Lentil and Fababean Update

Breeding and Research

January 17, 2019
Lentils by Market Class -
Acres Insured 2018

- Red: 1,358,554
- Large Greens: 809,440
- Others: 40,577
- Other Greens: ...
Top 5 Red Lentils
Top 6 Other Lentils

IMVINCIBLE CL
ESTON
VICEROY
PERIDOT CL
KERMIT
INDIANHEAD
<table>
<thead>
<tr>
<th>Variety</th>
<th>YRS</th>
<th>Yield/Area 1</th>
<th>Yield/Area 2</th>
<th>Height (cm)</th>
<th>DTF</th>
<th>Maturity Rating</th>
<th>Resistance to:</th>
<th>Seed Weight (g/1000)</th>
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<td>Height (cm)</td>
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F2 Nursery
2018
Progress in
disease
resistance
breeding
General Objectives:

Yield (Integrates many factors)
Disease Resistance
Herbicide Tolerance
Nutritional Traits
Diversification of Markets, Products, Value Chains
Genomics Integration and Genetic Base
Winter nurseries speed up the breeding process
Do hairy pods for lentil provide benefits for production?

Stay tuned...
What is happening underground with lentil roots?

Eston is a surface feeder....
IG 72815 - *Lens ervoides*

What is happening underground with lentil roots... Wild species dive deep?
LR 26-110 (is this transferable?)
Faba beans
Data from Regional/Coop Trials over past several years.....

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<td>Seed weight (mg)</td>
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Trends in faba bean breeding – yield of smaller seeded types is increasing

Protein extraction market is waiting for faba beans.

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<td>367</td>
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Bold indicates check
[X] Number of sites.

W - white
Winter nurseries speed up the breeding process.
High intensity growth room in Alberta with 8 L pots for faba bean growouts

No room in Saskatoon!!
Will need to scale back pulse crop Breeding.....
Crop Insurance: *is this the source of* or the *solution to* our biological problems in pulse crop production?

*Just imagine a world where:*

1. There was an 8 year cycle between planting the same crop.....

2. There was an 8 year cycle between planting the same susceptible crop.....

3. You had no premium (or eventually a credit) for maintaining a biologically sound rotation.....

- Would your crops yield more?
- Would your markets be more stable and diverse?
- Would your input costs be reduced?
- Would breeding programs be more successful?
- Would crop agriculture be more profitable and sustainable?
Thanks to all our research supporters:

- SPG
- NSERC
- ADF
- Genome Canada
- Nutrition International
- Global Institute of Food Security
- Danish Innovation Fund
- Pulse Crop Export Community
- Pulse Crop Processing Community
- Crop Diversification Centre – South
- Global Crop Diversity Trust

And many, many international research collaborators