

Northern New England Local Bread Wheat Project

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Home

The Northern New England Local Bread Wheat Project is a collaborative project among researchers, farmers, millers, and bakers in Vermont and Maine to help local farmers increase the production and quality of organic bread wheat through research, education, and networking.

Project coordinators: [Ellen Mallory](#), University of Maine
[Heather Dickey](#), University of Vermont

Watch our video series on Bread Wheat in Denmark!

www.umaine.edu/localwheat

Project Updates

New Publication!!! ... and Miles
 Need, and When ... of find it listed under
 "Maine" ... wheat Project

...ence - Feb 17 Commercial Production for
 February 17, 2012 Banger Banquet & Conference Center
 (off Iro, Hogan Rd.) Register by February 10th - \$15 includes
 ... To register, click here ...

2012 NGGA Conference - March 15th The 8th annual Grain Growers
 Conference will be held on March 15, 2012 at the INN AT ESSEX in Essex,
 VT. This year's conference is all about THE REED ...
 Posted Feb 9, 2012 11:04 AM by Local Bread Wheat Project

SAVE THE DATE - Maine Conference, Feb 17 Maine Grain
 Conference - Commercial Production for Food and Feed Friday, February
 17, 2012 Banger Banquet and Conference Center (off Banger Motor Inn) Come
 have what's going on with food ...
 Posted Jan 9, 2012 1:28 PM by Local Bread Wheat Project

SAVE THE DATE - Vermont Conference, March 15 The annual
 Northern Grain Growers Association's conference will be held on March 15.

Wheat - How do we get here?



Site selection

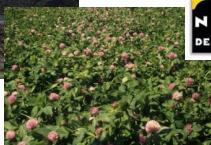


Feb 20th

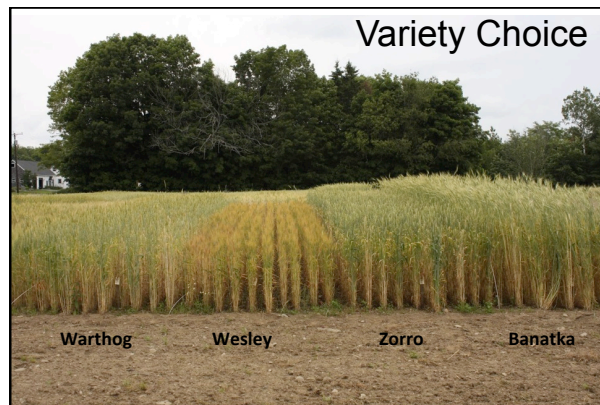
April 2nd

Fertility Sources

- Approx. 60-80 lbs N
- Follow soil test recommendations for P, K, S, ...
- If Organic, check that sources are OMRI approved



Variety Choice

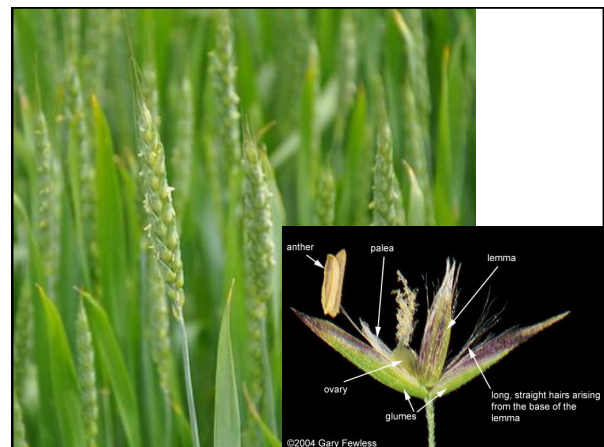
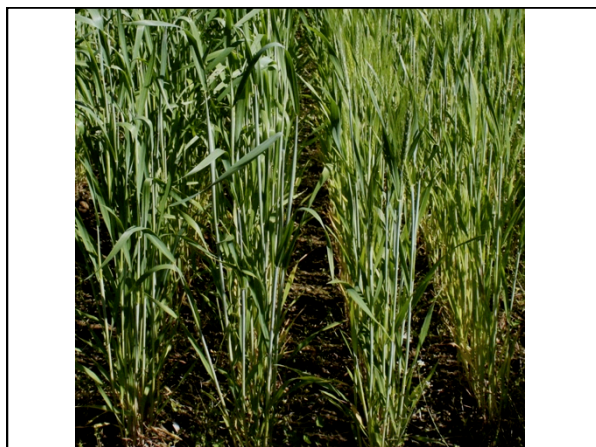


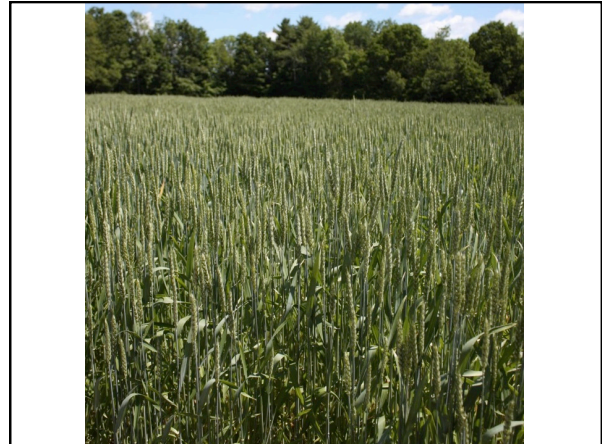
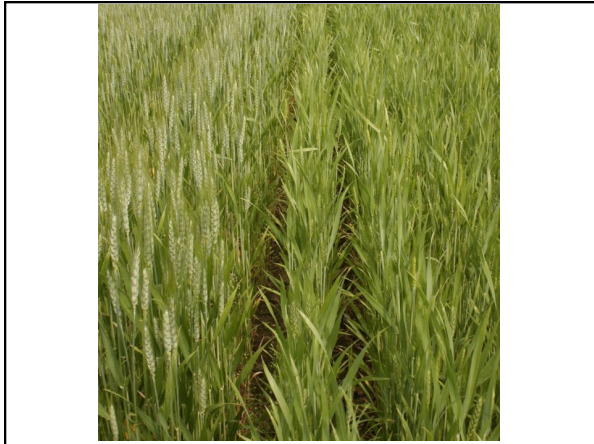


Weed Management for Spring Wheat

<p>Narrower rows (4.5") Increase competitive ability of crop</p>	<p>Wider rows (9") Improve mechanical weed control</p>
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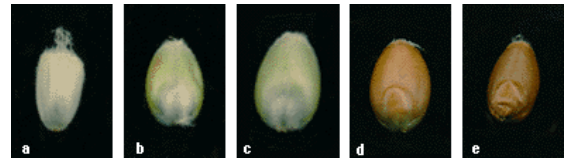
Topdressing Nitrogen





Wheat

- *Triticum aestivum*
- Cereal grass
- Annual
summer & winter
- Reproduces by
seed only



<http://www.extension.umn.edu/distribution/cropsystems/DC2547.html#intro>



Harvest Timing



Photo by Jim Amaral, Borealis Breads

Cleaning, drying, storage

Grain Bin with drying capacity Aurora Mills and Farm, Linneus



Batch Dryers

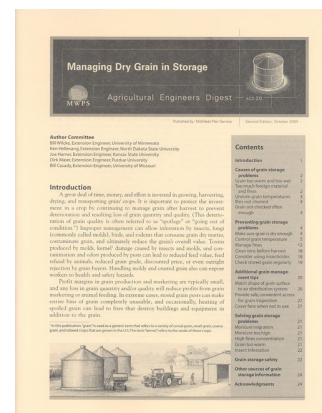
Recirculating Portable Dryer



Aerators



www.mwps.org



Quality Standards for Bread Wheat

- Moisture
- Test weight
- Vomitoxin/DON
- Protein
- Falling number
- Others ...



Protein

Why important?

- Predictor of baking performance (loaf volume)



Photo by Jim Amaral, Borealis Breads

Protein

Acceptable Level?

- 12-14% (perhaps 10.5%)



Photo by Jim Amaral, Borealis Breads

Protein

Related Production Practice?

- nitrogen fertility (amount & timing)

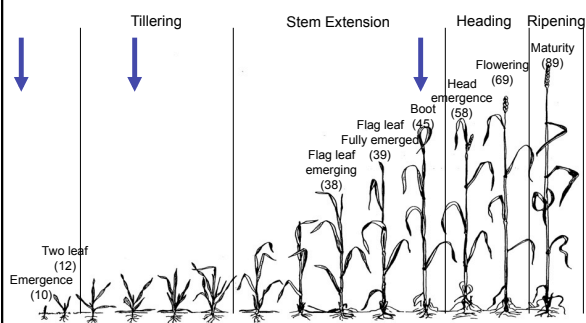
Preplant applications



Topdress applications



Applying Nitrogen



Falling Number

Why important?

- dough mixing strength, stickiness



Falling Number

What is it?



Photo – Northern Crops Institute
<http://www.northern-crops.com/technical/fallingnumber.htm>

Falling Number

Acceptable Levels?

- above 250 seconds



Falling Number

Related Production Practices?

- harvest timing (early)
- capacity to dry and store grain



Photo by Jim Amaral, Borealis Breads

Vomitoxin / Deoxynivalenol (DON)

Head Scab / Fusarium Head Blight



Vomitoxin / DON

Why important?

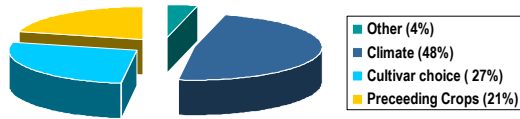
- can be toxic to humans and livestock
- affects gastrointestinal & immune systems
 - vomiting, diarrhea, feed refusal, weight loss, nutrient adsorption, immunosuppression
- monogastrics more susceptible than ruminants

Vomitoxin / DON

Allowable Levels?

- humans – 1ppm (finished product)
- livestock (depending on % of total diet)
 - swine 1ppm
 - dairy 2ppm
 - beef, poultry 5ppm

Factors influencing DON levels



Schaafsma *et al.* (2001; CJPP)

Vomitoxin or DON

Related Production Practices?

- rotate and manage residue
- select FHB “resistant” varieties
- plan for multiple flowering times
- avoid harvesting infected grain (cut selectively; turn up combine fan)
- aggressively clean the grain

... and don't use contaminated saved seed

