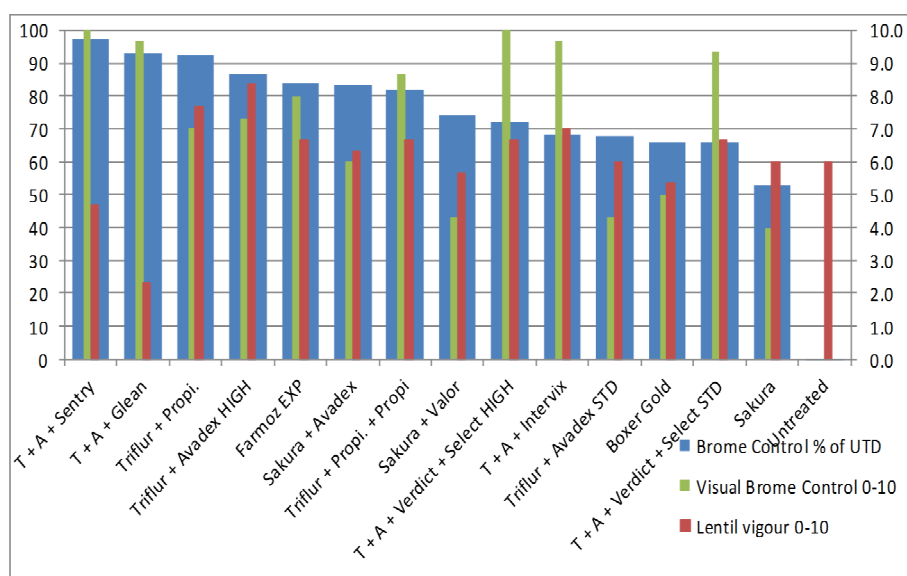


Brome Grass Control in Lentils: N&Y NRM Funded.

Background: The NSS group has conducted a range of trials observing brome grass control in cereals over the past 4 seasons. In 2014, with funding from the Northern & Yorke NRM board, we conducted work looking at a range of herbicides to control brome grass in the break crop part of the rotation. The break crop is an important opportunity to control brome grass (and other grass weeds), but with more and more sites becoming tolerant to group A and B herbicides, it is proving challenging to get near to 100% control of grasses.

Site Establishment: With their wide adaption in the region, lentils (Hurricane XT) were the obvious choice to conduct the trial on and we looked at pre-plant, post-plant—pre-emergent and early post emergent applications of commonly used products. The site at Pete Edwards was known for having high levels of brome grass, particularly over the sand hills. As is often the case with weed management trial sites, the spread of weeds was not entirely consistent and thus the data for the first replicate (4 replicates were done in total) was removed from the data set due to low weed numbers and poor crop establishment at the top of the dune.

Assessments: Weed control assessments were taken twice at this site. The first assessment was taken on the 16th June which was only 6 days after the early-post emergent (EPE) treatment were applied (Treatment 12,13 & 14). Thus these assessments of weed control were not impacted by the EPE treatments. This first assessment observed actual weed numbers taken with quadrants and converted to % control compared to untreated. The second assessment taken on the 28th August observed brome grass control as a score out of 10, with 10 being completely clear of brome and 0 being the untreated. Naturally this assessment allowed for the EPE treatments enough time to have had effect on the brome grass. Also at this time, an assessment for lentil vigour was taken. The crop vigour was affected both by some of the residual herbicide treatments as well as weed competition.



Graph 1 shown the 3 assessments taken. 16th June Brome control (thick blue columns) expressed as a % of the untreated (scale on LHS). The treatments are graded from the best % brome grass control on the LHS through to the worst on the RHS. The 28th August assessments of visual brome control (green thin columns) and lentil vigour (red thin columns) are expressed on a scale of 0 (worst) to 10 (best) on the RHS axis. T + A = Trifluralin + Avadex Xtra.

Summary: With the Sentry and Glean treatments giving robust brome control, both early and later in the season, it can be safely assumed that the brome grass population at this site is group B sensitive. However, it should be noted that there was an observed effect of both of these herbicides on the vigour of the lentils. The general trend of higher rates of herbicide having increased effect is also evident here. 3.0L of Avadex with Trifluralin was one of the best treatments as was the high rate of Verdict + Select.