

**Dixon Springs Agricultural Center
Brownstown Agronomy Research Center
Crop Sciences
Southern Illinois Newsletter**

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Weather and Crop Report.

Sorry to have been gone for a while, but what a year it has been. Yields were very good at both Dixon Springs and Brownstown. July rainfall was excellent for corn development and temperatures supported good grain filling during August.

Plots were finally harvested at both centers just before Thanksgiving. We were able to complete harvest at Dixon Springs without the use of the grain drier.

Wheat planting did occur in October without a hitch. Wheat stands seem to be excellent at both Centers, but one has to wonder about the effects of the current cold snap with wheat not having snow cover at this time.

Mark Your Calendars

IL Crop Management Conferences:

January 27-28 2009: Jacksonville, IL, Contact Robert Bellm, Edwardsville Extension Center, 618-692-9434, rcbellm@uiuc.edu

January 28-29, 2009: Rend Lake Resort & Conference Center, Whittington, IL, Contact Dennis Epplin, Mount Vernon Extension Center, 618-242-9310, depplin@uiuc.edu

February 3-4, 2009: Champaign, IL, Contact Dennis Bowman, Champaign Extension Center, 217-333-4901, ndbowman@uiuc.edu

Illinois Wheat Forum:

February 23, 2009, Mt. Vernon, IL.

Dixon Springs Weather Summary 2008

Month	Total Rainfall	Departure From Normal	Growing Degree Days	Departure From Normal	Ave. Air Temp.		Soil Temp. 4" Sod		Soil Temp. 4" Bare	
					High	Low	High	Low	High	Low
January	2.47	-1.09	52	16	44	25	41	40	34	33
February	6.38	2.98	56	-14	45	29	44	42	40	36
March	12.48	8.19	169	-16	59	39	51	48	49	42
April	7.81	3.33	324	-29	69	47	63	60	59	53
May	5.35	0.08	531	-16	78	56	72	69	68	61
June	2.32	-1.72	797	86	89	68	85	80	83	74
July	6.88	3.15	835	7	91	68	86	81	86	76
August	2.78	-0.61	800	3	88	66	84	81	82	74
September	1.27	-2.30	683	71	86	62	79	76	79	69
October	2.66	-0.96	422	27	74	47	67	64	65	56
November	3.40	-1.31	115	-57	56	36	55	53	50	46
December	4.59	0.05	69	13	48	28	44	42	38	34
<i>Totals</i>	<i>58.39</i>	<i>9.79</i>	<i>4850</i>	<i>91</i>						

Brownstown Weather Summary 2008

Month	Total Rainfall	Departure From Normal	Growing Degree Days	Departure From Normal	Ave. Air Temp.		Soil Temp. 4" Sod		Soil Temp. 4" Bare	
					High	Low	High	Low	High	Low
January	2.44	-0.68	42	20	40	23	41	39	43	41
February	4.80	2.51	15	-26	37	29	36	34	38	35
March	7.44	5.26	71	-41	50	34	41	39	44	41
April	4.89	0.14	217	-49	62	46	53	51	56	54
May	7.53	2.59	401	-74	71	54	61	59	65	63
June	6.50	1.34	771	94	86	67	69	69	72	70
July	5.62	1.69	803	18	86	68	76	73	79	76
August	1.92	-1.09	712	-43	83	64	71	69	74	71
September	5.99	2.70	536	-15	77	58	68	65	71	68
October	3.36	1.25	298	-26	67	45	60	57	63	59
November	2.02	-2.25	76	-43	50	35	48	46	50	47
December	4.88	3.12	26	7	43	24	39	37	40	38
<i>Totals</i>	<i>57.44</i>	<i>16.58</i>	<i>3975</i>	<i>-176</i>						

Nitrogen Rate Recommendations for

Wheat: Recent research at the Crop Sciences UI Research Centers across the state serve as the basis for an update to the new Agronomy Handbook, due out this spring. Below is a brief summation of those changes.

Twenty to thirty lbs N/acre is still recommended for fall application to wheat. Spring N recommendations are tied to economic as well as agronomic responses. The first step in determining a spring N recommendation is to calculate the amount of N equivalent in value to one bushel of wheat. For example, a bushel of wheat at \$6.00 would “buy” 10 lbs of N at \$0.60 per lb. Then find the column in table 1 that corresponds to this value, and determine the suggested N rate based on estimated soil organic matter. This suggested N rate is based on N application at greenup (Feekes Growth Stage 3.0 [GS 3]), and there are adjustments for N timing and sources.

On low organic matter soils in southern Illinois, research has shown that spring N rates can be decreased 10% if one of the following applies: 1) spring application is delayed to late tillering (Feekes GS 5.0-6.0), 2) spring N applications are split between Feekes GS 3 and Feekes GS 5-6, or 3) when either a nitrification inhibitor or a slow/controlled release N source is used. On high organic matter soils, spring application timing has had little effect. It is also recommended that no more than 150 lbs of spring N be applied to wheat grown on low organic matter soils, and no more than 90 lbs be applied to wheat grown on high organic matter soils.

Table 1. Recommended **spring** nitrogen application rates for wheat. Rates assume no more than 30 lbs/acre fall-applied N and spring application at greenup.

OM Level	Lb of N that 1 bushel of wheat will “buy”			
	V. High (> 13)	High (9-13)	Medium (5-9)	Low (< 5)
< 2%	150	120-150	90-120	60-90
2-4%	100-120	80-100	60-80	40-60
> 4%	70-90	50-70	30-50	30

Nitrogen recommendations are based on equipment delivering a uniform application of N across the spread path. Significant problems with lodging and yield loss can occur at higher N rates if uniform application does not occur.

For wheat after corn, there can be significant amounts of N tied up by the corn residue, but there can also be large amounts of residual N if the corn does not fully utilize applied N. If residual N is suspected, a soil test for N in the fall can tell you if sufficient N is present for wheat establishment. If not, then 25-30 lbs of fall applied N is sufficient. If significant amounts of carryover N are found or suspected, it might be helpful to soil test in the spring just prior to spring application, with rates adjusted accordingly.

If the wheat is serving as a companion crop for legumes or legume-grass seedings, then N rates to the wheat crop should be reduced by 20-25% to limit vegetative growth of the small grain and thus produce less competition for the young forage seedlings.