

YELLOW PEA: CDC AMARILLO

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| <p>Breeder: Dr. Tom Warkentin Crop Development Centre University of Saskatchewan Saskatoon, SK.</p> | <p>Year released to Select Seed Growers: 2012 Sub-licensed outside of SK: No International Distribution Rights: Canterra Seeds Ltd./Meridian Seeds</p> | <p>Plant Breeders Rights: No</p> |
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In two years of testing in the field pea co-op registration trials in 2009–2010, CDC Amarillo yielded 110% of the check varieties CDC Golden and Cutlass (Table 2). As a result of this strong performance, CDC Amarillo was designated the official check variety in 2017. The agronomic performance over 10 years of testing in the co-op and regional trials in Saskatchewan is shown in Table 1. CDC Amarillo does not have PBR protection.

Strengths:

- Good yield
- Good lodging resistance
- Medium vine length
- Powdery mildew resistance

Neutral:

- Medium maturity
- Medium seed weight
- Round seed shape
- Moderate cooking time
- Fair Mycosphaerella blight resistance
- Moderately resistant to Fusarium wilt

Weaknesses:

- Rated 'fair' for seed coat breakage
- Moderate protein concentration



Table 1: Agronomic Performance for CDC Amarillo from Co-op and Regional Trials in Saskatchewan – Adapted from Varieties of Grain Crops 2019

| Variety | Year Registered | Years Tested | Yield % Amarillo | | Maturity | Lodging (1-9) | Vine Length (cm) | Resistance to: | | | | | | Seed Weight (g/1000) | Protein vs. CDC Amarillo |
|----------------------|-----------------|--------------|------------------|--------------|----------|---------------|------------------|-----------------------|----------------|---------------|--------------------|--------------------|-----------|----------------------|--------------------------|
| | | | 1, 2 & South 3* | North 3 & 4* | | | | Mycosphaerella Blight | Powdery Mildew | Fusarium Wilt | Seed Coat Breakage | Seed Coat Dimpling | Greenness | | |
| CDC Amarillo (check) | 2012 | 10 | 100 | 100 | Medium | 3.5 | 85 | 4.5 | R | MR | Fair | Fair | Good | 230 | 23.0 |
| Abarth | 2012 | 7 | 93 | 90 | Early | 3.5 | 75 | 5.0 | R | I | Fair | Good | Good | 280 | -0.1 |
| AAC Ardill | 2013 | 7 | 103 | 99 | Medium | 3.5 | 85 | 4.5 | R | MR | Good | Good | Good | 230 | -1.9 |
| AAC Asher | 2017 | 3 | 103 | 100 | Medium | 4.5 | 75 | 4.5 | R | I | | Fair | Good | 260 | -0.6 |
| CDC Athabasca | 2016 | 7 | 93 | 97 | Medium | 3.0 | 85 | 4.5 | R | I | Fair | Fair | Good | 300 | +0.5 |
| CDC Canary | 2017 | 6 | 97 | 98 | Early | 3.5 | 85 | 4.5 | R | I | Good | Fair | Fair | 230 | -0.1 |
| AAC Carver | 2014 | 5 | 103 | 100 | Early | 4.0 | 85 | 5.0 | R | I | Good | Fair | Good | 240 | -1.3 |
| AAC Chrome | 2017 | 4 | 105 | 102 | Medium | 4.5 | 75 | 4.5 | R | I | Good | Good | Good | 240 | -1.2 |
| CDC Inca | 2015 | 7 | 104 | 99 | Medium | 4.0 | 85 | 4.5 | R | I | Good | Good | Fair | 230 | -0.8 |
| AAC Lacombe | 2013 | 6 | 96 | 99 | Medium | 3.5 | 85 | 5.0 | R | I | Fair | Fair | Fair | 250 | -0.9 |
| CDC Lewochko | 2018 | 5 | 104 | 103 | Medium | 3.5 | 90 | 4.5 | R | I | Good | Good | Good | 230 | 0.7 |
| CDC Meadow | 2006 | 10 | 92 | 89 | Early | 4.0 | 85 | 5.0 | R | I | Good | Good | Good | 220 | -0.6 |
| AAC Profit | 2018 | 3 | 101 | 110 | Medium | 4.5 | 90 | | R | I | Good | Good | Good | 230 | 0.6 |
| CDC Saffron | 2011 | 10 | 98 | 92 | Early | 4.0 | 80 | 4.5 | R | I | Good | Fair | Good | 250 | -0.4 |
| CDC Spectrum | 2016 | 7 | 104 | 102 | Medium | 3.5 | 85 | 4.5 | R | I | Good | Good | Fair | 240 | 0.5 |

Source: Varieties of Grain Crops 2019 (SaskSeed Guide)

*Area 1: Brown soil zone; Area 2: Dark Brown; Area 3: Black; Area 4: Dark Gray

Lodging score: 1=upright; 9=completely lodged

Mycosphaerella blight score (1-9) 1=No disease, 9=Completely blighted

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

Greenness: Good = 0-15%; Fair = 16-40%

Table 2: Agronomic Performance of CDC Amarillo Compared to the Checks (Pea Co-op Test A, 2009-2010)

| Variety | Yield (kg/ha) | Yield (% mean of checks) | Days to Maturity | Vine Length (cm) | Lodging* (pre-harvest) | Seed Weight (mg) | Seed Shape** | Seed Coat Breakage (%) | Crude Protein (%) | Cooking Time (min) |
|--------------------|---------------|--------------------------|------------------|------------------|------------------------|------------------|--------------|------------------------|-------------------|--------------------|
| Cutlass (check) | 5271 | 100 | 104 | 77 | 4.0 | 221 | 2.7 | 6.3 | 23.4 | 46.8 |
| CDC Golden (check) | 5311 | 100 | 102 | 77 | 4.1 | 214 | 2.7 | 3.3 | 24.2 | 30.3 |
| CDC Amarillo | 5812 | 110 | 105 | 86 | 2.8 | 233 | 2.9 | 6.8 | 22.7 | 46.3 |
| CV | 9 | | | | | | | | | |
| LSD 05 | 301 | | 0.9 | 2.8 | 0.6 | 6.9 | 0.3 | 5.2 | 0.6 | 26.4 |
| # locations | 20 | | 20 | 20 | 20 | 20 | 20 | 8 | 12 | 2 |

Source: CDC Pulse breeding group, U of S

*Lodging score: 1=upright; 9=completely lodged

**Seed shape: 1=round; 5=cubic