

Technical Bulletin

Genes that fit *your* farm.

SeCan

Canada's Seed Partner

CDC Spectrum Yellow Field Pea



Progress Through Research
Le progrès grâce à la recherche

Description:

CDC Spectrum is a high yielding yellow cotyledon, semi-leafless field pea with improved yield potential, good lodging tolerance and powdery mildew resistance.

Parentage: CDC Meadow/Polstead//CDC Bronco

Strengths:

- 11% higher yield compared to the mean of the yellow checks CDC Golden and Agassiz
- Better lodging resistance than the checks
- Powdery mildew resistant

Neutral Traits:

- Medium maturity (2 days later than Agassiz, 4 days later than CDC Golden)
- Medium vine length (similar to the checks)

- Medium seed size (larger than the checks)
- Round seed shape (similar to the checks)
- Low seed coat breakage percent
- Moderate protein concentration (similar to Agassiz, less than CDC Golden, higher than CDC Amarillo)
- Fair Mycosphaerella Blight resistance; similar to the checks
- Fair Fusarium wilt resistance; similar to the checks CDC Golden and Agassiz

Breeder:

Funded by:



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Table 1: Performance of CDC Spectrum compared to the checks (Pea Co-op Test B, 2012-2013)

| Variety | Yield (kg/ha) | Yield (% mean of checks) | Days to maturity | Vine length (cm) | Lodging (pre-harvest) | Seed wt (mg) | Shape | Seed coat breakage (%) | Crude protein (%) |
|---------------------|---------------|--------------------------|------------------|------------------|-----------------------|--------------|------------|------------------------|-------------------|
| CDC Golden (check) | 4743 | 95 | 96 | 85 | 5.0 | 206 | 2.5 | 1 | 24.7 |
| Agassiz (check) | 5196 | 105 | 98 | 87 | 4.4 | 219 | 2.5 | 5 | 23.8 |
| CDC Spectrum | 5501 | 111 | 100 | 90 | 3.2 | 232 | 2.5 | 2 | 23.9 |
| CV | 8.3 | | | | | | | | |
| LSD 05 | 266 | | 1.1 | 3.7 | 0.4 | 6.3 | 0.1 | 4.2 | 0.6 |
| # of locations | 21 | | 19 | 16 | 21 | 21 | 21 | 7 | 11 |

Lodging score: 1=upright; 9=completely lodged

Shape: 1=round; 5=cubic

Table 2: Disease resistance data of CDC Spectrum compared to the checks (Pea Co-op Test B, 2012-2013)

| Variety | Myc (MB) | Myc (SK) | AUDPC-SK | Fusarium wilt (%) | Powdery mildew |
|---------------------|------------|------------|-------------|-------------------|----------------|
| CDC Golden (check) | 6.5 | 5.0 | 15.7 | 33 | 0 |
| Agassiz (check) | 5.8 | 4.5 | 13.8 | 26 | 0 |
| CDC Spectrum | 5.8 | 4.2 | 13.2 | 25 | 0 |
| LSD 05 | 0.5 | 2.5 | 1.1 | 15.2 | 0 |
| # locations | 2 | 2 | 2 | 2 | 2 |

Myc (MB)= Mycosphaerella blight assessed at Morden, MB (1=no disease, 9=completely blighted)

Myc (SK)= Mycosphaerella blight assessed at Saskatoon, SK.

AUDPC= Mycosphaerella blight area under the disease progress curve

Powdery mildew (0=no disease, 9=completely mildewed)

For more information, call 1-800-665-7333 or visit www.secan.com

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2020 Seed Manitoba

| Variety | Yield (% of CDC Meadow) | Site Years Tested | Relative Maturity | Relative Vine Length | Seed Size (TKW) | Resistance to: | | | | | | |
|---------------------|-------------------------|-------------------|-------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------------------|------------------------------|--------------------|---------------------------------|
| | | | | | | Lodging | Powdery Mildew | MB ¹ | Fusarium Wilt ² | Green Seed Coat ³ | Seed Coat Breakage | Seed Coat Dimpling ⁴ |
| CDC Meadow (C) | 100 | 79 | E | M | 220 | G | VG | F | F | G | G | G |
| CDC Athabasca | 99 | 13 | M | L | 300 | VG | VG | F | G | G | F | F |
| CDC Canary | 100 | 13 | E | L | 230 | VG | VG | F | F | F | G | F |
| CDC Lewochko | 106 | 13 | M | L | 230 | VG | VG | F | F | G | G | G |
| CDC Spectrum | 100 | 13 | M | L | 240 | VG | G | F | F | G | G | G |

1 Mycosphaerella Blight

2 Varieties which show good disease tolerance to one strain of Fusarium wilt may be susceptible to other strains

3 Green seed coats: G= 0-10%, F= 11-25%

4 Seed coat dimpling rating: VG= 0-5%, G= 6-20%, F= 21-50%

2020 SaskSeed Guide

| Variety | Years Tested | Yield (% of CDC Amarillo) | | | Protein | Relative Maturity | Lodging ¹ | Vine Length (cm) | Resistance to: | | | | | Seed Weight (g/1000) | |
|---------------------|--------------|---------------------------|-------------|------------|-------------|-------------------|----------------------|------------------|-----------------|----------------|---------------|--------------------|---------------------------------|----------------------|------------------------|
| | | 1, 2 & South 3 | North 3 & 4 | Irrigation | | | | | MB ² | Powdery Mildew | Fusarium Wilt | Seed Coat Breakage | Seed Coat Dimpling ³ | | Greenness ⁴ |
| CDC Amarillo (C) | 11 | 100 | 100 | 100 | 23.0 | M | 3.5 | 85 | 4.5 | R | MR | F | F | G | 230 |
| CDC Canary | 7 | 98 | 98 | --- | -0.1 | E | 3.5 | 85 | 4.5 | R | I | G | F | F | 230 |
| CDC Lewochko | 6 | 103 | 103 | --- | +0.7 | M | 3.5 | 90 | 4.5 | R | I | G | G | G | 230 |
| CDC Athabasca | 7 | 93 | 97 | --- | +0.5 | M | 3.0 | 85 | 4.5 | R | I | F | F | G | 300 |
| CDC Spectrum | 8 | 103 | 101 | --- | +0.5 | M | 3.5 | 85 | 4.5 | R | I | G | G | F | 240 |

1 Lodging: 1= completely upright, 9= completely lodged

2 Mycosphaerella Blight score (1-9) 1= no disease, 9= completely blighted

3 Seed coat dimpling: VG= 0-5%, G= 6-20%, F= 21-50%

4 Green seed coats: G= 0-15%, F= 16-40%

2020 Alberta Seed Guide

| Variety | Overall Yield | Overall Station Years of Testing | Area 1 | | Area 2 | | Area 3 | | Area 4 | | Area 5 | | Maturity Rating | Vine Length (cm) | Seed Size (TKW) | Lodging ¹ | Resistance to: | | | | | |
|---------------------|---------------|----------------------------------|------------|------------|-----------|------------|-------------|------------|------------|------------|-------------|------------|-----------------|------------------|-----------------|----------------------|-----------------|---------------|----------------|--------------------|---------------------------------|------------------------------|
| | | | Yield (%) | Site Years | Yield (%) | Site Years | Yield (%) | Site Years | Yield (%) | Site Years | Yield (%) | Site Years | | | | | MB ² | Fusarium Wilt | Powdery Mildew | Seed Coat Breakage | Seed Coat Dimpling ³ | Green Seed Coat ⁴ |
| CDC Amarillo (C) | 100 | 106 | 100 | 18 | 100 | 30 | 100 | 17 | 100 | 25 | 100 | 16 | M | 81 | 227 | 2.4 | F | G | R | F | F | G |
| CDC Canary | 104 | 29 | 106 | 5 | 104 | 8 | 98 | 5 | 101 | 6 | 101 | 5 | E | 80 | 241 | 2.6 | F | F | R | G | F | G |
| CDC Lewochko | 106 | 15 | 102 | 2 | 98 | 4 | 104 | 3 | 100 | 3 | 105 | 3 | M | 89 | 233 | 1.6 | F | F | R | G | G | G |
| CDC Athabasca | 95- | 29 | 92 | 5 | 94 | 8 | 99 | 5 | 95 | 6 | 91- | 5 | M | 82 | 284 | 2 | F | F | R | F | F | G |
| CDC Spectrum | 106+ | 29 | 103 | 5 | 99 | 8 | 106+ | 5 | 100 | 6 | 109+ | 5 | M | 78 | 242 | 2.1 | F | F | R | G | G | F |

1. Lodging: 1= completely upright 9= completely lodging

2. Mycosphaerella Blight

3. Seed Coat Dimpling: VG= 0-5%, G= 6-20%, F= 21-50%

4. Green Seed Coat: G= 0-10%, F= 11-25%

Resistance: P= Poor, F= Fair, G= good, VG= Very Good R= Resistant

Maturity: E= Early, M= Medium, L= Late

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