

PROJECT TITLE: 2004 comparing the post harvest dormancy of Haxby and Eslick barley to Harrington and other lines.

PROJECT LEADER: D. M. Wichman, Agronomist, Moccasin, MT

PROJECT PERSONNEL: P.F. Hensleigh Barley Res Assoc. Bozeman, MT
Harold Armstrong, Mt Seed Lab Director, Bozeman, MT

OBJECTIVES:

Determine if Haxby and Eslick barley have a tendency toward slower post harvest germination than does Harrington barley.

RESULTS:

Post harvest dormancy is a primary factor affecting the chance a seed will lay dormant through the fall and winter and volunteer in the crop grown the next growing season. It has not been thoroughly proven, but this scientist is confident that even a 24 hour delay in germination at 50 F indicates a higher chance of the variety causing increased volunteer plants

Mean data indicates there were large differences between barley varieties for 72 to 96 hour period and for the 120 to 144 hour period (See figures 1-4). The percent germination for the 96 to 140 were more similar across lines evaluated. A check segment at the bottom of the graph bar indicates that variety had germination counts in the 72 to 96 hour period. If there is a solid segment below the bottom check segment, that indicates some barley seed had germinated by the end of 72 hours in the growth chamber set at 50F. Harrington and Metcalfe show similar germination rates in Fig 1. Haxby is a little slower. A larger hash segment at the top of the bar means there was significant amount of seed that did not germinate till after 120 hours had past with the seed in the 50F growth chamber. This is a red flag for continuous cropping. Eslick appears to be a variety less suited to continuous cropping systems.

SUMMARY:

After very minor testing, Metcalfe appears to have little post harvest dormancy and may be similar to the check Harrington. Eslick appears to have a fair amount of post harvest dormancy.

FUTURE PLANS:

CARC purchase a vacuum with seed head attachments with the plan to evaluate barley and other cereal species for post harvest dormancy in a more timely fashion (September).

Fig 1 2004 Post harvest dormancy of 3670 NT-RC barley.

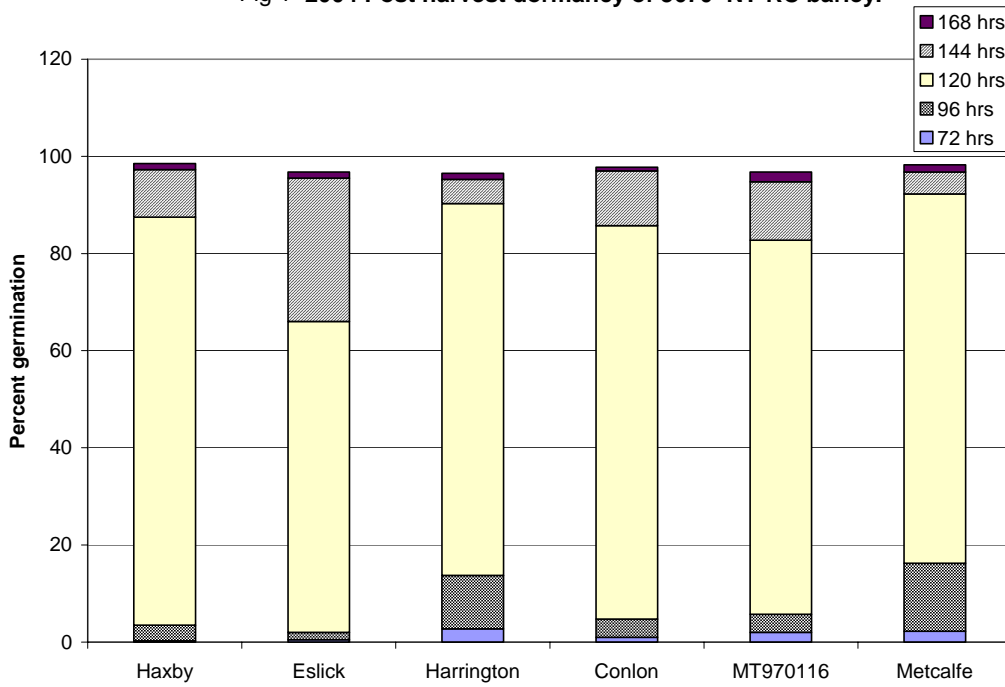


Fig 2 2004 Post harvest dormancy of 3671 Denton barley.

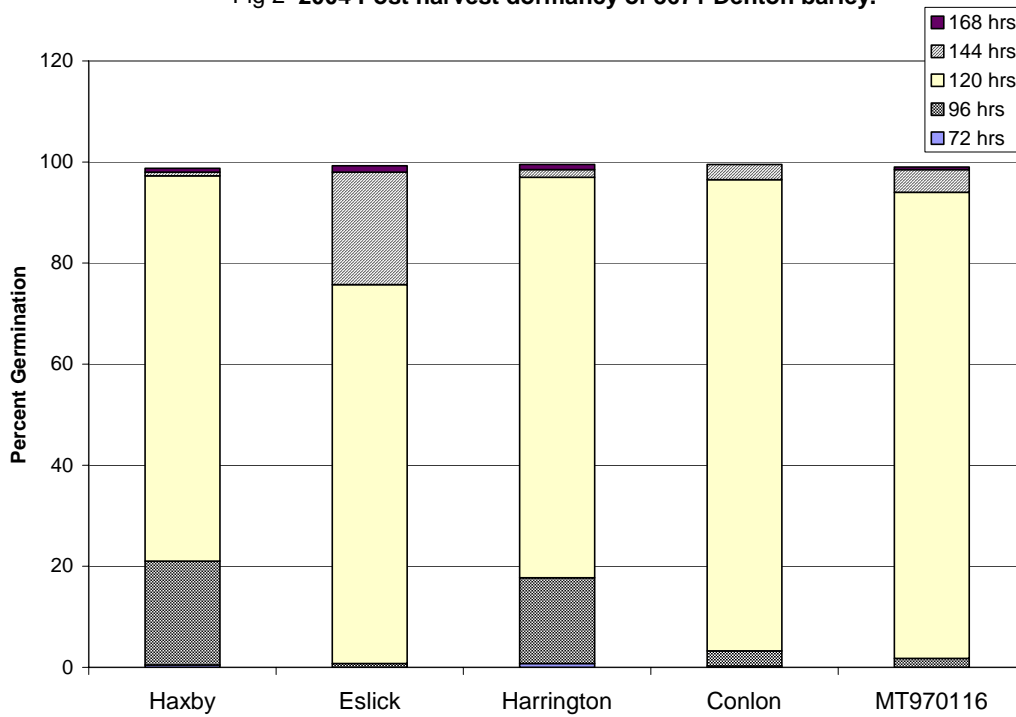


Fig 3 2004 Post harvest dormancy of 2107 barley.

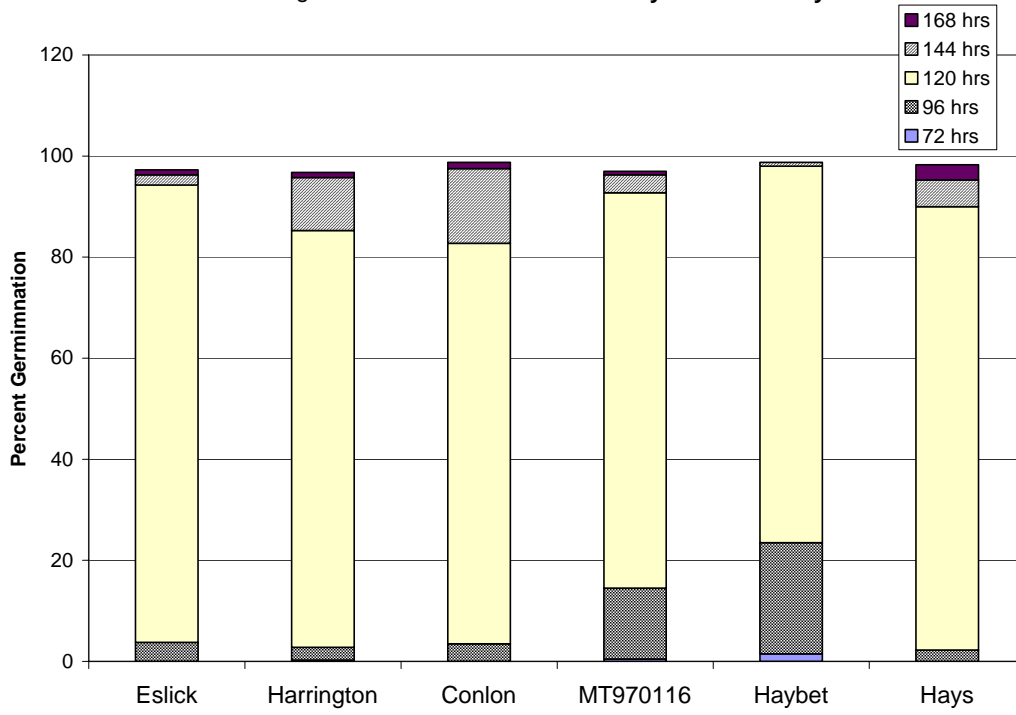


Fig 4. 2004 Post harvest dormancy of 3671 Denton hay barley.

