Wheat & Barley Variety Development In W. Canada

Garth Patterson
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Today...

- WGRF
- Wheat/Barley Variety Dev.
- Past/Present
- Future
Producer Forum to Fund Research

- To benefit western Canadian producers.
- 14 member organizations plus AAFC
Producer Forum to Fund Research

- $7.6 million in 2012
- Endowment Fund
- Wheat and Barley Check-Offs

**Assets**
- Endowment Fund: $98 million
- Check-Off Reserves: $26 million
Wheat/Barley Variety Development: Past/Present
Public Private Producer Partnerships

- Public Institutions Dominate
  - AAFC
  - University of Saskatchewan (Crop Development Centre)
  - University of Alberta
  - University of Manitoba
  - Alberta Agriculture Food and Rural Development
- Public, Private (Industry) and Private (Producer) support of variety development
- Varieties tendered to private industry
Producer Funding (WGRF)

$79 million (approximately)

- Check-Off
- Endowment Fund
- Royalties reinvested
Producer Value From Check-Offs

- Over 150 new wheat and barley varieties registered since 1993
- Pipeline is full!
  - Midge tolerance
  - FHB resistance
- Yield benefit from KVD removal
- CPS Red
Wheat/Barley Variety Development: Future
Producer Leadership

- Leadership from Wheat/Barley Commissions and Councils
- WGRF committed to a smooth transition to provincial check-offs
- WGRF can collaborate on research
World Food Demand

- 10 Billion by 2100
- Diet Upgrades
- Growth in meat, oil, dairy, fruit, vegetable consumption

Source: FAO World Agriculture to 2050
World Cereal Demand

- Cereal Decline in Diet
- Industrial demand growing
- LDC: Wheat Demand Growth
- DC: Wheat Demand Flat

Source: FAO World Agriculture to 2050
World Wheat Yield Trends

Dr. Braun, CIMMYT, 2012 Wheat Summit

- Competition: Marginal areas
- Competition: Less inputs
- Suboptimal sowing & harvest
- Research: Quality vs. Yield
- Low R&D Investment
Global Variety Development $

Dr. Braun, CIMMYT, 2012 Wheat Summit

- $3.2 Billion: 7 largest MN’s
- > $1 Billion to corn
- Only $160 Million to wheat
- Total Global Wheat = $400 mil
Canadian wheat yield increases have done well considering the level of investment in breeding.

Dr. Braun, Director Global Wheat, CIMMYT

2012 Wheat Summit
Defining Wheat Success

Better Performing Varieties =

1/3 Breeding + 1/3 Agronomy + 1/3 Policy

Dr. Braun, Director Global Wheat, CIMMYT 2012 Wheat Summit
W. Canadian Wheat Yield Gains

- 0.5% ave. annual over 40 years in Man./Sask.
  - Dr. Steve Morgan Jones, AAFC
  - Seed Guide Data
- 1.1 bu/ac ave. annual 2000 to 2012 in W. Canada
  - Dr. Rob Graf, AAFC
  - Commercial yields (StatsCan)
  - 0.8 bu/ac/yr Canola for comparison
Canadian Wheat Opportunities

- Most important food crop globally
- Producers are engaged
- Sustainable production
- Increased private industry interest
- Innovation Dialogue
Wheat Challenges

- Self pollinated, complex genome
- Low level of R&D investment
- Market acceptance of GMO?
- Global diet upgrades
- Canadian Regulatory environment
  - Variety registration
  - IP protection
Collaboration is Key

Success
(Better performing wheat varieties) =
Private Industry Activity +
Private Producer Activity +
Public Activity
Thank You