
ALBERTA CORN COMMITTEE

2001 Corn Hybrid Trials

Trials were seeded at Brooks (2200 CHU), Bow Island (2400 CHU), Lethbridge (2100 CHU), and Vauxhall (2200 CHU). Four Replicates were seeded at each site.

Plots consisted of two 6 - metre rows for the Silage trials and four 6 - metre rows for the Grain trials. Population densities were 60,000 plants/ha (24,000 plants/acre) for the irrigated grain tests, and 75,000 plants/ha (30,000 plants/acre) for the silage tests. Checks for each tests are recommended hybrids on the 2002 Recommendation List.

This growing season was better than average for corn. There were ample heat units, but trials were challenged by wind, hail, and drought. Successful harvests were accomplished and data from all four sites was deemed acceptable.

Corn Heat Units accumulated from 15MAY01 to the first kill frost recorded at Lethbridge were 2710 CHU, Vauxhall 2646 CHU, Bow Island 2749 CHU, and Brooks 2595 CHU.

Explanation of Variables

- X Grain yields were obtained by harvesting all ears or cobs of the centre two rows in each four row plot. Silage yields were obtained by harvesting all plants in the two row plot.

- X Grain yield is expressed as yield in g/plot and bu/ac at 15.5% moisture and silage yield is tonnes/ha on a dry matter basis.

- X Grain moisture at all locations was determined with a Dickey John GAC-II grain moisture computer.

- X Silage Whole Plant Moisture content was determined by collecting a 300 g sample of chopped material from the harvested plot, drying and reweighing the sample.

- X Anthesis was the first day when anthers were extruded on at least 10% of the plants.

- X Silking was the first day when silks were visible on at least 50% of the plants.

- X Test Weight, expressed as kg/hl, was determined by the GAC-II grain moisture computer at Vauxhall and Lethbridge. To convert to lb/bu multiply by 0.807. Test weights were adjusted to moisture at 15.5% using a method that adjusts for porosity changes.

This is available on request.

Table a. 2001 Corn Hybrid Trial Co-operators

| Location of test | Co-Operator | Supervising Agency |
|-----------------------|---|--------------------------------|
| Lethbridge & Vauxhall | B. Beres | Agriculture & Agri-Food Canada |
| | Technical support: A. Larson R. Dyck G. Larson | |
| Brooks & Bow Island | C. Wildschut | AAFRD - Brooks |
| | Technical support: L. Ost | |

Table b. 2001 Corn Hybrid Trials Soil profiles, seeding and harvest dates

| | Lethbridge | Vauxhall | Brooks | Bow Island |
|--------------|------------|-------------------|------------|------------|
| Soil Type | Loam | Sandy Loam | Silty Loam | Sandy |
| Soil Zone | Dark Brown | ----- Brown ----- | | |
| Seeding Date | 03 May | 04 May | 07 May | 09 May |
| Harvest Date | Silage | Silage | Silage | Silage |
| | Sept 13 | Sept 14 | Sept 25 | Sept 26 |
| | Grain | Grain | Grain | Grain |
| | Oct 09 | Oct 12 | Oct 03 | Oct 02 |

Table c. 2001 Corn Hybrid Trials - Amendments and Pesticides used

| Location | Fertilizer Amendments | Pesticides Used | Irrigation Applied |
|--------------------------|-------------------------------------|---|----------------------------|
| <u>Lethbridge</u> | No Amendments required | No post emergent applied | Linear inoperable Aug 2-15 |
| Grain | 276 lbs avail N, 1256 lbs avail P | Eradicane 8E (3.4L/Ac) | 12.25" Irrigation applied |
| Silage | 276 lbs avail N, 1256 lbs avail P | Eradicane 8E (3.4L/Ac) | 12.25" Irrigation applied |
| <u>Vauxhall</u> | No Amendments required | | |
| Grain | 675 lbs avail N, 338lbs avail P | Eradicane 8E (2L/Ac), Pardner (450ml/Ac), Accent (13.6g/Ac) | 14.5 " Irrigation applied |
| Silage | 675 lbs avail N, 338lbs avail P | Eradicane 8E (2L/Ac), Pardner (450ml/Ac), Accent (13.6g/Ac) | 14.5 " Irrigation applied |
| <u>Bow Island</u> | | | |
| Grain | 500 lbs/Ac 34-17-0 broadcast/disc'd | Eradicane 8E (2L/Ac), Buctril M (400ml/Ac) | 16" Irrigation applied |
| Silage | 500 lbs/Ac 34-17-0 broadcast/disc'd | Eradicane 8E (2L/Ac), Buctril M (400ml/Ac) | 16" Irrigation applied |
| <u>Brooks</u> | | | |
| Grain | 500 lbs/Ac 34-17-0 broadcast/disc'd | Eradicane 8E (2L/Ac), Buctril M (400ml/Ac) | 16" Irrigation applied |
| Silage | 500 lbs/Ac 34-17-0 broadcast/disc'd | Eradicane 8E (2L/Ac), Buctril M (400ml/Ac) | 16" Irrigation applied |