

UW-Extension, Buffalo & Chippewa Counties 2017 & 2018 Spring Malting Barley Nitrogen Fertilizer Results

Two different nitrogen fertilizer trials for malting barley were tested in Buffalo and Chippewa Counties in 2017 and 2018. The trials were different in nature but similar results were seen. There was very little benefit of supplying more than 30 pounds of nitrogen fertilizer to malting barley following soybeans.

The main purpose of the trial is to determine if we can economically produce malting quality barley for the brewing industry. The primary factors measured are yield and protein. Protein levels can be increased above acceptable levels through nitrogen fertilization with some varieties. It is important to test levels at individual locations and variety you wish to grow. Lodging has not been significant in any variety at either location. Additional quality data is available upon request.

	2017			
	Buffalo		Chippewa	
N Fertilizer Rates (lbs)	Yield	Protein	Yield	Protein
0	108.22	10.1	62.01	NA
25 (planting)	117.05	10.7	64.17	NA
50 (planting)	112.98	10.7	64.29	NA
75 (planting)	125.38	10.7	64.94	NA
25 (Feekes 5)	119.74	10.5	64.63	NA
50 (Feekes 5)	127.54	10.9	63.90	NA
75 (Feekes 5)	105.09	11.1	59.50	NA
25 (½ planting ½ Feekes 5)	119.39	10.8	59.06	NA
50 (½ planting ½ Feekes 5)	133.19	10.8	57.89	NA
75 (½ planting ½ Feekes 5)	129.34	11	57.78	NA
Plot Median	119.57		62.96	
Plot Average	119.79	10.78	61.82	
LSD P=0.10	12.68		5.26	
Standard Deviation	15.19	0.315	6.29	
CV	12.68		10.11	

There was no significant difference (90% confidence) between any of the fertilizer treatments in this trial.

Trial Details

Variety:

Pinnacle

Planting Date:

Buffalo Site: April 29, 2018

Chippewa Site: May 7, 2018

Plot Layout:

All plots were four feet by fifteen feet and included four replication in a randomized complete block design.

Fertility:

Phosphorus, Potassium, and Lime were supplied according to soil test data.

Soil Type:

Buffalo Site: Seaton Silt Loam

Chippewa Site: Scott Lake Sandy Loam

Fungicides:

Approach @ 8 oz./acre @ Feekes 8
Prosaro @ 8 oz./acre @ heading

Herbicide:

Huskie @ 12 oz./acre

Harvested:

Buffalo Site: August 12, 2018

Chippewa: August 18, 2018

Growing Season Summary:

Buffalo Site: Hot and wet the last week in May, otherwise cool and wet the rest of the season.

Chippewa Site:

Cooperators:

Joe Bragger and Pat Rasmus, and Chippewa County

Variety ^c	N Fert (lbs)	2018	
		Buffalo	Chippewa
Conlon	0	63.11 ^b	29.06 ^c
	30	86.39 ^{*a}	48.31 ^{ab}
	60	62.50 ^b	41.52 ^b
	90	63.82 ^b	48.25 ^{ab}
Tinka	0	45.60 ^c	44.51 ^b
	30	63.97 ^b	55.39 ^{*a}
	60	66.34 ^b	52.01 ^a
	90	66.27 ^b	46.37 ^{ab}
Odyssey	0	39.60 ^c	
	30	60.56 ^b	
	60	62.19 ^b	
	90	61.15 ^b	
Plot Median		62.50	47.31
Plot Average		59.56	45.68
LSD P=0.10		15.90	11.27
Standard deviation		8.85	9.26
CV		14.33	20.27

Authors:

Carl Duley is an Associate Professor with UW-Extension located in Buffalo County.

Jerry Clark is an Associate Professor with UW-Extension located in Chippewa County.

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