



# Indiana Crop & Weather Report

INDIANA AGRICULTURAL STATISTICS  
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## CROP REPORT FOR WEEK ENDING JUNE 7

Recent cool temperatures have slowed growth of emerged crops, according to the Indiana Agricultural Statistics Service. There have been scattered reports of frost in low lying areas in the northernmost regions of the state over the weekend. The extent of the damage is not yet known. Soil conditions remain wet in the southern part of the state, particularly the southwest, where there is water standing in fields. The northern region remains dry, causing emergence problems and poor stands.

### CORN AND SOYBEANS

**Corn planting** is 96 percent complete, behind 98 percent last year, but ahead of the 89 percent average for this date. By region, corn planting is virtually complete in the north, 98 percent complete in the central, and only 83 percent complete in the south. Eighty-six percent of the corn is **emerged**. By region, 94 percent is emerged in the north, 88 percent in the central, and 67 percent in the south. **Soybean planting** is 84 percent complete, behind 89 percent last year, but 14 percent ahead of the average. By region, soybean planting is 96 percent complete in the north, 89 percent complete in the central, and 51 percent complete in the south. Sixty-three percent of the soybean crop is **emerged**. By region, 76 percent is emerged in the north, 64 percent in the central, and 36 percent in the south.

### WINTER WHEAT

**Winter wheat condition** is rated 65 percent good to excellent, a decrease of 6 percent from last week. In addition to lodging, disease pressure appears to be increasing, especially in the southwest portion of the state.

### OTHER CROPS

Transplanting of **tobacco** is 43 percent complete, equal to the average for this date. First cutting of **alfalfa** is 75 percent complete, well ahead of 25 percent last year and the 44 percent average.

### DAYS SUITABLE and SOIL MOISTURE

For the week ending Friday, 4.8 days were rated **suitable for fieldwork**. **Topsoil moisture** was rated 5 percent very short, 17 percent short, 57 percent adequate and 21 percent surplus. **Subsoil moisture** was rated 2 percent very short, 11 percent short, 67 percent adequate and 20 percent surplus.

#### CROP PROGRESS

Crop	This Week	Last Week	Last Year	5-Year Avg
	Percent			
Corn Planted	96	90	98	89
Corn Emerged	86	76	NA	NA
Soybeans Planted	84	69	89	70
Soybeans Emerged	63	41	NA	NA

#### CROP CONDITION

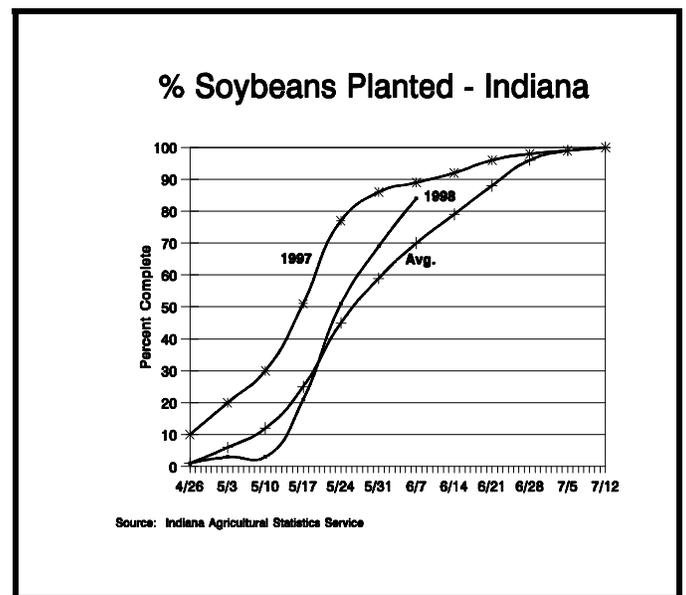
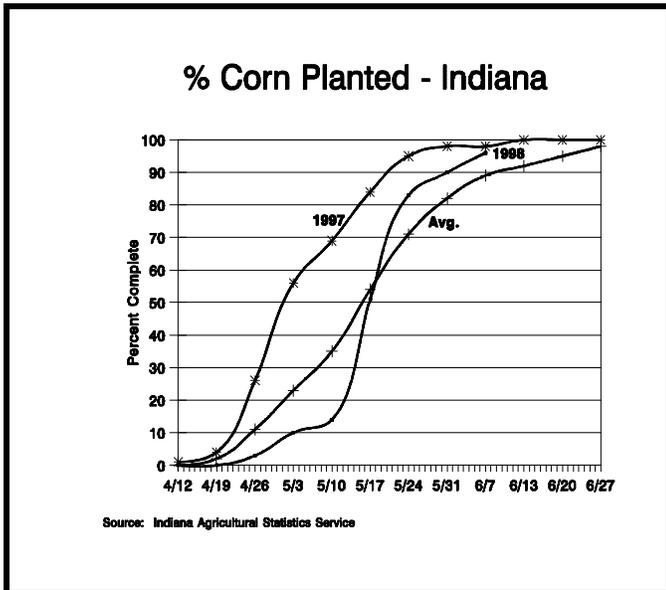
Crop	Very Poor	Poor	Fair	Good	Excellent
	Percent				
Corn	1	5	24	58	12
Soybeans	1	6	27	55	11
Winter Wheat 6/7	3	8	24	50	15
Winter Wheat 1997	1	4	28	53	14
Pasture	1	3	22	54	20

#### SOIL MOISTURE

	This Week	Last Week	Last Year
	Percent		
<b>Topsoil</b>			
Very Short	5	4	0
Short	17	14	0
Adequate	57	54	31
Surplus	21	28	69
<b>Subsoil</b>			
Very Short	2	2	0
Short	11	8	0
Adequate	67	69	43
Surplus	20	21	57

--Ralph W. Gann, State Statistician  
 --Lance Honig, Agricultural Statistician  
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<http://info.aes.purdue.edu/agstat/nass.html>

# Crop Progress



## Erotic Corn Fields

I got word this week that there has been a lot of talk down at the Chat 'n Chew Café about “erotic” corn fields. I suspect that the actual topic of discussion centered around “erratic” corn fields, those fields with uneven population or height that are so prevalent around the state this year. Last week, I encouraged folks to begin spending some time in their fields taking notes about emergence and growth. This week, I want to fill in some more detail on these “erratic” fields of corn.

### ***Uneven Germination and Emergence***

Uneven plant populations throughout a field result from some combination of problems with planter operation, germination and emergence. The success or failure of the latter two events depend on the adequacy of soil moisture and temperature (seedbed), the degree of seed-to-soil contact, and the absence or presence of soil pests.

Differences in soil temperature between light and dark soils or wet and dry soils may be significant enough to influence germination and emergence. April plantings this year were often affected by this variability.

Differences in soil moisture between low and high ground or well- and poorly-drained soils can also influence germination and emergence. Extremes in either direction, wet or dry, can limit germination. April and May plantings this year often exhibited the effects of this variability where rainfall was excessive or limiting.

Seed-to-soil contact is important for the germination process because of the need for the seed to absorb sufficient moisture to initiate the process. It should be no surprise that seed-to-clod contact, seed-to-dust contact or

seed-to-air contact (open furrows) is not conducive for rapid and uniform germination. Variability for the degree of seed-to-soil contact throughout a field will easily result in uneven germination and, consequently, emergence. As with the other factors, April and May plantings this year often occurred in seedbeds that exhibited varying degrees of cloddiness and soil moisture, while open planter furrows have been common in no-till fields planted on the wet side.

Soil insects have not been a prevalent problem with this year's plantings, but soil-borne fungal diseases have been troublesome in many fields. As H. Walker Kirby, Extension plant pathologist at the University of Illinois, has described (Illinois Pest & Crop Bulletin, May 15 & 29); the primary pathogen involved appears to be the fungus *Pythium*, which is favored by wet soils and cool weather.

It has not been uncommon this year for significant rainfall to occur after plantings. Even where germination was successful, subsequent emergence of the crop has been restricted where dense surface soil crusts developed. As they say in comedy clubs, timing is everything. The effects of soil crusting depends on the timing of the emergence of the coleoptiles or “spikes” of the corn seedlings. Where emergence had not yet occurred before the development of the crust, the penetration of the emergence occurred below ground. Where the coleoptiles were almost at the soil surface or just beginning to emerge when the crusts developed, subsequent completion of emergence often occurred successfully.

(Continued on Page 4.)

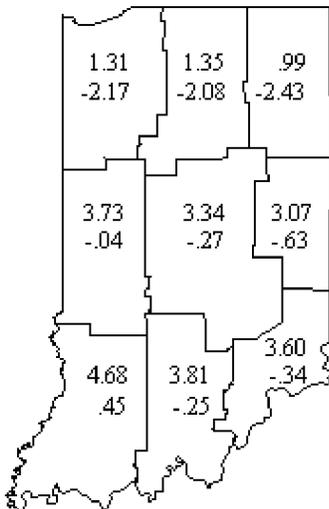
## Average Daily Values for week ending Monday morning June 8, 1998

Area	Station	Air Temperature			Precipitation			Growing Degree Days		
		Max	Min	DN	Past Week	Since April 1	DN Since April 1	Past Week	Since April 1	DN Since April 1
NW	Wanatah	70	43	-10	.28	7.79	-.59	77	766	+200
	Kentland	71	49	-8	.15	9.42	+.93	82	838	+166
	Winamac	71	45	-9	.15	7.30	-.92	81	804	+146
NC	South Bend	67	46	-10	.13	6.79	-1.23	69	751	+166
	Waterford Mills	71	45	-9	.16	7.26	-.28	78	811	+189
NE	Prairie Heights	70	46	-7	.15	7.21	-.80	78	802	+280
	Columbia City	69	44	-9	.26	7.06	-1.08	72	777	+189
	Fort Wayne	70	47	-9	.14	7.95	+.23	79	806	+175
	Bluffton	69	49	-9	.12	7.26	-1.11	78	821	+150
WC	West Lafayette	72	50	-6	.35	10.40	+1.90	88	854	+202
	Perrysville	70	52	-8	.18	11.63	+1.93	88	882	+54
	Crawfordsville	71	48	-8	.45	9.45	+1.03	81	817	+159
	Terre Haute 8s	74	53	-6	.05	9.69	+.45	101	981	+215
C	Tipton	69	49	-8	.67	10.62	+2.07	75	763	+133
	Indianapolis	71	52	-8	.73	12.40	+3.82	89	886	+129
	Indian Creek	72	52	-6	.22	11.12	+1.89	93	907	+178
EC	Farmland	70	49	-7	.64	9.97	+1.56	78	820	+211
	Liberty	71	49	-7	.54	11.86	+2.43	83	842	+114
SW	Vincennes	74	53	-7	.48	16.77	+6.86	100	953	+144
	Dubois	73	52	-6	.47	14.57	+4.43	100	922	+143
	Evansville	75	57	-6	.52	14.89	+5.17	117	1027	+103
SC	Bedford	70	51	-8	1.07	20.67	+10.79	86	882	+129
	Louisville	74	58	-5	.60	12.27	+2.53	116	1055	+151
SE	Butlerville	71	51	-8	.98	15.10	+5.68	90	902	+54

DN = departure from normal.

Growing Degree Days = daily mean - 50 (below 50 adjusted to 50, above 86 adjusted to 86.)

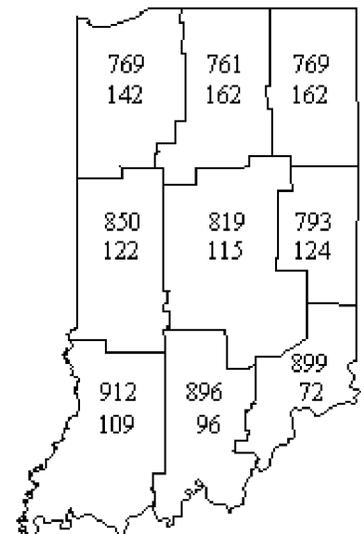
Rainfall for the Past 4 Weeks and Departure from Normal



Rainfall of 1 inch or more for the Past 7 Days as of Monday morning



Growing Degree Days and Departure since April 1



## Corn (continued)

### ***Development of the Plant***

Successful germination and emergence does not guarantee continued success in the development of the crop. Assorted limiting factors such as excessive or deficient soil moisture, disease or insect pressure, compaction from tillage traffic or planting in wet soils, variable soil temperatures, and herbicide injury can all retard the subsequent development of the corn crop.

An otherwise perfect-looking field can turn “ugly” almost overnight. The causes of such a quick turnaround almost always result from some sort of limitation of root development. Uneven development that is unrelated to uneven emergence often begins to appear some time after growth stages V4 to V6 (4- to 6-leaf collars) when root development normally begins to speed up dramatically. In such fields, check for limiting factors such as soil compaction, herbicide injury, low soil pH, poor drainage, or root diseases.

Permanent roots that are developing horizontally instead of downward at an angle suggest the presence of severe soil compaction. Permanent roots (and/or seed roots) developing primarily in the planter furrow suggest the presence of severe sidewall compaction by the planter's double-disc openers.

Permanent roots that are ‘stubbed off’ AND appear to have been fed on suggest grub or rootworm larvae damage. Permanent roots that are disfigured (swollen, club ends, excessive secondary root development or ‘bottle-brushing’) suggest herbicide injury. Permanent roots with scattered discolored areas, with water-soaked lesions, suggest a disease infection.

Permanent roots that appear ‘stubbed off’ and shriveled, but NOT eaten, suggest excessively dry surface soils. Permanent roots that are uniformly discolored (yellowish or brownish) suggest excessively wet soils or excessively low soil pH. Permanent roots whose tips appear “burned” off suggest injury from excessive amounts of starter fertilizer.

Don't forget, this and other timely information about corn can be viewed at the Chat 'n Chew Café on the **W o r l d   W i d e   W e b   a t** <http://www.agry.purdue.edu/agronomy/ext/corn/chatchew.htm>. For other information about corn, take a look at the Corn Growers' Guidebook on the World Wide Web at <http://www.agry.purdue.edu/agronomy/ext/corn/>

--Bob Nielsen, Professor of Agronomy, Purdue University

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