

2008 Growing Conditions

Hettinger Research Extension Center

Southwestern North Dakota continued to suffer from drought in 2008. The winter of 2007-08 was generally mild with very little snowfall. These conditions caused some winter kill in winter wheat. Spring temperatures were cool, causing delays in crop and weed emergence. Very little pre-plant burndown herbicide treatments were applied. These cool temperatures also delayed maturity in warm season crops. The number of frost free growing season days was 10 fewer than normal. Very little of the area=s corn was harvested for grain.

The North Dakota / South Dakota state line was the dividing line for spring and summer precipitation with more rainfall to the south and less to the north. Hettinger received above normal precipitation in May (4") and June (4") while some areas to the north received very little of these rainfall events. Hay land and pastures remained green throughout the year in most of NW South Dakota, but were too short and thin to form a windrow in much of SW North Dakota. With rain, often comes hail, which was the case for several large areas causing severe crop losses. Hot and dry weather in July and August caused small grain crops to deteriorate, resulting in relatively low yields and very light test weight.

White sterile wheat heads caused by wheat stem maggot were again prevalent throughout the Western Dakota=s. Wheat stem sawfly also continues to increase in both intensity and area and has quickly becoming a major production problem in wheat. A late season explosion of grasshoppers were reported in some areas. Foliar diseases were almost absent this year.

Most trials at the Hettinger Research Center were grown under a no-till system. Broadleaf crop trials were typically planted into wheat stubble and small grain trials were typically planted into field pea 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 legume crops were treated with granular *rhizobia* inoculant during seeding.

HRSW, durum and barley trials were treated post-emergence for both 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

	Frost Free Days		
	28 F	32 F	Normal 32 F
Date of last frost	April 25	May 11	May 18
Date of first frost	Oct. 7	Sept. 3	Sept. 20
Frost free days	165	115	125

Weather Data Summary - Hettinger

Precipitation

Precipitation (inches)	2004 - 05	2005 - 06	2006 - 07	2007 - 08	53 Year Average
Sept. - Dec.	4.41	3.68	3.15	1.26	3.26
Jan. - March	0.98	2.34	2.18	0.87	1.44
April	0.75	2.12	1.09	0.98	1.63
May	2.30	0.97	5.97	4.01	2.61
June	5.10	2.53	3.04	4.08	3.32
July	1.31	0.58	1.62	1.23	2.02
August	1.38	1.75	3.65	1.75	1.67
Total	16.23	13.97	20.70	14.18	15.95

Air Temperature

Average Temperature F°	2004	2005	2006	2007	2008	53 Year Average
April	45.4	45.5	47.8	40.2	40.1	42.8
May	51.3	50.7	55.6	56.2	52.0	53.9
June	59.5	64.0	65.2	62.7	59.7	63.3
July	69.2	71.9	77.3	75.4	71.1	70.2
August	63.4	68.0	71.3	68.8	70.0	68.9
September	60.2	60.4	56.4	60.9	56.6	57.7

Growing Degree Units - Corn

Growing Degree Units (50-86)	2004	2005	2006	2007	2008	36 Year Average
May	242	226	323	272	207	264
June	371	430	465	452	346	422
July	558	609	678	672	606	588
August	441	513	593	533	579	539
September	335	388	276	353	340	313
Total	1947	2166	2335	2282	2078	2126