

PROJECT TITLE: Evaluation of post-harvest dormancy of newly released barley varieties and advanced lines.

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OBJECTIVES:
Compare early post harvest germination of barley lines and new cultivars with Harrington barley.

METHODS:
One hundred seeds from of seven barley varieties, grown NTCC after lentils near Denton,

RESULTS:
The largest differences between varieties occurred for the 96 hour count and the ≥ 120 hour count. Eslick (44), followed by MT960101 (22), had the most seeds germinating within the 120 hour count or later (Table 1). Harrington and Metcalfe had the lowest post 120 hour germinated seed counts. The 72 hour and 120 hour counts had greater variability than the 96 hour count.

SUMMARY:
Post harvest dormancy is a primary factor affecting the chance a seed will lay dormant on the soil surface till the next growing season. A 24 hour delay in germination time in a controlled environment may equate to a much greater delay in less suitable germination soil surface environment. Harrington barley has been found to be very compatible with continuous cropping systems because it produces very few volunteer plants in the next growing season. After very minor testing, This study suggest seed of Harrington, Metcalfe, Hockett and Craft will be less likely to cause volunteer barley plants in the next growing season as compared to Eslick, MT96101 and Haxby.

FUTURE PLANS:
Future post harvest dormancy is dependent upon the release of new varieties and industry interest in post harvest dormancy. Would like to evaluate winter wheat and spring wheat varieties.

**Table 1. Post harvest dormancy in seven barley lines.
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Cultivar/Line	Reps	Hours in incubator at 20 C			Total	Dead Seed
		72	96	≥ 120		
		%	%	%	%	#
Haxby	2	35	46	18	99	1.5
Eslick	2	26	30	44	99	1
Harrington	2	12	80	8	99	1.5
Metcalfe	2	32	62	7	100	0.5
MT96101	2	29	48	22	98	2
Hockett	2	29	60	10	99	1.5
Craft	2	31	56	13	99	2.5
Mean		27.4	54.2	17.1	98.7	1.5
P-value		0.06	0.00	0.00	0.81	0.45
CV1		20.0	8.7	25.8	1.0	57.3
LSD(0.05)		13.4	11.6	10.8	2.4	2.1