

X HARVESTABILITY TRIAL

Objective: To compare the harvestability of varieties entered in the variety and system comparison trials.

Background: A number of varieties have very similar yield and quality traits. In choosing a variety a grower needs to consider additional traits like lodging and harvestability. Harvestability is the measurement of swathing and combining ease. Currently, there is no meaningful scientific measurement for harvestability. Therefore, a standardized criterion for a subjective measurement was used.

Methodology: A **Lodging score** is a visual score in which 1=erect and 9=flat. Varieties that are standing well and have a 'high yield tip' are given a score of two to three. Varieties that have severe uneven lodging with patches standing upright and patches laying flat are given a seven or eight, depending on the severity. **Lodging ratios** are obtained by dividing the average height of the canopy by the average height of randomly selected plants. **Harvestability** was evaluated as swathing and combining were completed on the *B. napus* variety and system comparison trials. Swathing and combining were each evaluated on a scale of one to five, compared to the check (Hyola 401) which was rated a two to match the rating at the Canola Production Centres in Canada where AC Excel is the standard with a rating of three. The following criteria were considered; lodging, height, straw stiffness, straw strength, stand uniformity, swath fluffiness (pod dispersion), tendency to clump, flowability, feeding and speed of operation.

The following ratings are subjective. The machine operator, crop conditions, weather and time of day can affect the harvestability of a variety.

Ratings: 1 = much better than average
 2 = better than average (check)
 3 = average
 4 = worse than average
 5 = much worse than average

Observation: The variety and system comparison trials are reported in separate tables for statistical analysis. Lodging was variable among the varieties. Swathing was more difficult in plots that were lodged unevenly. Combining ease was related closely to flow of the swath into the combine, the amount of clumping in the swath and the ease of picking up the swath. The plots were swathed with an 18 ft Versatile swather equipped with a pick-up reel. They were harvested with a John Deere 9600 combine in the system comparison trial and with a John Deere 8820 combine in the *B. napus* variety trial.

Results:

HARVESTABILITY TRIAL Systems Comparison Trial Thief River Falls, MN				
Variety	Lodging Ratio	Lodging Score	Swathing Rating	Combining Rating
46A76	0.55	4.5	3.0	2.6
DKL23-38	0.55	4.8	2.3	2.6
DKL3455	0.70	4.0	3.0	2.9
DS Roughrider	0.57	4.8	2.5	2.6
Gladiator	0.65	4.5	1.9	2.8
Hyola 357	0.61	4.0	2.0	2.6
Hyola 401	0.70	4.0	2.0	2.0
InVigor 2573	0.53	4.5	3.1	3.5
InVigor 2663	0.51	4.0	3.0	3.1
LG3525	0.63	4.3	2.8	3.1
LS 296RR	0.57	5.5	2.8	2.3
LiBred 499RR	0.64	4.3	2.4	2.4
Q2	0.59	4.3	2.9	2.6
RideR	0.56	4.8	3.0	2.9
SW BadgeRR	0.59	4.5	2.5	2.5
LSD (0.10)	0.091	0.58	0.55	0.46
C.V.	12.8	11.1	17.9	14.4

HARVESTABILITY TRIAL <i>B. napus</i>, Variety Trial Thief River Falls, MN				
Variety	Lodging Ratio	Lodging Score	Swathing Rating	Combining Rating
Canterra 1492	0.62	4.5	3.3	2.8
HyClass 601	0.68	3.8	3.1	3.0
Hyola 401	0.74	3.8	2.0	2.0
LG3311	0.63	4.3	3.0	2.8
LG3366	0.60	5.0	3.4	2.8
Q2	0.55	4.3	3.5	3.0
LSD (0.10)	0.083	0.65	0.7	0.5
C.V.	10.5	12.4	20.5	13.9

Discussion:

LS296RR had more lodging than most of the other varieties in the systems comparison trial. Gladiator, Hyola 357 and Hyola 401 swathed easier than most of the varieties. Hyola 401 and LS296RR flowed the best into the combine. In the *B. napus* trial, LG3366 had the most lodging. Hyola 401 was the easiest to swath and combine.