer	Sask.	2000	White	35	Strong	63	8	6	8	V.good	M
CDC Minstrel	Sask.	2006	White	34	M.strg.	64	8	8	8	Good	M
CS Camden	Meridian	2016	White	33	Strong	64	8	6	NA	Good	M
Deon	MN	2013	Yellow	37	Strong	65	8	2	2	V.good	M
Hayden	SD	2014	White	36	Med.	62	8	6	NA	V.good	M
HiFi	ND	2001	White	35	Strong	63	4	8	2	Good	M
Hytest	SD	1986	White	38	M.strg.	62	8	6	8	V.good	H
Jury	ND	2012	White	34	M.strg.	64	1	8	4	V.good	M
Killdeer	ND	2000	White	32	Strong	63	8	6	4	Good	M
Leggett	AAFC	2005	White	33	Strong	63	3	1	8	Good	M
ND Heart	**ND**	**2020**	**White**	**39**	**Strong**	**60**	**3**	**6**	**4**	**Good**	**H**
Newburg	ND	2011	White	38	Med.	62	1	8	4	Good	M
Otana	MT	1977	White	36	M.weak	63	8	8	8	V.good	M/L
Paul[6]	ND	1994	Hull-less	37	Strong	68	1	4	2	Good	H
Rockford	ND	2008	White	38	Strong	65	8	8	4	V.good	M
Souris	ND	2006	White	33	Strong	63	6	8	6	V.good	M
Stallion	SD	2006	White	34	Med.	64	8	3	NA	V.good	M
Warrior	SD	2018	White	32	Strong	62	6	1	NA	V.good	M

Bolded varieties were tested for the first time this year, so some ratings may change as new data become available.

[1]AAFC = Agriculture & Agri-Food Canada; MN = University of Minnesota; ND = North Dakota State University; SD = South Dakota State University; Sask. = University of Saskatchewan; MT = Montana State University.

[2]Days after planting.

[3]Disease reaction scores from 1-9, with 1 = resistant and 9 = very susceptible.

[4]Disease reaction scores from 1-9, with 1 = resistant and 9 = very susceptible, NA – not available.

[5]H = high; M = medium; L = low; NA = not available.

[6]Hull-less variety.

Table 7. Yield and test weight of oat varieties at four locations in eastern North Dakota, 2018-2020.

	Fargo			Casselton			Carrington			Langdon			Average Eastern N.D.		
	Test	Yield		Test	Yield		Test	Yield		Test	Yield		Test	Yield	
Variety	Wt.	2020	2 Yr.	Wt.	2020	2 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	2/3 Yr. Avg.
	(lb/bu)	(bu/a)		(lb/bu)	(bu/a)		(lb/bu)	-----(bu/a)-----		(lb/bu)	-----(bu/a)-----		(lb/bu)	-----(bu/a)-----	
Beach	39.3	70.8	96.3	40.9	69.2	85.8	36.6	132.6	124.8	39.9	184.9	166.9	39.2	114.4	118.4
CDC Dancer	37.4	75.1	93.4	39.8	85.0	72.1	35.9	139.9	138.0	36.9	191.5	187.4	37.5	122.9	122.7
CDC Minstrel	33.0	82.6	91.5	35.0	93.0	80.2	34.5	120.7	125.8	34.5	199.3	185.7	34.3	123.9	120.8
CS Camden	30.0	84.3	96.3	33.9	92.4	76.0	36.5	124.2	138.6	33.6	209.1	201.8	33.5	127.5	128.2
Deon	35.4	109.1	111.1	39.2	110.6	92.3	37.1	127.1	135.7	36.6	222.8	196.2	37.1	142.4	133.8
Hayden	33.6	82.8	79.9	37.0	82.3	79.4	36.0	122.5	132.8	38.0	180.5	175.3	36.2	117.0	116.8
HiFi	29.8	74.4	84.8	35.0	87.3	68.6	38.7	123.5	121.3	36.5	187.6	173.8	35.0	118.2	112.1
Hytest	36.2	79.4	94.5	39.6	85.3	87.5	36.2	119.3	122.6	38.9	180.9	159.8	37.7	116.2	116.1
Jury	34.4	85.1	78.7	37.8	70.0	69.4	35.4	134.6	129.4	35.4	191.2	196.9	35.8	120.2	118.6
Killdeer	31.3	80.1	79.5	34.4	76.0	70.4	36.5	107.5	122.8	36.3	199.3	192.1	34.6	115.7	116.2
Leggett	37.3	99.9	114.6	38.2	98.2	106.2	36.8	111.5	121.9	36.6	192.8	192.5	37.2	125.6	133.8
ND Heart	35.5	68.2	68.2	37.5	99.6	99.6	36.9	130.8	127.2	37.3	193.6	173.8	36.8	123.0	117.2
Newburg	33.6	77.3	77.5	34.4	75.6	53.9	35.4	133.4	130.9	34.9	195.2	180.1	34.6	120.4	110.6
Otana	31.9	72.8	69.0	33.1	60.5	63.6	38.7	152.4	134.3	35.1	181.4	182.8	34.7	116.8	112.4
Paul[1]	41.6	41.9	38.6	44.3	59.7	40.4	43.6	67.3	73.6	44.0	146.3	141.4	43.4	78.8	73.5
Rockford	32.6	72.5	66.4	35.1	71.7	57.6	37.8	120.8	123.1	37.7	170.2	171.9	35.8	108.8	104.7
Souris	33.7	65.7	76.7	34.7	59.4	59.5	35.6	111.5	121.1	36.7	186.4	172.6	35.2	105.7	107.5
Stallion	36.4	97.6	94.5	38.8	95.0	85.1	39.6	152.9	143.7	38.3	170.3	172.8	38.3	128.9	124.0
Warrior	36.8	107.6	117.6	37.1	95.9	97.5	35.6	104.4	--	35.8	179.0	--	36.3	121.7	--
Mean	34.8	80.5	85.7	37.1	82.0	76.0	36.9	122.9	126.0	37.2	192.0	179.1	36.5	118.3	116.0
CV %	3.1	12.2	--	2.7	10.7	--	4.3	15.9	--	1.6	3.7	--	--	--	--
LSD 0.05	1.2	14.7	--	1.4	14.5	--	2.2	27.5	--	1.0	11.7	--	2.2	17.7	14.7
LSD 0.10	1.1	11.5	--	1.1	11.3	--	1.9	23.0	--	0.8	9.8	--	1.8	14.8	12.3

[1]Hull-less varieties. When comparing yield of hull-less oat varieties with varieties with hulls, multiply the yield of the hull-less oats by 1.35 (the hull of a hulled kernel comprises 35% of the weight).

Table 8. Yield and test weight of oat varieties at four locations in western North Dakota, 2018-2020.

	Dickinson			Hettinger			Minot			Williston			Average Western N.D.		
	Test	Yield		Test	Yield		Test	Yield		Test	Yield		Test	Yield	
Variety	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.	Wt.	2020	3 Yr.
	(lb/bu)	----(bu/a)----		(lb/bu)	----(bu/a)----		(lb/bu)	----(bu/a)----		(lb/bu)	----(bu/a)----		(lb/bu)	----(bu/a)----	
Beach	39.4	90.3	94.1	33.4	44.9	96.6	41.8	87.6	119.0	45.0	62.4	94.6	39.9	71.3	101.1
CDC Dancer	37.8	83.7	93.7	33.3	45.2	105.7	41.3	112.9	120.9	46.6	64.9	111.0	39.8	76.7	107.8
CDC Minstrel	37.7	93.9	109.1	33.8	47.8	110.3	41.3	102.2	115.4	45.7	65.1	104.4	39.6	77.2	109.8
CS Camden	35.0	98.5	104.1	32.6	56.4	114.8	38.4	117.5	127.2	44.1	71.7	114.7	37.5	86.0	115.2
Deon	36.9	94.5	113.3	34.6	40.0	96.8	42.6	96.2	113.2	45.4	60.1	105.8	39.9	72.7	107.3
Hayden	38.2	93.2	113.3	34.7	48.2	109.2	42.9	96.6	121.4	45.1	60.7	103.0	40.2	74.6	111.7
HiFi	35.9	93.3	106.9	34.0	50.6	102.1	39.8	92.1	109.1	43.5	61.2	101.2	38.3	74.3	104.8
Hytest	38.2	86.9	93.0	36.3	48.7	93.1	43.3	88.8	113.8	44.9	55.9	80.3	40.7	70.1	95.1
Jury	36.3	93.6	103.8	32.9	48.2	100.9	40.3	91.2	105.7	45.7	68.7	113.1	38.8	75.4	105.9
Killdeer	36.0	102.5	112.5	34.1	48.6	102.5	40.6	93.8	107.4	45.3	74.8	115.9	39.0	79.9	109.6
Leggett	37.9	88.5	93.9	33.0	49.9	103.4	42.9	84.9	116.4	44.5	63.9	112.5	39.6	71.8	106.6
ND Heart	33.8	93.0	98.4	34.0	42.9	99.4	41.5	94.6	112.7	44.4	58.5	89.9	38.4	72.2	100.1
Newburg	37.4	101.3	97.0	32.8	40.5	98.4	41.2	88.6	99.3	45.5	70.0	101.1	39.2	75.1	98.9
Otana	37.9	94.5	100.1	36.0	42.9	99.8	41.3	107.5	106.9	44.3	65.8	105.6	39.9	77.7	103.1
Paul[1]	43.8	62.3	77.3	43.0	32.9	70.4	45.7	77.1	87.6	51.4	41.0	72.1	46.0	53.3	76.9
Rockford	38.2	90.5	104.3	36.5	55.9	112.0	41.2	106.6	120.2	45.5	68.5	108.2	40.4	80.4	111.2
Souris	36.9	103.2	102.9	35.1	46.4	100.8	40.8	91.7	102.3	46.1	63.3	99.4	39.7	76.2	101.3
Stallion	38.7	94.6	104.0	36.4	33.8	91.7	41.5	103.1	119.9	45.3	66.7	102.4	40.5	74.5	104.5
Warrior	36.8	91.6	--	33.3	47.4	--	40.4	99.0	--	44.6	62.0	--	38.8	75.0	--
Mean	37.8	91.3	101.2	34.9	46.8	104.8	41.7	98.1	112.1	45.7	64.1	102.0	39.8	74.4	103.9
CV %	2.6	7.9	--	2.3	7.5	--	2.0	6.8	--	1.3	8.6	--	--	--	--
LSD 0.05	1.4	10.1	--	1.1	4.9	--	1.4	10.8	--	1.0	9.0	--	1.4	8.5	8.9
LSD 0.10	1.2	8.4	--	0.9	4.1	--	1.1	9.0	--	0.8	7.5	--	1.2	7.1	7.5

[1]Hull-less varieties. When comparing yield of hull-less oat varieties with varieties with hulls, multiply the yield of the hull-less oats by 1.35 (the hull of a hulled kernel is 35% of the weight).

Table 9. 2020 North Dakota winter rye variety descriptions.

Variety	Origin[1]	Year Released	Height (inches)	Straw Strength	Days to Flowering	Seed Color	Seed Size	Winter Hardiness
AC Hazlet	Canada	2006	43	Good	152	Bl-grn.	Small	Good
Aroostok	USDA	1981	45	Fair	145	Tan	Small	V.good
Bono[3]	KWS Germany	2013	37	Good	151	Green	Med.	Good
Brasetto[3]	KWS Germany	2008	36	V.good	151	Bl-grn.	Large	Good
Dacold	ND	1989	42	Good	154	Bl-grn.	Med.	Fair
Danko	Poland	1976	36	Good	150	Green	Large	Poor
ND Dylan	ND	2016	45	Good	150	Blue	Med.	V.good
ND Gardner	ND	2019	44	Fair	144	Bl-grn.	Small	V.good
Rymin	MN	1973	42	V.good	150	Grn-gray	Large	Fair[4]
Spooner	WI	1993	44	V.good	149	Tan	Large	Good
Wheeler	MI	1971	47	Fair	152	Tan	Large	Fair

[1]ND = North Dakota State University; WI = University of Wisconsin; MN = University of Minnesota; MI = Michigan State University.

[2]NA = not available.

[3]Hybrid.

[4]Varieties with fair or poor winter hardiness should not be seeded in bare soil.

Table 10. Yield and test weight of winter rye varieties at five locations in North Dakota, 2018-2020.

	Carrington			Carrington (organic)			Hettinger			Langdon			Minot			Average		
	Test	Seed Yield		Test	Seed Yield		Test	Seed Yield		Test	Seed Yield		Test	Seed Yield		Test	Seed Yield	
Variety	Wt.	2020	3-yr.	Wt.	2020	3-yr.	Wt.	2020	3-Yr.	Wt.	2020	3-Yr.	Wt.	2020	3-yr.	Wt.	2020	3-yr.
	(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---		(lb/bu)	---(bu/a)---	
AC Hazlet	52.9	56.3	54.8	53.8	41.5	62.0	53.6	50.1	53.0	53.4	54.9	--	53.4	105.1	79.1	53.4	61.6	--
Aroostok	51.5	43.4	34.9	53.4	34.0	45.0	50.4	36.6	39.4	52.0	38.9	47.3	53.8	75.1	54.0	52.2	45.6	44.1
Bono	52.8	69.5	--	54.1	55.5	--	54.4	68.9	--	53.0	51.8	--	54.3	132.8	--	53.7	75.7	--
Brasetto	51.9	64.0	56.4	53.3	58.3	68.5	53.6	64.3	70.9	51.4	68.3	79.9	52.3	130.2	96.9	52.5	77.0	74.5
Dacold	52.1	46.3	47.7	52.6	30.5	54.8	51.1	38.4	39.9	51.9	31.4	51.7	51.4	93.3	70.9	51.8	48.0	53.0
Danko	52.3	43.9	--	53.8	41.5	--	54.0	45.5	--	52.0	27.7	--	53.3	86.4	--	53.1	49.0	--
ND Dylan	51.8	50.8	52.2	53.3	42.1	60.9	52.1	50.5	47.2	53.2	59.5	67.3	53.1	98.9	73.9	52.7	60.4	60.3
ND Gardner	51.8	51.8	47.0	53.1	39.7	53.5	51.1	38.3	42.9	52.6	49.0	53.6	53.2	79.0	61.3	52.4	51.6	51.7
Rymin	51.5	44.9	51.7	52.7	39.1	60.9	52.9	44.6	49.7	53.1	54.4	54.4	53.9	78.1	69.8	52.8	52.2	57.3
Spooner	52.6	50.7	43.9	53.7	35.7	50.6	52.3	42.2	46.0	52.4	44.7	53.4	53.2	79.9	58.7	52.8	50.6	50.5
Mean	52.1	52.2	48.6	53.4	41.8	57.0	52.5	47.9	48.6	52.7	49.7	58.2	53.2	95.9	70.6	52.7	57.2	55.9
CV %	0.6	11.3	--	0.8	8.1	--	1.8	15.0	--	1.0	17.9	--	1.8	6.5	--	--	--	--
LSD 0.05	0.5	8.5	--	0.7	4.9	--	1.4	10.5	--	0.7	12.8	--	1.7	10.8	--	0.9	10.0	4.7
LSD 0.10	0.4	7.1	--	0.5	4.1	--	1.1	8.7	--	0.6	10.6	--	1.4	8.9	--	0.7	8.3	3.9

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