

4 Rates of Nitrogen on 4 Malting Barleys

N Rate: lbs per acre actual Nitrogen available

Site: Fort St. John, B.C.
Date Seeded: May 13, 1995 (133)
Fertilizer: 12-51-0 @ 66 kg/ha with seed
 34-0-0 varying rates banded

Co-operator: Vic Blanchette

Available lbs/acre Soil Test
 34 - 30 - 834 - 40

Herbicide: BUCTRIL M 1.0 L/ha
 MCPA Amine 0.75 L/ha
 water 100 L/ha

Date Harvested: Sept.1, 1995 (244)
Days to Harvest: 111 days

Date Applied: June 16, 1995

Variety	N rate actual lbs/ac	Yield kg/ha bu/ac	Yield % of 50 N	1000 k grams	Test Weight kg/hl	Plump %	Protein %	
ARGYLE	50	4135	77	100%	38.9	69.5	90.1	10.0
ARGYLE	70	5058	94	122%	40.3	68.7	88.7	9.3
ARGYLE	90	5832	108	141%	41.1	70.8	91.9	10.1
ARGYLE	110	6440	120	156%	42.1	70.8	90.7	10.3
DUEL	50	4167	77	100%	41.0	71.6	85.5	9.6
DUEL	70	5035	93	121%	40.3	66.5	82.2	10.0
DUEL	90	6033	112	145%	39.8	65.8	87.3	9.3
DUEL	110	6662	124	160%	41.4	70.3	89.7	10.2
HARRINGTON	50	4042	75	100%	50.0	74.0	93.6	10.0
HARRINGTON	70	4615	86	114%	52.8	75.3	93.7	10.0
HARRINGTON	90	5688	106	141%	51.3	75.3	90.3	11.3
HARRINGTON	110	5705	106	141%	51.8	71.1	89.2	10.5
MANLEY	50	4418	82	100%	47.2	71.3	91.4	9.5
MANLEY	70	5150	96	117%	48.4	70.9	88.3	9.4
MANLEY	90	6127	114	139%	50.8	71.1	94.5	9.2
MANLEY	110	6598	122	149%	50.2	70.5	92.4	9.6

Yield Coefficient of Variation = 5.16 %

This trial was designed to determine if increasing the rate of nitrogen fertilizer would increase the protein content of malting barleys. The 4 year averages show that the yields increased only slightly (due mostly to weather conditions) but protein content did not increase significantly. When we look at just the 1995 data on a site with low available nitrogen and good growing conditions, we see large increase in yields with increased nitrogen but still no significant increase in protein.

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Averages 1992-95 [4 Station Years]

Variety	N rate actual lbs/ac	Yield kg/ha	bu/ac	Yield % of 50 N	Yield % of Harr 50	1000 k grams	Test Weight lbs/bu	Plump %	Protein %	Germ. %
ARGYLE	50	4134	77	100%	97%	39.5	66.6	85.1	12.0	97.0
ARGYLE	70	4204	78	102%	99%	39.5	67.3	83.2	11.1	96.0
ARGYLE	90	4377	81	106%	104%	40.2	67.6	84.1	11.4	92.5
ARGYLE	110	4649	86	113%	111%	39.6	67.7	84.3	11.6	94.7
DUEL	50	4379	81	100%	103%	41.5	67.1	82.6	10.4	95.3
DUEL	70	4763	88	109%	113%	40.8	65.8	80.6	10.6	91.7
DUEL	90	5112	95	117%	121%	40.9	65.6	81.7	11.1	85.3
DUEL	110	5070	94	117%	121%	41.3	67.0	80.9	11.2	94.0
HARRINGTON	50	4253	79	100%	100%	48.5	70.3	89.0	11.3	90.0
HARRINGTON	70	4426	82	104%	104%	49.5	70.4	89.8	11.0	91.3
HARRINGTON	90	4639	86	110%	110%	48.7	69.8	87.6	11.5	91.2
HARRINGTON	110	4655	86	110%	110%	49.5	69.5	86.9	11.7	93.0
MANLEY	50	4763	88	100%	112%	47.9	69.2	88.6	10.9	89.2
MANLEY	70	5045	94	106%	119%	49.6	69.1	86.9	11.1	91.8
MANLEY	90	5430	101	115%	129%	49.4	69.0	88.7	11.2	87.2
MANLEY	110	5556	103	117%	132%	49.3	67.9	87.7	11.4	87.3

HARRINGTON N at 50 lb/ac	C.V.%	Yield kg/ha	bu/ac
Fort St.John 1995	5.16	4042	75
Prespatou 1994	7.64	3914	73
Dawson Creek 1993	14.98	4386	81
Dawson Creek 1992	12.92	4671	87