SUNFLOWERS - NON-OIL TYPE

Comments:

These varieties were tested and data donated by the National Sunflower Association of Canada Inc. (NSAC)

All sunflowers varieties listed are susceptible to sclerotinia and sunflower rust strains present in Manitoba.

Genetic resistance to verticillium wilt is rated as moderately susceptible to moderately resistant for all sunflower varieties presented.

| Summary Table | | | | | | | | | |
|--|-----------------------|---------------------|-----------------|---------|--------------|----------|--------|--------|--------|
| Genetic Site Yield Maturity Height 2019 Seed Sizing (%) ² | | | | | | | | | |
| Company | Hybrid | Traits ¹ | Years | % Check | (days to R9) | (inches) | >22/64 | >20/64 | <20/64 |
| NuSeed America | 6946 DMR | DM | 25 | 100 | 0 | 0 | 41 | 30 | 26 |
| NuSeed America | Panther DMR | DM | 33 | 100 | 1 | -3 | 55 | 26 | 14 |
| Experimental lines | s being tested/prop | osed for regist | ration in Canad | da | | | | | |
| NSAC | EX 43400 | ExSun | 2 | 82 | -1 | 3 | 47 | 32 | 22 |
| NSAC | EX 88647 | ExSun | 2 | 91 | -3 | 3 | 70 | 23 | 7 |
| | CHECK CHARACTERISTICS | | | | | | | | |
| | 6946 DMR | | 25 | 3195 | 121 | 68 | | | |
| | | | site years | lb/ac | days | inches | | | |

¹ Genetic traits include CL = Clearfield tolerance; ExSun = Express tolerance; DM = Downy Mildew Resistance.

Maturity*

Yield

| Site | Companisons |
|------|-------------|
| | Carhorry |

2019 Seed Sizing (%) 2

Test Wt

| Hybrid | | • | | | | |
|--|------------------------|-------------------|--------|-------------|--------|-----------|
| | (lb/ac) | (days to R9) | >22/64 | >20/64 | <20/64 | (lb/bu A) |
| 6946 DMR | 3289 | 129 | 39 | 40 | 21 | 25.4 |
| Panther DMR | 3875 | 131 | 49 | 40 | 11 | 26.8 |
| Experimental lines being tested/pr | oposed for regist | ration in Canada | a | | | |
| EX 43400 | 2714 | 127 | 25 | 40 | 36 | 25.4 |
| EX 88647 | 3407 | 125 | 54 | 35 | 11 | 24.1 |
| Site Average (lb/ac) | 3321 | 128 | | | | 25.4 |
| CV% | 6.96 | | | | | |
| Sign Diff | No | | | | | |
| LSD (0.05) | | | | | | |
| Planting Date | 14-May | | | | | |
| Desiccation Date | | | | | | |
| Harvest Date | 22-Oct | | | | | |
| | | | | | | |
| | | Dakota Plains | | | | |
| | Yield | Maturity* | 2019 | Seed Sizing | | Test Wt |
| Hybrid | (lb/ac) | (days to R9) | >22/64 | >20/64 | <20/64 | (lb/bu A) |
| 6946 DMR | 3519 | 128 | 67 | 23 | 10 | 24.0 |
| Panther DMR | 3167 | 129 | 71 | 20 | 9 | 23.4 |
| Experimental lines being tested/pr | oposed for regist | tration in Canada | a | | | |
| EX 43400 | 2898 | 128 | 69 | 23 | 7 | 24.0 |
| E/(15 100 | 2024 | 120 | 87 | 11 | 3 | 23.7 |
| EX 88647 | 2821 | 126 | 6/ | 11 | 3 | |
| | 3101 | 128 | 67 | - 11 | | 23.8 |
| EX 88647 | | | 67 | - 11 | | 23.8 |
| EX 88647 Site Average (lb/ac) | 3101 | | - 67 | | | 23.8 |
| EX 88647 Site Average (lb/ac) CV% | 3101 9.46 | | 67 | | | 23.8 |
| EX 88647 Site Average (lb/ac) CV% Sign Diff | 3101 9.46 | | 0/ | | | 23.8 |
| EX 88647 Site Average (lb/ac) CV% Sign Diff LSD (0.05) | 3101 9.46 No | | 0/ | | | 23.8 |

^{*}Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown.



² Totals may not add to 100% due to rounding

At Carberry, heads were clipped and dried artificially for stationary combining.

² Totals may not add to 100% due to rounding

SUNFLOWERS - OIL TYPE

Comments:

These varieties were tested and data donated by the National Sunflower Association of Canada Inc.

Oil Sunflower markets - include birdfood, oil crush and de-hull. Variety selection become more important when trying to capture de-hull markets. Choose varieties with better de-hull ratio, larger size and higher test weight. Environment will contribute greatly to final product.

| | Summary Table | | | | | | | | | | |
|------------------------------|---|---------------------------|-------|---------|--------------|----------|--------|------|--------|--|--|
| | Herbicide/Disease Site YIELD Maturity Height Oil Test | | | | | | | | | | |
| Company | Variety | Tolerance | Years | % check | (days to R9) | (inches) | /0 UII | Type | Weight | | |
| NuSeed Americas | N4HM354 DMR | CL / DM | 12 | 104 | -1 | -2 | 47.9 | NS | 34.3 | | |
| NuSeed Americas | Talon | ExSun | 15 | 97 | -2 | -4 | 45.2 | NS | 29.7 | | |
| DuPont Pioneer | P63HE60 | ExSun / DM | 12 | 96 | -2 | 0 | 46.9 | НО | 33.2 | | |
| DuPont Pioneer | P63ME70 | ExSun / DM | 17 | 100 | 0 | 0 | 47.8 | NS | 31.0 | | |
| DuPont Pioneer | P63ME80 | ExSun / DM | 15 | 94 | 1 | 0 | 49.8 | NS | 32.4 | | |
| Experimental lines be | eing tested/propose | ed for registration in Ca | anada | | | | | | | | |
| NuSeed Americas | N4HE302 | ExSun | 6 | 88 | -2 | 3 | 44.5 | НО | 30.7 | | |
| NuSeed Americas | N5LM307 | CL | 2 | 103 | 0 | -8 | 39.4 | CO | 30.7 | | |
| | CHECK CHARACTERISTICS | | | | | | | | | | |
| | P63ME70 | | 17 | 3313 | 124 | 69 | | | | | |
| | site years lb/ac days inches | | | | | | | | | | |

¹ Genetic traits include CL = Clearfield tolerance; ExSun = Express tolerance; DM = Downy Mildew Resistance.

Site Comparisons

| | Carberry | | | | | | |
|--------------------------------|-------------------|-------------------------|-----------|------|--|--|--|
| | Yield | Maturity* | Test Wt | Oil | | | |
| Hybrid | (lb/ac) | (days to R9) | (lb/bu A) | (%) | | | |
| N4HM354 DMR | 2203 | 128 | 34.9 | 41.9 | | | |
| Talon | 2426 | 122 | 32.3 | 41.1 | | | |
| P63HE60 | 2148 | 125 | 33.2 | 40.0 | | | |
| P63ME70 | 2115 | 129 | 31.5 | 42.7 | | | |
| Experimental lines bein | ng tested/propose | d for registration in (| Canada | | | | |
| N4HE302 | 2212 | 133 | 32.3 | 41.4 | | | |
| N5LM307 | 2110 | 129 | 32.4 | 37.0 | | | |
| Site Average (lb/ac) | 2202 | 128 | 32.8 | 40.7 | | | |
| CV% | 8.9 | | | | | | |
| Sign Diff | No | | | | | | |
| LSD (0.05) | | | | | | | |
| Planting Date | 14-May | | | | | | |
| Desiccation Date | | | | | | | |
| Harvest Date | 22-Oct | | | | | | |

| | Dakota Plains | | | | | | |
|--------------------------------|------------------|-------------------------|-----------|------|--|--|--|
| _ | Yield | Maturity* | Test Wt | Oil | | | |
| Hybrid | (lb/ac) | (days to R9) | (lb/bu A) | (%) | | | |
| N4HM354 DMR | 3179 | 127 | 34.8 | 47.2 | | | |
| Talon | 3302 | 128 | 29.8 | 44.8 | | | |
| P63HE60 | 3588 | 128 | 34.6 | 46.9 | | | |
| P63ME70 | 3374 | 128 | 31.3 | 48.2 | | | |
| Experimental lines bein | g tested/propose | d for registration in (| Canada | | | | |
| N4HE302 | 3406 | 130 | 31.5 | 46.5 | | | |
| N5LM307 | 3549 | 128 | 29.1 | 40.7 | | | |
| Site Average (lb/ac) | 3400 | 128 | 31.9 | 45.7 | | | |
| CV% | 5.7 | | | | | | |
| Sign Diff | No | | | | | | |
| LSD (0.05) | | | | | | | |
| Planting Date | 28-May | | | | | | |
| Desiccation Date | | | | | | | |
| Harvest Date | 19-Oct | | | | | | |

^{*}Physiological maturity for sunflowers is R9, where the bracts on the head are almost completely brown. At Carberry, heads were clipped and dried artificially for stationary combining.



² Oil Type include NS=NuSun; HO=High Oleic; CO = ConOil