# Dixon Springs Agricultural Center
# Brownstown Agronomy Research Center

# Crop Sciences
# Southern Illinois Newsletter

**July-August, 2007** (Volume 3:4)


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**Weather and Crop Report**.

The very dry weather in August resulted in less than earlier predicted corn yields. Upland corn yields at Dixon Springs are running in the 90-120 bu/a range with bottomlands running from 180-230. Average high temperatures in August of over 95 degrees certainly reduced yield potentials at both locations. The above average rainfall in July is most likely the reason that corn yields are as high as they are.

## Mark Your Calendars

Crop Protection Technology Conf.
Urbana . . . . . Jan. 9-10,2008

Corn & Soybean Classic
Rend Lake . . . . . Jan. 14

IL Fertilizer & Chemical Assoc.
Convention (Peoria) . . . . . Jan. 21-23

So. IL No-till Assoc. Meeting
Pinckneyville . . . . . Jan, 23

Crop Management Conference
Rend Lake . . . . . Jan. 29-30

Crop Management Conference
Springfield . . . . . Feb. 12-13

## Dixon Springs Weather Summary 2007

| 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 | 6.10 | 2.68 | 25 | -11 | 44 | 29 | 44 | 42 | 39 | 35 |
| February | 4.14 | 0.81 | 31 | -40 | 41 | 23 | | | 36 | 34 |
| March | 1.71 | -2.82 | 323 | 140 | 67 | 44 | | | 56 | 49 |
| April | 3.28 | -1.17 | 279 | -79 | 65 | 43 | | | 62 | 53 |
| May | 2.92 | -2.42 | 583 | 34 | 80 | 57 | | | 76 | 68 |
| June | 2.85 | -1.17 | 752 | 42 | 88 | 65 | 84 | 79 | 83 | 72 |
| July | 3.96 | 0.23 | 807 | -22.3 | 89 | 66 | 85 | 81 | 87 | 76 |
| August | 1.79 | -1.72 | 861 | 66.2 | 97 | 72 | 88 | 84 | 92 | 81 |
| *Totals* | *26.75* | *-5.57* | *3659* | *130.7* | | | | | | |

## Brownstown Weather Summary 2007

| 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 | 4.36 | 1.24 | 10 | -12 | 40 | 28 | 40 | 38 | 42 | 40 |
| February | 2.19 | -0.10 | 4 | -37 | 35 | 20 | 34 | 33 | 35 | 34 |
| March | 2.62 | 0.44 | 231 | 119 | 61 | 43 | 49 | 47 | 52 | 50 |
| April | 2.78 | -1.97 | 242 | -23 | 62 | 44 | 53 | 51 | 57 | 55 |
| May | 2.96 | -1.98 | 609 | 135 | 79 | 60 | 69 | 67 | 72 | 69 |
| June | 3.99 | -1.17 | 723 | 46 | 85 | 65 | 77 | 75 | 79 | 78 |
| July | 4.82 | 0.89 | 754 | -32 | 88 | 65 | 81 | 80 | 84 | 82 |
| August | 0.97 | -2.09 | 870 | 115 | 95 | 70 | 84 | 82 | 87 | 85 |
| *Totals* | *24.69* | *-4.74* | *3443* | *311* | | | | | | |

**Wheat Planting Tips for 2007-08.**

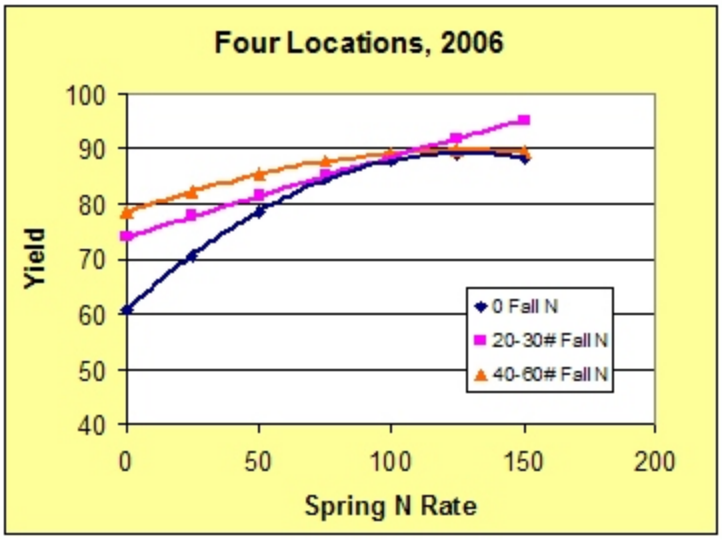
Some fall N is beneficial for wheat following soybeans. Higher yields resulted in cases where at least 20-30 lb N/acre was applied at planting (Figure 1). Applying 150 lb/acre of DAP (18-46-0) in the fall at planting will provide an adequate amount of N (27 lb N), but will also provide 69 lb $P_2O_5$/acre which is closely associated with wheat requirements for P. For wheat after corn, my colleagues at Kentucky suggest that there may be adequate N remaining in the soil for the fall needs of wheat, especially where corn yields are lower than anticipated and corn did not utilize all of the applied N.

Planting on or within a week of the Hessian-fly free day (FFD) will result in the best opportunity to prevent problems with Hessian flies and aphids (some of which may carry barley yellow dwarf virus [BYDV]). Planting near the FFD also helps to prevent excessive fall growth leading to winter injury. A seed treatment insecticide (STI) may be used to control aphids in the fall, but a cheaper alternative may be to not use a STI, scout for aphids 3-4 weeks after planting, and treat when threshold levels are reached.

We have good results with no-tilling wheat into either soybean or corn residue. However, it is easier to get good stands with some tillage to bury a portion of the previous crop residue and to prepare a seedbed. We normally shoot for 35 seed/square foot with tilled areas and 40 seed/sq ft with no-till areas. 35 seed/sq for translates into 1.5 million seed per acre and 40 seed/sq ft is 1.75 million seed per acre.

Plant no-till areas early and save the tilled areas to plant later as no-till planted late often results in slower emergence, decreased fall growth and possible winter injury compared to late planted tilled wheat. With either tillage system, make sure to calibrate the planted and check settings to assure planting depths between 1 to $1^1/_2$ inches into the soil.

Figure 1. Effects of fall N rates and spring N rates on wheat yields, average 4 locations.




**PLANTING RATES (Tilled)**

seeds/sq foot

| Field Conditions | Early (FFD +/- 3) | Medium (FFD + 1 wk) | Late (FFD + 2 wk) |
|---|---|---|---|
| Good | 30 | 35 | 40 |
| Fair | 35 | 40 | 45 |
| Poor | 40 | 45 | 50 |

Chart reflects pure live seed

Adapted from Opti-Crop

**PLANTING RATES (No-till)**

seeds/sq foot

| Field Conditions | Early (FFD +/- 3) | Medium (FFD + 1 wk) | Late (FFD + 2 wk) |
|---|---|---|---|
| Good | 35 | 40 | 45 |
| Fair | 40 | 45 | 50 |
| Poor | 45 | 50 | 55* |

Chart reflects pure live seed

* Why Bother!

Adapted from Opti-Crop

To determine your seeding rate in lb/acre, you should multiply your seeding rate in seed/sq ft times 43,560 and divide by the number of seeds per lb of wheat (this should be listed on the bag or tag).

An example:

You have 12,000 seed/lb and want to plant at 35 seed/sq ft.

35*43560/12000 = 127 lb/acre seeding rate.

When spring rolls around, remember that early N application is not always the best management. Our results consistently show that waiting until later in the spring allows N to be utilized more efficiently by the wheat and provides some protection against late freezes (Figure 2).

Figure 2. Effects of spring N application rates at Feekes Growth Stage 3.0 versus 5.0.