USDA, National Agricultural Statistics Service

Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING APRIL 26

AGRICULTURAL SUMMARY

Planting season has finally begun, according to the Indiana Field Office of USDA's National Agricultural Statistics Service. Cool, wet conditions hindered field work early in the week. However, a strong breeze and temperatures over 80 degrees late in the week allowed soils to dry enough to support equipment in many areas. Many farmers were able to do some tillage work, spread dry fertilizer and knife-in anhydrous ammonia. Strong winds made it difficult to spray herbicides. Fruit crops are reported to be in good condition at this time.

FIELD CROPS REPORT

There were 2.0 **days suitable for field work** during the week. Two percent of the intended **corn** acreage has been **planted** compared with 9 percent last year and 25 percent for the 5-year average. Only a few scattered fields of **soybeans** have been reported to be **planted** at this time.

Forty-five percent of the **winter wheat** acreage is **jointed** compared with 49 percent last year and 61 percent for the 5-year average. Winter wheat **condition** is rated 78 percent good to excellent compared with 67 percent last year at this time. Very little winter wheat acreage will have to be destroyed this spring due to poor stands.

Major activities during the week included: hauling grain to market, tilling soils, spreading fertilizer, knifing-in anhydrous ammonia, planting corn, hauling manure, and taking care of livestock.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated 20 percent excellent, 58 percent good, 19 percent fair, 2 percent poor, and 1 percent very poor. Livestock remain in mostly good condition. Feeding of hay continues on some livestock operations but is slowing down as pasture condition improves.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
	Percent			
Corn Planted	2	NA	9	25
Winter Wheat Jointed	45	25	49	61

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excel-lent
	Percent				
Pasture	4	5	26	54	11
Winter Wheat	1	2	19	58	20

SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
	Percent		
Topsoil			
Very Short	0	0	0
Short	1	0	1
Adequate	56	37	76
Surplus	43	63	23
Subsoil			
Very Short	1	0	0
Short	2	2	1
Adequate	67	57	66
Surplus	30	41	33
Days Suitable	2.0	1.0	4.8

CONTACT INFORMATION

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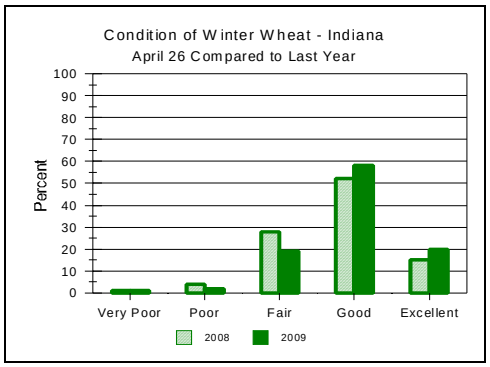
http://www.nass.usda.gov/Statistics_by_State/Indiana//



Other Agricultural Comments And News

Low Temperatures and Corn Emergence

What impact will recent weather conditions have on corn that's already been planted? Some fields were planted several weeks ago before soils were saturated by persistent rains. In past years, we have observed that early planted corn that was in the process of germinating or as far along as the V1 stage (one leaf collar visible) survived freezing temperatures in late April with little impact on crop performance or plant stand. Agronomists generally downplay the impact of low temperature injury in corn because the growing point is at or below the soil surface until V6 (six leaf collars visible), and thereby relatively safe from freezing air temperatures. However when dry corn seed absorbs cold water as a result of a cold rain or melting snow, "imbibitional chilling injury" may result. Cold water can cause similar injury to seedling structures as they emerge during germination. Such physiological injury was widely observed in 2005 when early planted corn in various stages of germination and emergence was subjected to a period freezing rain and snow followed by temperatures at or below 50 degree F for about 10 days. What we've experienced thus far in 2007 is mild in comparison to 2005.

To assess the impact of these freezing temperatures on emerged corn, check plants about 5 days after the freezing injury occurred (and preferably when growing conditions conducive for regrowth have occurred). New leaf tissue should be emerging from the whorl. You can also observe the condition of the growing point (usually located ½ in to 3/4 in below the soil surface) by splitting seedlings lengthwise. If the growing point appears white to light yellow and firm several days after the frost, prognosis for recovery is good.

Of greater concern with regard to the viability of germinating and emerging corn is how long soils will remain saturated. Cool temperatures and wet weather provide the right conditions for the development of seedling blight diseases. Cold temperature injury can play a significant role in predisposing plants to root infection and blight. Under normal conditions plants can continue to grow and produce new roots, but when other injuries occur, new roots cannot develop rapidly and Pythium and other soil fungi can kill stressed plants. Seed treatment fungicides generally remain effective from 10 to 14 days but under saturated conditions the duration of protection may be shorter.

For more detailed information on corn germination and emergence, check out the series of excellent articles (noted below) which Dr. Bob Nielsen, my counterpart at Purdue University has written. These articles include great photos that will assist your understanding of these growth and development processes. Nielsen, R.L. 2008. Germination Events in Corn. Corny News Network, Purdue Univ. [On-Line]. Available at http://www.kingcorn.org/news/timeless/GerminationEvents.html.

Nielsen, R.L. 2008. The Emergence Process in Corn. Corny News Network, Purdue Univ. [On-Line]. Available at http://www.kingcorn.org/news/timeless/Emergence.html.

Nielsen, R.L. 2008. Heat Unit Concepts Related to Corn Development. Corny News Network, Purdue Univ. [On-Line]. Available at http://www.kingcorn.org/news/timeless/HeatUnits.html

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(Additional Article on Page 4)

Weather Information Table

Week ending Sunday April 26, 2009

Station	Past Week Weather Summary Data							Accumulation				
								April 1, 2009 thru April 26, 2009				
	Air Temperature				Precip.		Avg 4 in Soil	Precipitation			GDD Base 50°F	
	Hi	Lo	Avg	DFN	Total	Days	Temp	Total	DFN	Days	Total	DFN
Northwest (1)												
Chalmers_5W	83	34	55	+2	0.77	3		4.18	+1.07	11	59	-30
Francesville	83	31	53	+0	0.61	4		3.76	+0.56	12	54	-11
Valparaiso_AP_I	84	30	53	+2	0.64	4		3.46	+0.02	9	69	+8
Wanatah	83	27	51	+1	0.64	4	52	3.50	+0.19	11	40	-6
Winamac	83	32	53	+1	0.66	4	48	3.72	+0.52	12	56	-9
North Central(2)												
Plymouth	84	32	53	+0	1.02	5		3.88	+0.53	13	58	-14
South_Bend	85	30	54	+3	0.82	5		3.00	-0.35	11	75	+22
Young_America	83	31	54	+3	0.20	2		3.35	+0.36	10	78	+15
Northeast (3)												
Fort_Wayne	84	33	56	+5	1.06	3		5.17	+2.23	10	83	+25
Kendallville	86	36	54	+3	0.61	3		2.88	+0.10	12	73	+17
West Central(4)												
Greencastle	84	36	57	+2	0.86	3		5.23	+2.06	12	82	-21
Perrysville	84	34	57	+4	0.60	3	51	4.73	+1.38	10	88	+6
Spencer_Ag	83	34	57	+4	0.45	3		5.45	+2.01	13	81	-7
Terre_Haute_AFB	84	38	60	+5	1.78	2		4.66	+1.33	9	123	+19
W_Lafayette_6NW	85	34	57	+5	0.88	4	48	5.04	+1.85	13	78	+12
Central (5)												
Eagle_Creek_AP	83	36	59	+4	0.64	3		4.75	+1.57	13	104	+9
Greenfield	84	34	55	+2	0.90	3		5.06	+1.60	12	67	-8
Indianapolis_AP	85	37	59	+5	0.41	3		4.83	+1.65	11	119	+24
Indianapolis_SE	84	34	56	+2	0.66	3		5.59	+2.40	12	79	-7
Tipton_Ag	84	32	55	+4	0.69	4	58	5.53	+2.16	12	63	+12
East Central(6)												
Farmland	85	30	55	+5	0.84	3	53	4.33	+1.24	12	74	+27
New_Castle	83	32	54	+3	0.47	3		3.78	+0.27	10	64	+13
Southwest (7)												
Evansville	86	35	62	+4	1.03	1		4.28	+0.83	10	162	-5
Freelandville	83	39	58	+3	0.86	3		6.10	+2.81	12	105	-13
Shoals_8S	85	31	57	+2	0.91	3		5.80	+2.30	12	89	-28
Stendal	86	40	62	+5	1.51	2		6.14	+2.32	11	160	+21
Vincennes_5NE	86	38	60	+4	0.66	3	57	5.54	+2.25	10	106	-12
South Central(8)												
Leavenworth	86	38	59	+3	1.16	3		4.44	+0.46	13	126	+5
Oolitic	83	35	57	+3	0.62	3	55	4.85	+1.41	13	90	-9
Tell_City	85	40	60	+3	1.55	1		4.45	+0.28	8	142	-7
Southeast (9)												
Brookville	87	35	57	+4	0.39	3		3.59	+0.32	12	88	+16
Greensburg	86	37	58	+4	0.45	3		3.88	+0.40	12	97	+9
Seymour	86	35	56	+2	0.46	3		3.87	+0.51	11	80	-21

DFN = Departure From Normal.
GDD = Growing Degree Days.
Precipitation (Rainfall or melted snow/ice) in inches.
Precipitation Days = Days with precip of .01 inch or more.
Air Temperatures in Degrees Fahrenheit.

For more weather information, visit www.awis.com
or call 1-888-798-9955.

Heat Units Required for Corn Emergence

Cool wet conditions have thus far limited corn planting in April. A few fields were planted as early as late March and early April. Now there are questions as to when this corn will emerge. According to USDA-NASS http://www.nass. usda.gov/oh/ as of April 12, we were behind in heat unit (growing degrees day, GDD) accumulation compared to the long term norm - with GDD accumulation since April 1 averaging about 42 across the state

Corn requires about 100 GDDs to emerge but emergence requirements can vary from 90 to150 GDDs. To determine daily GDD accumulation, calculate the average daily temperature (high + low)/2 and subtract the base temperature which is 50 degrees F for corn. If the daily low temperature is above 50 degrees, and the high is 86 or less, then this calculation is performed using actual temperatures, but if the low temperature is less than 50 degrees, use 50 degrees as the low in the formula. Similarly, if the high is above 86 degrees, use 86 degrees in the formula.

If it takes a corn hybrid 100 GDDs to emerge, and daily high and low temperatures average 70 and 50 degrees following planting, 10 GDDs accumulate per day, and corn should emerge in about 10 days (100 GDDs to emerge/10 GDDs per day = 10 days). However, if daily high and low temperatures are cooler, averaging 60 and 45 degrees after planting, 5 GDDs accumulate per day, and it may take nearly 3 weeks (100 GDDs to emerge/5 GDDs per day = 20 days) for corn to emerge. In 2005, corn planted in mid- April took as long as 3 to 4 weeks to emerge in many fields.

Seedling emergence is dependent on soil temperature and air temperature. Also, keep in mind that estimates of emergence based on GDDs are approximate and can be influenced by various factors including residue cover, tillage, and soil organic matter (soil "color") and moisture content. Corn emergence can be slowed by inadequate soil moisture. Dry soil conditions can cause uneven emergence in some fields that may impact yield if emergence delays exceed 1.5 to 2 weeks. We observed this problem in some corn fields in 2007 when weather turned dry after a wet April. Crops vary widely with regard to the minimum moisture content required for emergence. For corn, the minimum moisture content at which the radicle emerges is 30% of the seed dry weight. In contrast, for soybean, the reported minimum moisture content required for germination is 50%. However since a soybean seed generally weighs only 2/3 or less the weight of a corn seed, a soybean seed requires less water to germinate.

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