

# Growing Conditions

## Hettinger Research Extension Center

### 2005

The 2005 growing season was again challenging, starting out relatively warm and dry and ending relatively warm and dry. Almost 4 ½ inches of Fall precipitation was received, with most of that being received in September and October. This provided for excellent winter wheat development going into winter. The winter months were generally mild with little snow cover. Relatively warm and dry Spring conditions allowed for seeding to begin during the first part of April and continued with few weather related interruptions. Hard frosts almost every night from April 23 through May 4 caused some crop damage, especially to mustard, canola, flax and alfalfa, but small grains, field peas and safflower appeared unaffected. Windy conditions in May and June caused delays in pesticide applications. Over 5 inches of rain was received in June, providing relief to small grain crops just as they were beginning to head. Hot and dry conditions prevailed throughout July, causing kernels of small grain crops to shrivel and ultimately causing very light test weights. These same hot temperatures were ideal for corn and other warm season crops. The sunflower variety trial located near Reeder was hailed out on July 24. Harvest began during the first week of August, but was interrupted by wet weather through mid-August.

White sterile wheat heads caused by wheat stem maggot were prevalent throughout the Western Dakota's with reports as high as 25% infection. Reports of wheat stem sawfly continue to increase. Warm temperatures in April brought out a heavy infestation of flea beetles on newly emerged canola. Foliar diseases were abundant with tan spot and septoria being most prevalent followed by leaf rust and stripe rust. There were also reports of scab infections in both spring and winter wheat. Almost all fields of field pea were infected with bacterial blight caused by windy conditions during pod fill.

Most trials at the Hettinger Research Center were grown under a no-till system. Broadleaf crop trials were typically planted into small grain stubble and small grain trials were typically planted into soybean stubble. Residual soil fertility levels were determined and fertilizer was applied according to specific yield goals for each crop. Urea (46-0-0) was the primary nitrogen fertilizer source and was applied with a no-till drill prior to planting. Monoammonium phosphate (11-52-0) was typically applied directly with the seed during planting.

All HRSW, durum and barley trials were treated post-emergence for both grassy weeds (foxtails and wild oats) and for broadleaf weeds (kochia, Russian thistle and wild buckwheat). Most broadleaf crops were treated with a pre-emergence burn down, and with either a pre-emergence or a post-emergence herbicide for grassy weeds and broadleaf weeds when possible.

### Weather Data Summary - Hettinger

	<b>Frost Free Days</b>		
	28 F	32 F	Normal 32 F
Date of last frost	May 14	May 15	May 18
Date of first frost	Oct. 6	Sept. 23	Sept. 20

---

---

Frost free days	145	131	125
-----------------	-----	-----	-----

---

## Weather Data Summary - Hettinger

### Precipitation

Precipitation (inches)	2001 - 02	2002 - 03	2003 - 04	2004 - 05	50 Year Average
Sept. - Dec.	1.69	1.49	6.88	4.41	3.31
Jan. - March	1.11	3.83	1.83	0.98	1.41
April	1.14	1.38	0.54	0.75	1.65
May	0.80	3.18	1.00	2.30	2.59
June	1.34	1.99	0.46	5.10	3.31
July	1.36	0.37	3.43	1.31	2.08
August	1.11	0.44	1.13	1.38	1.63
<b>Total</b>	<b>8.55</b>	<b>12.60</b>	<b>15.27</b>	<b>16.23</b>	<b>15.98</b>

### Air Temperature

Average Temperature F	2001	2002	2003	2004	2005	50 Year Average
April	43.0	40.2	46.7	45.4	45.5	42.7
May	55.2	49.6	52.9	51.3	50.7	54.0
June	62.7	65.4	60.2	59.5	64.0	63.3
July	71.6	76.2	72.4	69.2	71.9	70.0
August	73.0	67.5	73.7	63.4	68.0	68.9
September	59.1	61.1	57.6	60.2	60.4	57.5

### Growing Degree Units - Corn

Growing Degree Units (50 - 86)	2001	2002	2003	2004	2005	33 Year Average
May	285	245	212	242	226	264
June	401	476	349	371	430	422
July	652	707	612	558	609	583
August	631	549	655	441	513	536
September	357	387	294	335	388	312
<b>Total</b>	<b>2326</b>	<b>2364</b>	<b>2186</b>	<b>1947</b>	<b>2166</b>	<b>2117</b>