



Winter Cereals

Sustainability in Action

Winter Wheat + Canola, A Winning Combination

Canola Colleges 2009



Ducks Unlimited Canada
Conserving Canada's Wetlands

Active by nature.



Bayer CropScience



DUC and Winter Wheat

- Habitat for waterfowl and ground nesting birds
 - 1 nest/30 acres of winter wheat vs. 1 nest/300 acres of spring wheat
- Economically viable crop for growers + beneficial for habitat
- Since mid 1990's DUC has been involved in the winter wheat industry
 - Variety and Agronomy Research
 - Incentive Programs
 - Agronomic Support and Advice





Benefits of Diverse Rotations

- breaks insect and disease cycles
- diversified cropping cycle helps manage weeds
- exhibit different water and nutrient use patterns

Which can translate to...

- increased subsequent crop yield
- reduced overall economic risk





Diverse Crop Rotations

- Studies have shown 11-34% increase in canola following cereals and a 10-20% increase in wheat following canola under direct seeding systems (*Agdex 519-28. April 2000. AARD*)
- Crop insurance data supports benefit of avoiding back to back crops in rotation



The Recipe for Winter Wheat Success

Goal: Establishing a strong plant in fall and getting it through winter

How to do it...

1. Seed early
2. Seed shallow into weed free conditions
3. Seed into tall dense stubble





1. Seed Early

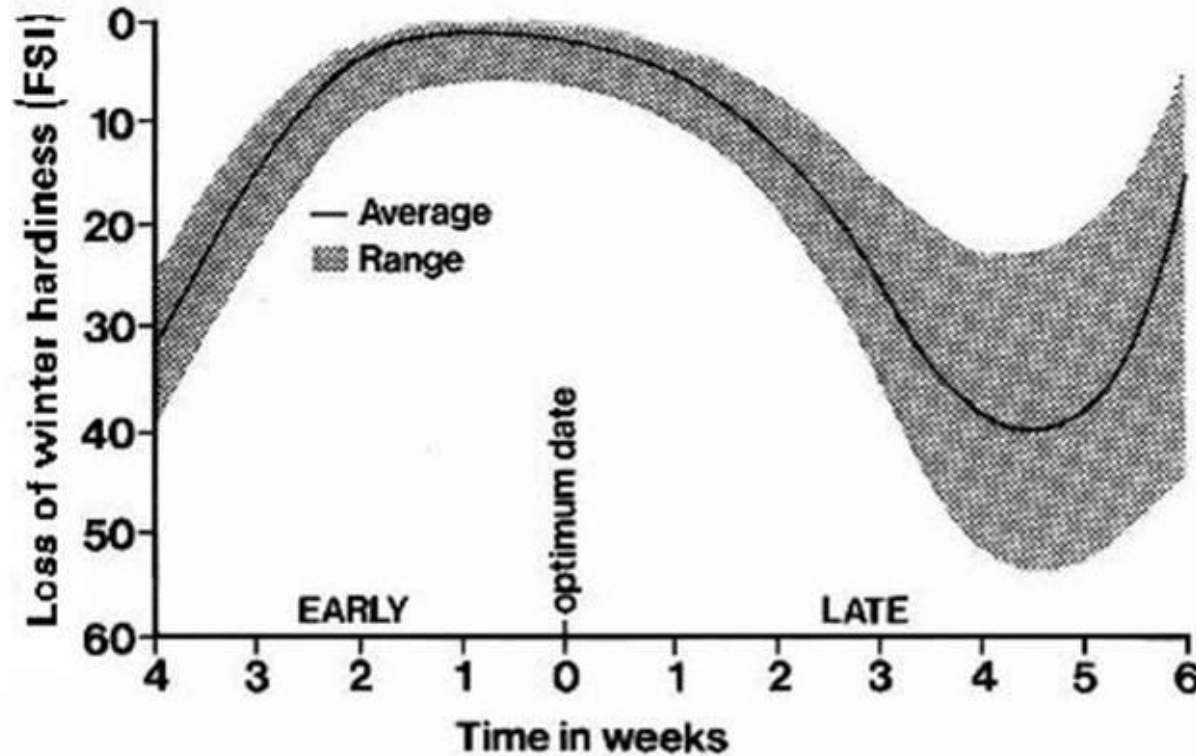


Figure 1. Influence of seeding date on winter hardiness of winter wheat. See table 1 for optimum seeding date.





1. Seed Early

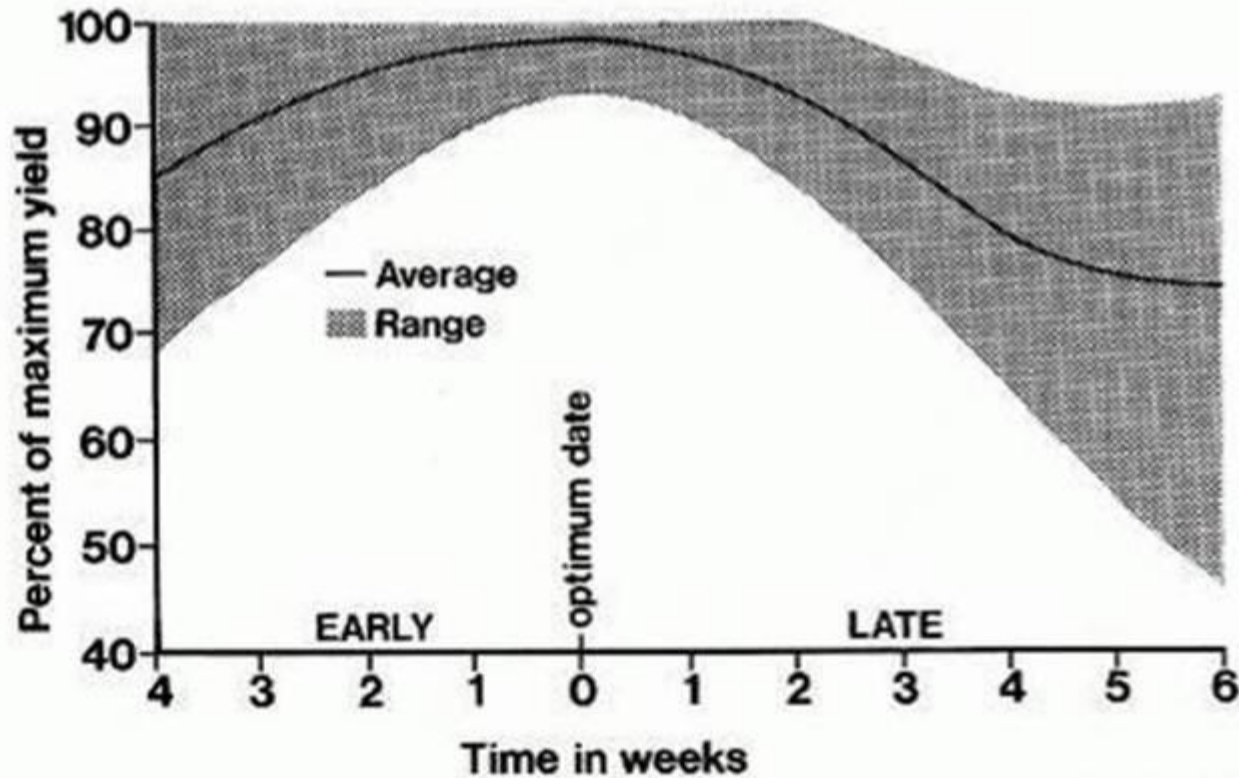


Figure 2. Influence of seeding date on yield of winter wheat. See table 1 for optimum seeding date.





1. Seed Early

- Seed your canola early, for yield and maturity
- Online Tools
 - “WeatherManager” at www.wintercereals.ca
 - “Performance Online Database” at www.canolacouncil.org





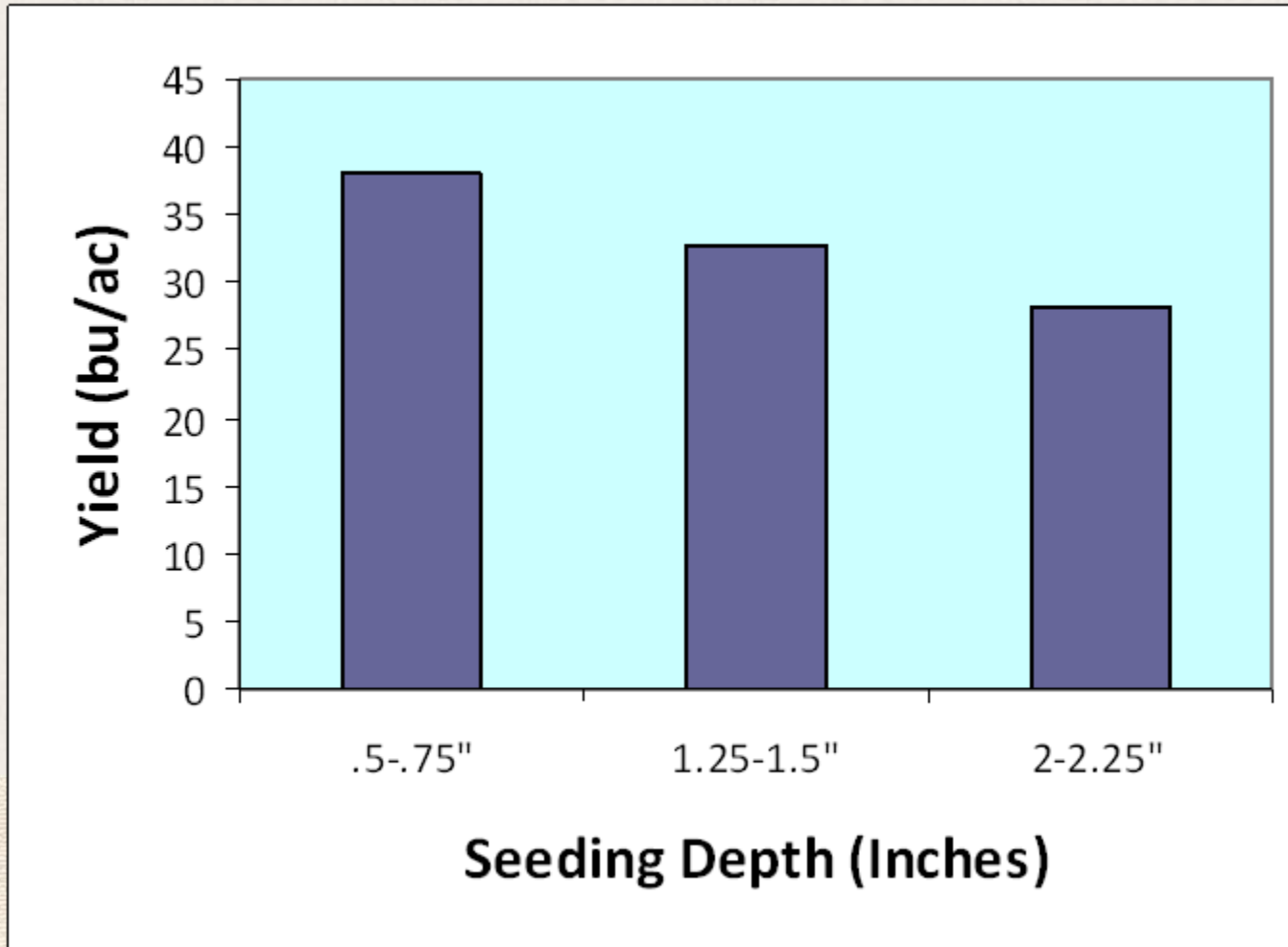
2. Seed Shallow

- Aim to seed your winter wheat at “canola depth”
 - ½” to 1”
- Consider a pre- or post-harvest glyphosate application for a clean start
- Be mindful of potential herbicide residue issues





2. Seed Shallow





3. Seed into Stubble

- Peas < Chemfallow < Canola
- Canola stubble is an ideal choice for winter wheat, because of its Snow Trapping Potential

$$STP = \frac{\text{stubble height in cm} \times \# \text{ stems/m}^2}{100}$$

- Target > 40 pre-seeding to have > 20 post-seeding





The Benefits...

- Increased profits – winter wheat and canola yields have increased
(Statistics Canada, 1990 - 2008)
 - Winter Wheat – 33%
 - Canola – 16%
- Strong weed competition with the potential to reduce dependence on Group 1 products
- Improved soil retention due to fall growth
- Equipment and labor management maximization due to staggered field operations
- Habitat for waterfowl and ground nesting birds





Thank You!

A special thanks to Bayer CropScience for supporting winter wheat through the “Sustainability in Action” partnership with DUC and DUI.



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