

WINTER MALTING BARLEY TRIAL – 2021 RESULTS

Hickory Corners

Variety	Yield (bu/A)	#Test Weight (lbs/bu)	Heading Date	Maturity Date	Height (cm)
0214-007	87.2	41.0	5/20	6/23	77.3
02WI-13	89.1	39.8	5/22	6/28	87
13ARS537-13	35.6	NA	5/18	6/24	67.3
13ARS537-19	56.8	52.3	5/18	6/23	72
13ARS537-25	85.1	41.2	5/19	6/24	82.7
Amaze 10*~	64.2	55.7	5/20	6/28	93.3
ARS15B12	89.7	43.6	5/24	6/28	100.7
Avalon	88.0	42.2	5/14	6/28	99
Charles	48.3	NA	5/23	6/21	76.3
Dementiel*	88.2	35.6	5/21	6/22	83.7
DH140963	87.4	40.4	5/26	6/28	81.3
DH141132	76.9	36.9	5/30	6/28	79.3
DH141222	81.6	41.5	5/24	6/28	73
DH141225	100.0	41.2	5/22	6/21	80
Endeavor	59.0	NA	5/26	6/25	89.7
Flavia	94.4	39.1	5/23	6/21	72
Hirondella*	110.3	38.7	5/24	6/24	93
KWS Faro*	100.1	37.9	5/20	6/25	86.3
KWS Joyau*	107.8	37.5	5/18	6/26	84.7
KWS Scala	91.2	37.5	5/23	6/22	76.3
KWS Somerset	96.9	40.7	5/26	6/26	88
LCS Calypso	89.9	38.9	5/28	6/25	80.3
LCS Puffin	84.1	38.8	6/2	6/26	79
LCS Violetta	104.3	38.9	5/23	6/21	83
NB15420*	56.6	NA	5/18	6/26	89.3
Nomini**	82.1	40.3	5/15	6/26	91.3
Pixel*	93.2	35.7	5/20	6/25	87
SC 31450 TH	95.4	38.5	5/21	6/22	70
Secretariat*	81.0	40.2	5/16	6/28	81.3
Teepee	92.8	38.3	5/28	6/21	78.7
Thoroughbred*	88.6	39.7	5/17	6/28	87.7
Thunder	57.7	NA	5/19	6/21	74.7
VA15H-73 2R~	81.2	52.1	5/19	6/24	99.3
VA16BFHB-268NA**	90.8	43.2	5/15	6/28	97.3
VA16M-84 2R	87.3	43.0	5/21	6/25	97
Visuel*	96.9	37.7	5/19	6/21	77.3
Wintmalt	97.3	41.3	5/26	6/26	83
Grand Mean	84.4	40.6	5/21	6/25	84
CV	16.5	5.7	4.0	2.5	6.2
HSD P=.05	46.1	7.7	9.5	NA	17.1

HICKORY CORNERS

Planting date: 10/09/2020

Fertility: 10/1/2020 – 32 lbs N/acre, 52 lbs P/acre, 12 lbs S/acre.

3/22/2021 60 lbs K/acre, 100 lbs N/acre, 15 lbs S/acre.

Fungicide: 5/21/2021 13.7 oz/acre Miravis Ace

Harvest: 7/02/2021

Growing season conditions:

Mild winter and very dry April, May, and early June were followed by a two week period of heavy rains in late June.

Research site details:

W.K. Kellogg Biological Station (KBS): Project managed by Brook Wilke, Dean Baas, Josh Dykstra and Christian Kapp

Previous crop: Soybeans

Soil type: Kalamazoo Loam

*Six-row varieties

**Awnless six -row varieties

~Hulless varieties

#Due to substantial pre-harvest sprout, test weights were very light for most varieties. For some samples and varieties, the Dickey John machine used to calculate test weight did not provide a viable density.



WINTER MALTING BARLEY TRIAL – 2021 RESULTS

Kawkawlin

Variety	Yield (bu/A)	#Test Weight (lbs/bu)	Heading Date	Maturity Date	Height (m)
0214-007	99.4	45.8			
02WI-13	98.7	43.1			
13ARS537-13	93.2	37.0			
13ARS537-19	101.3	40.5			
13ARS537-25	93.2	38.5			
Amaze 10*~	62.7	58.2			
ARS15B12	97.6	44.2			
Avalon	98.3	45.5			
Charles	107.6	37.2			
Dementiel*	126.0	39.6			
DH140963	99.4	41.8			
DH141132	102.4	39.9			
DH141222	104.3	44.6			
DH141225	102.1	41.0			
Endeavor	103.6	40.0			
Flavia	98.5	41.8			
Hirondella*	101.0	39.8			
KWS Faro*	128.9	44.6			
KWS Joyau*	112.0	42.0			
KWS Scala	108.5	42.4			
KWS Somerset	103.5	42.8			
LCS Calypso	96.5	41.6			
LCS Puffin	111.2	46.3			
LCS Violetta	108.4	40.8			
NB15420*	73.0	40.8			
Nomini**	6.4	43.8			
Pixel*	132.4	42.2			
SC 31450 TH	107.8	43.0			
Secretariat*	49.2	46.0			
Teepee	106.2	43.2			
Thoroughbred*	81.1	42.9			
Thunder	82.3	36.8			
VA15H-73 2R~	86.6	56.4			
VA16BFHB-268NA**	12.4	44.6			
VA16M-84 2R	90.5	47.0			
Visuel*	111.2	40.9			
Wintmalt	104.4	41.6			
Grand Mean	94.6	42.9			
CV	12.9	2.6			
HSD P=.05	40.1	3.6			

KAWKAWLIN

Planting date: 10/16/2020

Fertility: 10/14/2020 – 15 lbs N/acre, 15 lbs P/acre, 45lbs K/acre.

3/31/2021 100 lbs N/acre (28% UAN)

Fungicide: 5/02/2021 2 oz/acre Fitness, 4 oz/acre Priaxor

Herbicide: 5/02/2021 15 oz/acre Huskie

Harvest: 7/06/2021

Growing season conditions:

Mild winter and very dry April, May, and early June were followed by a week of heavy rains in late June.

Research site details:

Cooperating Farmers: Don Shelagowski and Chris Schmidt. The research team was unable to collect in season metrics due to COVID-19 travel limits.

Previous crop: Dry beans

Soil type: Wixom Sandy Loam

*Six-row varieties

**Awnless six -row varieties

~Hulless varieties

Awnless varieties Nomini and VA16BFHB-268NA were severely damaged by wildlife prior to harvest, which resulted in the low yield values.



WINTER MALTING BARLEY TRIAL – 2021 QUALITY

Hickory Corners

Variety	% Protein	Plump (6/64)	Thin	GE 4 ml	GE 8 ml	GC	RVU	DON (ppm)
0214-007	14.2	92.9	0.5	75	62	95	-1	0.33
02WI-13	13.2	84.6	1.7	94	78	82	-2	0.28
13ARS537-13	12.5	87.0	1.2	34	14	6	-4	0.34
13ARS537-19	12.5	61.6	19.5	83	69	23	-4	0.14
13ARS537-25	12.2	96.0	0.5	58	41	22	-4	0.37
Amaze 10*~	13.3	40.6	30.9	89	85	54	-3	0.37
ARS15B12	13	93.1	0.5	94	57	98	1	0.18
Avalon	13.8	97.7	0.1	96	90	99	-1	0.34
Charles	11.3	96.8	0.2	52	30	10	-4	0.03
Dementiel*	12	35.3	13.6	99	78	95	-1	0.39
DH140963	13.6	84.8	0.8	62	52	70	-2	0.21
DH141132	13.1	65.4	3.5	93	67	93	-1	0.28
DH141222	12.3	78.9	1.6	93	76	93	-2	0.31
DH141225	12.4	92.8	0.4	93	81	97	-1	0.37
Endeavor	12.2	84.6	1.9	43	31	17	-3	0.22
Flavia	11.8	94.0	0.4	90	79	97	-1	0.27
Hirondella*	11.4	86.0	0.6	97	93	100	26	0.28
KWS Faro*	12.3	54.0	7.1	95	56	96	-3	0.33
KWS Joyau*	12.4	64.0	3.2	90	94	99	4	0.25
KWS Scala	12.8	92.1	1.2	87	89	84	-3	0.23
KWS Somerset	12.5	94.3	0.3	85	97	95	0	0.36
LCS Calypso	13.9	83.7	0.9	67	66	100	23	0.3
LCS Puffin	13.3	79.3	1.3	90	80	88	-2	0.29
LCS Violetta	13.5	75.4	2.9	84	76	98	1	0.22
NB15420*	13.3	25.1	21.9	95	91	96	6	0.31
Nomini**	12.8	58.0	4.4	15	9	98	21	0.23
Pixel*	12.4	55.3	4.8	96	95	98	-2	0.36
SC 31450 TH	12.5	88.0	1.1	97	90	95	-3	0.35
Secretariat*	11.6	77.9	1.8	83	61	99	2	0.34
Teepee	11.9	84.9	1.0	91	77	80	-3	0.36
Thoroughbred*	11.5	55.7	7.7	100	96	93	2	0.08
Thunder	12.7	96.8	0.2	51	11	7	-4	0.34
VA15H-73 2R~	13.4	68.6	1.5	98	96	86	-2	0.4
VA16BFHB-268NA**	12.8	64.1	3.4	6	5	97	41	0.37
VA16M-84 2R	14.9	93.8	0.2	99	75	98	11	0.25
Visuel*	12	58.0	5.7	97	87	97	8	0.31
Wintmalt	11.2	90.6	1.0	93	63	73	-2	0.27
Grand Mean	12.7	77.2	3.8	80.5	68.1	77.5	2.0	0.3

GRAIN QUALITY

Grain quality is the most important characteristic for malting barley.

If the barley doesn't meet quality specifications, it may be rejected by the malthouse. Conversely, premiums may be offered for barley that meets or exceeds quality standards.

Ideal values for the quality data shown on this page are shown below.

- GC >95%
- Plump >90%
- CP <12.5%
- DON <1.0 ppm
- RVU >120

Grain quality from the Hickory Corners site was analyzed two months after harvest. The dry spring and wet harvest period caused substantial quality issues including high protein, low plumps and pre-harvest sprout.



WINTER MALTING BARLEY TRIAL – 2021 QUALITY

Kawkawlin

Variety	% Protein	Plump (6/64)	Thin	GE 4 ml	GE 8 ml	GC	RVU	DON (ppm)
0214-007	14.1	97.8	0.2	92	88	96	51	0.11
02WI-13	13.6	97.9	0.1	80	74	95	12	0.17
13ARS537-13	11.5	98.5	0.2	20	21	84	3	0.22
13ARS537-19	11.1	98.8	0.1	26	24	81	3	0.34
13ARS537-25	12.0	98.6	0.1	21	26	86	4	0.19
Amaze 10*~	12.2	6.5	15.7	98	96	100	77	0.1
ARS15B12	14.0	99.0	0.1	98	92	96	98	0.23
Avalon	13.9	98.0	0.2	94	89	99	53	0.09
Charles	11.4	98.0	0.2	44	36	85	4	0.18
Dementiel*	10.2	85.0	0.9	99	97	98	105	0.3
DH140963	12.3	98.9	0.1	89	72	95	24	0.22
DH141132	12.3	93.4	0.2	98	81	99	39	0.23
DH141222	12.6	96.6	0.2	91	77	93	31	0.24
DH141225	12.1	98.0	0.1	89	71	93	25	0.23
Endeavor	11.4	93.9	0.5	40	31	82	4	0.08
Flavia	12.3	96.9	0.2	88	89	91	10	0.17
Hirondella*	11.1	91.8	0.4	100	99	100	84	0.09
KWS Faro*	10.6	90.2	0.8	100	94	98	55	0.23
KWS Joyau*	10.6	95.2	0.3	99	97	100	126	0.13
KWS Scala	11.6	98.6	0.3	91	78	93	13	0.17
KWS Somerset	12.0	99.4	0.0	94	90	96	52	0.16
LCS Calypso	12.4	92.6	0.6	95	93	91	17	0.06
LCS Puffin	12.3	95.9	0.2	97	94	98	76	0.1
LCS Violetta	12.2	96.0	0.3	100	95	100	133	0.08
NB15420*	12.8	60.5	3.7	100	90	86	87	0.18
Nomini**	12.6	85.4	0.8	91	28	85	43	0.02
Pixel*	10.6	88.5	0.8	97	96	98	42	0.35
SC 31450 TH	10.4	98.7	0.1	77	73	91	22	0.32
Secretariat*	12.0	90.5	0.5	100	79	100	116	0.01
Teepee	11.7	96.0	0.2	96	95	100	58	0.1
Thoroughbred*	11.5	89.8	0.5	100	97	94	119	0.14
Thunder	12.4	96.3	0.5	12	13	64	9	0.06
VA15H-73 2R~	13.2	62.9	1.9	99	97	99	60	0.06
VA16BFHB-268NA**	12.9	73.9	2.4	77	28	94	131	0.05
VA16M-84 2R	14.3	99.0	0.1	99	83	99	137	0.24
Visuel*	10.1	83.6	1.1	100	98	97	118	0.17
Wintmalt	12.2	98.8	0.2	90	84	93	31	0.32
Grand Mean	12.1	90.3	0.9	83	75	93	56	0.17

GRAIN QUALITY

Grain quality is the most important characteristic for malting barley.

If the barley doesn't meet quality specifications, it may be rejected by the malthouse. Conversely, premiums may be offered for barley that meets or exceeds quality standards.

Ideal values for the quality data shown on this page are shown below.

- GC >95%
- Plump >90%
- CP <12.5%
- DON <1.0 ppm
- RVU >120

Grain quality from the Kawkawlin site was analyzed six months after harvest. The weather at Kawkawlin was not as extreme as Hickory Corners, but still resulted in some pre-harvest sprout.

