



# Indiana Crop & Weather Report

United States Dept of Agriculture

Indiana Agricultural  
Statistics Service

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Released: July 1, 2002

Vol. 52, No. 26

## CROP REPORT FOR WEEK ENDING JUNE 30

### AGRICULTURAL SUMMARY

Some areas received much needed rain while other areas of the state received very little or no precipitation during the week. Heavy showers fell in some isolated areas causing ponding in some fields. Farmers have completed planting of major crops for this year except for double crop soybeans, according to the Indiana Agricultural Statistics Service. Hot temperatures continued last week placing some stress on crops. Cutting and baling hay, side dressing corn and spraying for weed control continued during the week. Winter wheat harvest is steadily gaining momentum in the southern regions. Wheat fields in the central and northern regions are rapidly maturing.

### FIELD CROPS REPORT

There were 5.5 **days suitable for fieldwork**. Corn **condition** is rated 62 percent good to excellent compared with 59 percent last week and 78 percent last year at this time. Corn growth and development continued to improve last week. Ninety-nine percent of the corn acreage has **emerged** compared with 100 percent a year earlier. Planting of double crop soybeans made good progress in the southern regions last week. Soybean **condition** is rated 61 percent good to excellent unchanged from last week compared to 68 percent a year earlier. Ninety-five percent of the soybean acreage has **emerged** compared with 100 percent a year earlier. Three percent of the soybean acreage is **blooming** compared with fourteen percent last year and 10 percent for the 5-year average.

Other activities during the week included cleaning up and repairing equipment, field scouting, mowing roads, cultivating row crops, moving grain to market and taking care of livestock.

Winter wheat **condition** is rated 50 percent good to excellent compared with 55 percent last week and below the 69 percent a year ago. Wheat **harvest** is 42 percent complete compared with 45 percent last year and 34 percent for the 5-year average. By area, 1 percent of the wheat acreage is harvested in the north, 26 percent in the central regions and 87 percent in the south.

### LIVESTOCK, PASTURE AND RANGE REPORT

**Pasture condition** is rated 9 percent excellent, 63 percent good, 23 percent fair and 5 percent poor. First cutting of **alfalfa** hay is 98 percent complete compared with 99 percent last year and 95 percent for the average. Transplanting of **tobacco** is 94 percent complete compared with 98 percent last year and 83 percent for the average. Livestock were under some stress due to the hot weather.

### CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
Percent				
Corn Emerged	99	97	100	NA
Soybeans Emerged	95	85	100	NA
Soybeans Blooming	3	0	14	10
Winter Wheat Harvested	42	28	45	34
Tobacco Plants Set	94	84	98	83
Alfalfa First Cutting	98	92	99	95

### CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excellent
Percent					
Corn	1	8	29	54	8
Soybean	1	6	32	55	6
Pasture	0	5	23	63	9
Winter Wheat 2002	2	14	34	43	7

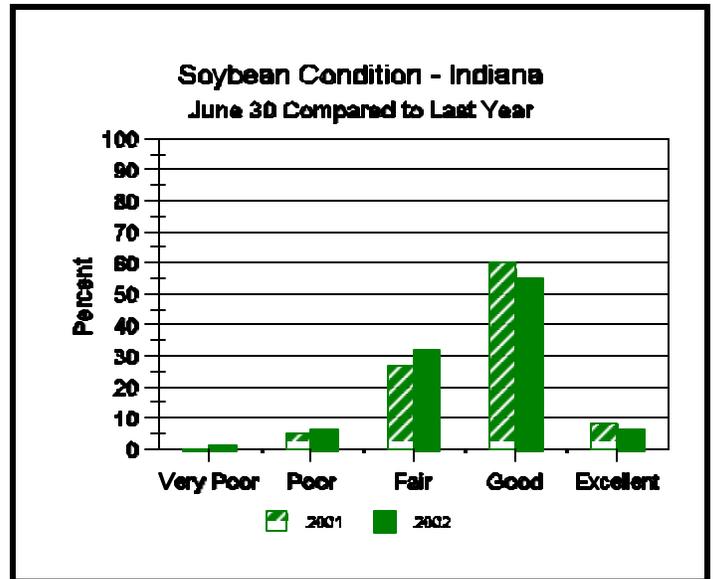
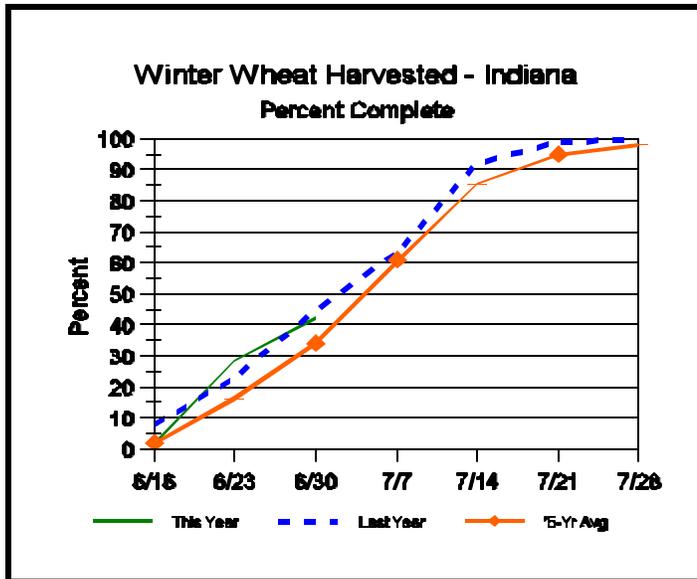
### SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
Percent			
<b>Topsoil</b>			
Very Short		3	1
Short	21	18	13
Adequate	64	71	78
Surplus	11	8	8
<b>Subsoil</b>			
Very Short	1	1	3
Short	11	7	17
Adequate	74	78	75
Surplus	14	14	5
<b>Days Suitable</b>	5.5	6.7	6.1

### CONTACT INFORMATION

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<http://www.nass.usda.gov/in/index.htm>

# Crop Progress



## Other Agricultural Comments And News

### What Exactly Do You Mean by 'Growing Degree Day'?

- Crop development is dependent on temperature
- Thermal time (heat accumulation over calendar time) can be called heat units or growing degree days

Growth and development of corn are strongly dependent on temperature. Corn develops faster when temperatures are warmer and more slowly when temperatures are cooler. For example, a string of warmer than normal days in late spring will encourage faster leaf development than normal. Another example is that a cooler than normal grain filling period will delay the calendar date of grain maturity.

The phrases "string of warmer than normal days" and "cooler than normal grain filling period" can be converted mathematically into measures of thermal time by calculating the daily accumulations of heat. Commonly used terms for thermal time are Growing Degree Days (GDDs) or heat units (Hus). Different methods exist for calculating heat units depending on a) the crop or biological organism of interest and b) the whim or personal preference of the researcher. In Purdue's Pest & Crop Newsletter (<<http://www.entm.purdue.edu/Entomology/ext/targets/newslett.htm>> ), you will often see more than one type of calculated GDD or HU reported depending on the insect or crop of interest.

The calculation method most commonly used in the U.S. for determining heat unit accumulation relative to corn phenology is the formula first suggested by the National Oceanic and Atmospheric Administration in 1969 and labeled as the 'Modified Growing Degree Day' formula in 1971.

This method calculates daily accumulation of GDDs as the average daily temperature minus 50° F. The 'modification' refers to the limits imposed on the daily maximum and minimum temperatures allowed in the calculation. Daily maximums greater than 86° F are set equal to 86 in the calculation of the daily average temperature. Similarly, daily minimums less than 50° F are set equal to 50 in the calculation.

**Example 1:** If the daily maximum temperature was 80° F and the minimum was 55° F, the GDD accumulation for the day would be  $((80 + 55)/2) - 50$  or 17.5 GDDs.

**Example 2 (Illustrating the limit on daily maximums):** If the daily maximum temperature was 90° F and the minimum was 72° F, the GDD accumulation for the day would be  $((86 + 72)/2) - 50$  or 29 GDDs.

**Example 3 (Illustrating the limit on daily minimums):** If the daily maximum temperature was

# Weather Information Table

Week ending Sunday June 30, 2002

Station	Past Week Weather Summary Data							Accumulation				
	Air Temperature				Precip.		Avg	April 1, 2002 thru June 30, 2002				
							4 in	Precipitation			GDD Base 50°F	
	Hi	Lo	Avg	DFN	Total	Days	Soil Temp	Total	DFN	Days	Total	DFN
<b>Northwest (1)</b>												
Chalmers_5W	98	60	78	+5	0.66	2		10.77	-0.50	42	1102	-30
Valparaiso_AP_I	94	59	77	+6	0.78	3		11.46	-0.58	36	1090	+104
Wanatah	95	56	77	+6	0.47	2	82	11.45	+0.05	39	1021	+91
Wheatfield	94	59	77	+6	1.42	2		11.06	-0.25	33	1057	+94
Winamac	93	59	78	+7	0.54	2	83	11.27	-0.11	40	1040	+18
<b>North Central(2)</b>												
Plymouth	93	59	76	+5	1.09	2		12.81	+0.95	41	977	-90
South_Bend	92	58	78	+7	0.35	1		10.21	-0.94	39	1034	+69
Young_America	93	61	77	+6	0.75	2		12.52	+1.58	37	1137	+104
<b>Northeast (3)</b>												
Columbia_City	90	58	75	+5	0.24	2	81	11.09	-0.15	39	971	+57
Fort_Wayne	92	61	77	+5	1.05	2		13.17	+2.76	36	1099	+81
<b>West Central (4)</b>												
Greencastle	88	59	75	+1	1.99	3		18.71	+6.48	39	1098	-109
Perrysville	91	61	77	+4	0.21	1	78	17.25	+5.13	40	1176	+61
Spencer_Ag	90	61	76	+4	1.47	3		19.67	+6.84	43	1165	+53
Terre_Haute_AFB	91	61	78	+4	0.54	3		25.23	+13.29	42	1320	+119
W_Lafayette_6NW	92	60	77	+5	1.27	4	81	16.87	+5.56	46	1161	+121
<b>Central (5)</b>												
Eagle_Creek_AP	90	64	77	+4	1.56	4		16.58	+5.39	42	1260	+72
Greenfield	90	62	77	+4	3.36	4		20.52	+8.68	45	1188	+69
Indianapolis_AP	91	62	77	+4	1.00	3		16.22	+5.03	38	1318	+130
Indianapolis_SE	90	60	76	+3	3.60	4		19.52	+8.11	38	1185	+22
Tipton_Ag	92	60	75	+3	1.56	2	79	13.88	+2.67	38	1071	+76
<b>East Central (6)</b>												
Farmland	94	60	77	+6	1.22	3	78	13.09	+1.61	43	1120	+160
New_Castle	87	60	73	+2	1.80	2		16.43	+4.00	34	965	-20
<b>Southwest (7)</b>												
Evansville	92	69	80	+3	0.92	2		17.15	+4.89	33	1584	+145
Freelandville	91	67	79	+5	0.39	3		17.81	+5.21	33	1380	+128
Shoals	90	63	77	+4	0.62	2		19.34	+5.93	34	1296	+97
Stendal	90	68	79	+4	0.58	3		19.69	+5.92	33	1450	+119
Vincennes_5NE	94	65	79	+4	0.78	2	78	19.47	+6.87	35	1418	+166
<b>South Central(8)</b>												
Leavenworth	90	66	79	+5	0.07	1		16.68	+3.10	30	1397	+197
Oolitic	90	63	77	+5	2.43	4	78	22.34	+9.56	42	1250	+120
Tell_City	93	67	80	+5	0.34	1		17.82	+4.12	26	1660	+312
<b>Southeast (9)</b>												
Brookville	92	63	78	+7	0.11	2		17.99	+5.91	35	1253	+212
Milan_5NE	87	59	74	+2	1.93	3		23.41	+11.33	42	1072	+31
Scottsburg	89	62	77	+3	0.81	2		19.49	+7.08	38	1297	+54

DFN = Departure From Normal (Using 1961-90 Normals Period).

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.

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## What Exactly Do You Mean by 'Growing Degree Day' ? (Continued)

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68° F and the minimum was 41° F, the GDD accumulation for the day would be  $((68 + 41)/2) - 50$  or 9 GDDs.

In late April to early May, normal daily GDD accumulations for central Indiana are about 10 GDDs. By late July, the normal daily accumulation rises to about 23 GDDs. For a typical corn growing season in central Indiana, say from late April to late September, the total seasonal accumulation of GDDs is about 2800 GDDs. Historical normal GDD accumulations on a weekly basis for Indiana's nine Crop Reporting Districts are available in Purdue's Corn & Soybean Field Guide, Extension publication #ID-179. Daily or monthly normal GDD accumulations for Indiana are also available at the Indiana Climate Page on the Web

at <http://shadow.agry.purdue.edu/sc.norm-geog.html>.

Obviously, the ability to calculate daily heat unit accumulations is dependent on your having access to daily maximum and minimum temperatures. If you do not have your own max/min recording thermometer, you can guesstimate the daily highs and lows by manually recording the temperatures shortly after sunrise (approximate daily low) and late in the afternoon (approximate daily high). Daily temperature data for specific locations are also recorded and reported at the Indiana Climate Page on the Web at <http://shadow.agry.purdue.edu/sc.obs-geog.html>.

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The INDIANA CROP WEATHER REPORT (USPS 675-770), (ISSN 0442-817X) is issued weekly April through November by the Indiana Agricultural Statistics Service, 1435 Win Hentschel Blvd, Suite B105, West Lafayette IN 47906-4145. Second Class postage paid at Lafayette IN. For information on subscribing, send request to above address. POSTMASTER: Send address change to the Indiana Agricultural Statistics Service, 1435 Win Hentschel Blvd, Suite B105, West Lafayette IN 47906-4145.