

# University of Saskatchewan Fababean A&B Variety Evaluations

**Project duration:** May 2021 – October 2021

**Objectives:** To evaluate coloured and white fababean entries for the Crop Development Centre, University of Saskatchewan

**Collaborators:** Jaret Horner, University of Saskatchewan

## Background

Adapted from the [Crop Development Centre \(CDC\) website](#): The CDC was established in 1971 to improve economic returns for farmers and the agriculture industry in western Canada by improving existing crops, creating new uses for traditional crops, and developing new crops.

## Results

The average yield for white fababean entries is shown in Figure 1. The average yield for coloured fababean entries is shown in Figure 2. Numbered, non-registered varieties are provided for tracking purposes only. The results are for one site-year only, and should be interpreted with caution. Consult a seed guide for multi-site-year data for available varieties.

## Materials and methods

Experimental Design: Random Complete Block

Entries: 10 Trial A entries, 5 Trial B entries; 3 replications

Seeding: May 4

Harvest: Sep 22

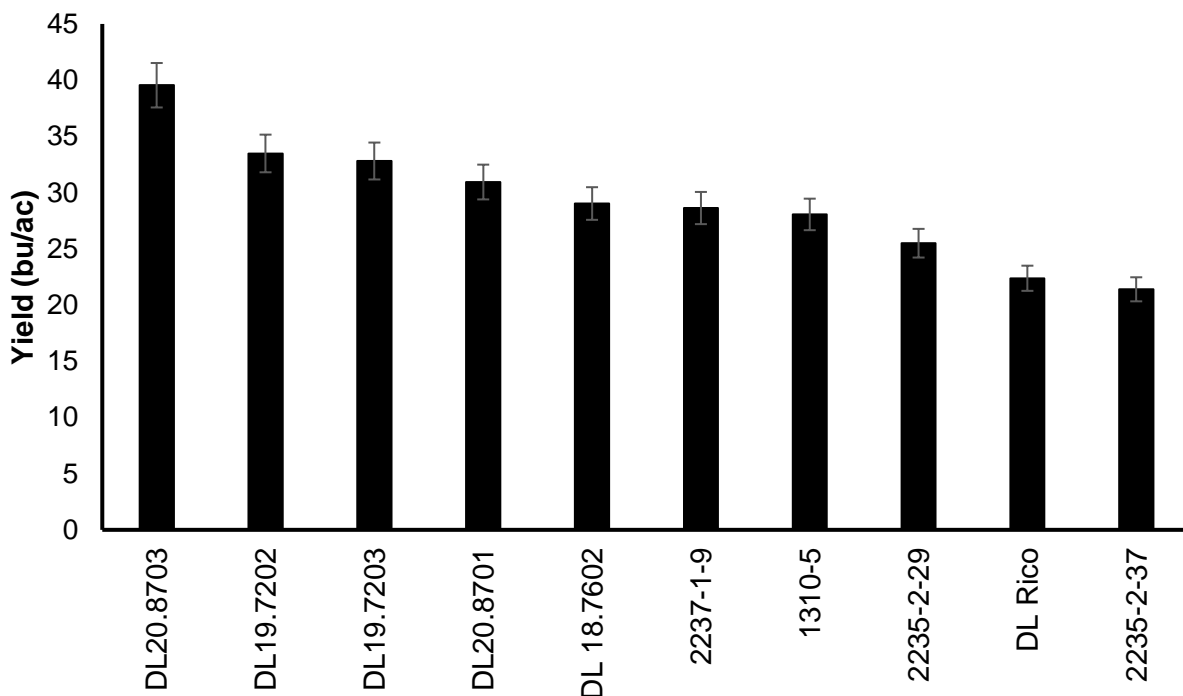


Figure 1: Average yield for white fababean entries

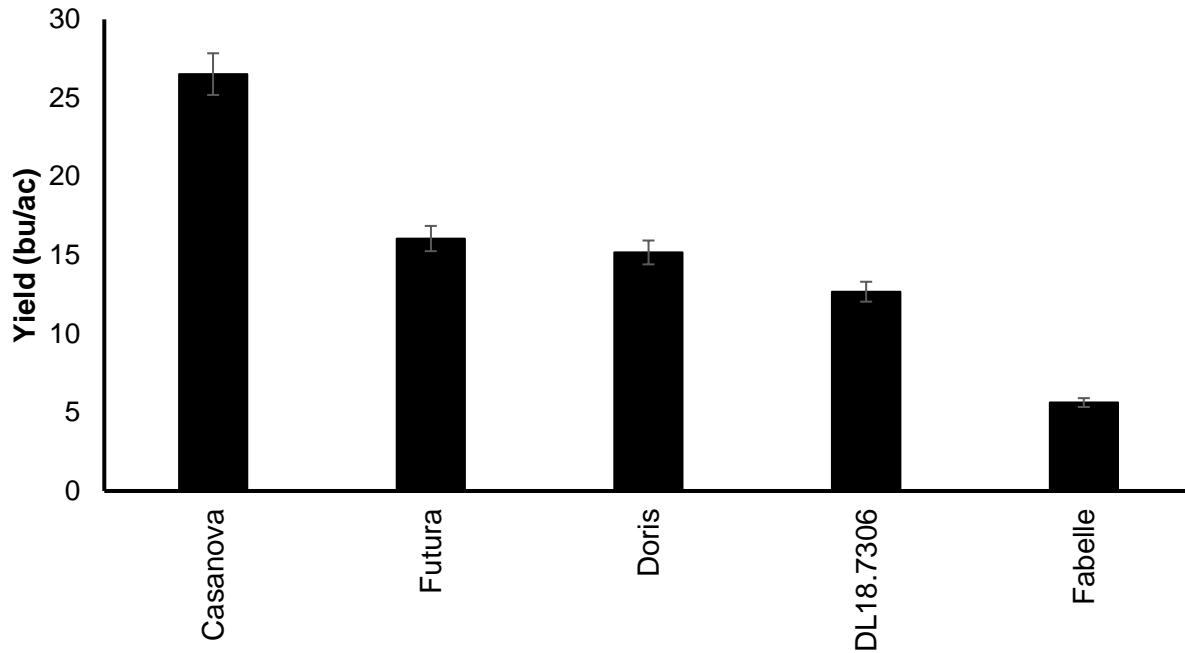


Figure 2: Average yield for coloured fababean entries

Table 1: Comparison of yield means and statistical difference for white fababean entries (varieties connected by the same letter are statistically significant)

| Variety     | Statistical significance for yield | Yield (bu/ac) |
|-------------|------------------------------------|---------------|
| DL20.8703   | A                                  | 39.55         |
| DL19.7202   | A                                  | 33.48         |
| DL19.7203   | A                                  | 32.81         |
| DL20.8701   | A                                  | 30.94         |
| DL 18.7602  | A                                  | 29.03         |
| 2237-1-9    | A                                  | 28.62         |
| 1310-5      | A                                  | 28.06         |
| 2235-2-29   | A                                  | 25.50         |
| DL Rico     | A                                  | 22.38         |
| 2235-2-37   | A                                  | 21.40         |
| <b>LSD</b>  | <b>19.94</b>                       |               |
| <b>% CV</b> | <b>37.84</b>                       |               |

Table 2: Comparison of yield means and statistical difference for coloured fababean entries (varieties connected by the same letter are statistically significant)

| Variety     | Statistical significance for yield | Yield (bu/ac) |
|-------------|------------------------------------|---------------|
| DL18.7306   | A                                  | 21.06         |
| Casanova    | A                                  | 18.13         |
| Futura      | A                                  | 16.06         |
| Doris       | A                                  | 15.17         |
| Fabelle     | A                                  | 5.62          |
| <b>LSD</b>  | <b>17.24</b>                       |               |
| <b>% CV</b> | <b>63.46</b>                       |               |

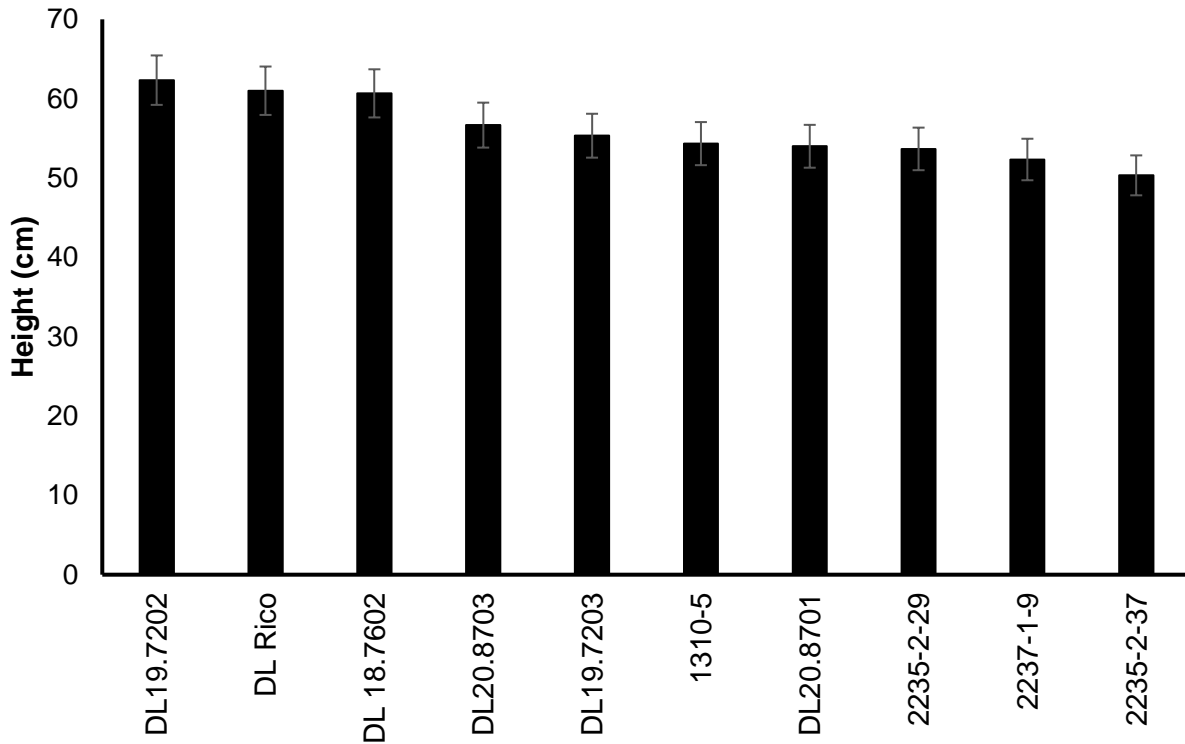


Figure 3: Plant heights for white fababean varieties

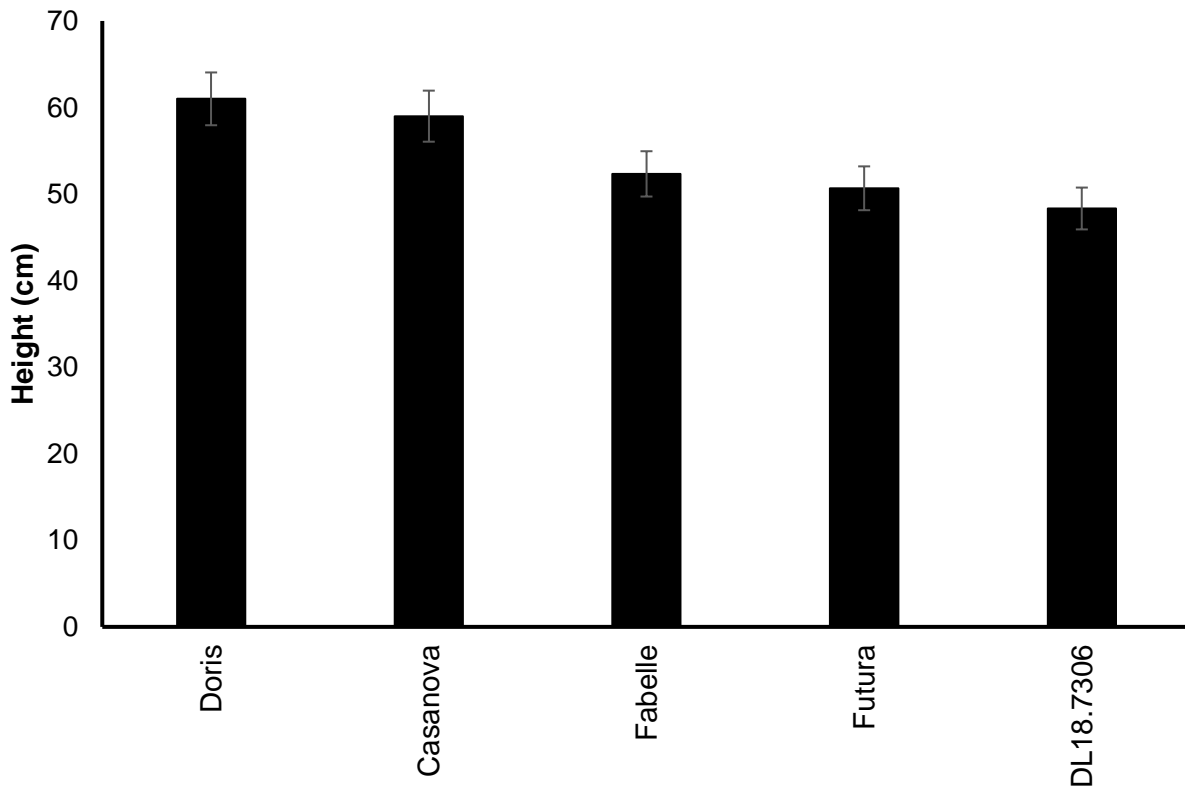


Figure 4: Plant heights for coloured fababean entries

Table 3: Comparison of height means and statistical difference for white fababeen entries (varieties connected by the same letter are statistically significant)

| Variety     | Statistical Significance for Height |   | Height (cm) |
|-------------|-------------------------------------|---|-------------|
| DL19.7202   | A                                   |   | 62.33       |
| DL Rico     | A                                   | B | 61.00       |
| DL 18.7602  | A                                   | B | 60.67       |
| DL20.8703   | A                                   | B | 56.67       |
| DL19.7203   | A                                   | B | 55.33       |
| 1310-5      | A                                   | B | 54.33       |
| DL20.8701   | A                                   | B | 54.00       |
| 2235-2-29   | A                                   | B | 53.67       |
| 123097      | A                                   | B | 52.33       |
| 2235-2-37   |                                     | B | 50.33       |
| <b>LSD</b>  | <b>11.53</b>                        |   |             |
| <b>% CV</b> | <b>12.19</b>                        |   |             |

Table 4: Comparison of height means and statistical difference for coloured fababeen entries (varieties connected by the same letter are statistically significant)

| Variety     | Statistical significance for yield | Height (cm) |
|-------------|------------------------------------|-------------|
| DL18.7306   | A                                  | 61.00       |
| Casanova    | A                                  | 55.67       |
| Futura      | A                                  | 52.33       |
| Doris       | A                                  | 51.67       |
| Fabelle     | A                                  | 50.67       |
| <b>LSD</b>  | <b>13.53</b>                       |             |
| <b>% CV</b> | <b>14.30</b>                       |             |

Data collected                      Date collected  
 % Plant Stand:                      May 19  
 Maturity:                              Sep 9  
 Yield:                                  Sep 24  
 Moisture:                              Sep 24

Agronomic info  
 Previous year's crop:              Oat Silage  
 Soil Type:                              Erickson Clay Loam  
 Landscape:                            Rolling with trees to the east  
 Seedbed preparation:              Vertical tilled

Table 3: Spring 2021 Soil Test

|   | Available | Added    | Type      |
|---|-----------|----------|-----------|
| N | 151 lb/ac | -        | -         |
| P | 47 ppm    | 10 lb/ac | 11-52-0-0 |
| K | 743 ppm   | -        | -         |

*Inoculant added with seed; P banded with seed*

Table 4: Pesticide Application

| Crop stage | Date   | Product | Rate      |
|------------|--------|---------|-----------|
| Pre-emerge | May 26 | RoundUp | 640 ml/ac |
|            |        | Heat    | 28.0 g/ac |
| In-crop    | Jul 22 | UAN 28% | 800 ml/ac |
|            |        | Viper   | 400 ml/ac |
| Desiccant  | Sep 22 | Reglone | 670 ml/ac |
|            |        | LI700   | 250 ml/ac |