



Indiana Crop & Weather Report

INDIANA AGRICULTURAL STATISTICS
U.S. DEPARTMENT OF AGRICULTURE
PURDUE UNIVERSITY
1148 AGAD BLDG, ROOM 223
WEST LAFAYETTE IN 47907-1148
Phone (765)494-8371
FAX (765)494-4315

Released: Monday, 3PM

August 4, 1997

Vol. 47, #18

West Lafayette, IN 47907

CROP REPORT FOR WEEK ENDING AUGUST 3

Crop conditions are declining with continued dry weather according to the Indiana Agricultural Statistics Service. Crop conditions remain good in areas that have received timely rains, however many areas of the state have not been as fortunate. The west central and southern areas of Indiana appear to be the driest. Crops in these driest areas are in need of rain soon. Soil moisture conditions are rapidly declining, with 52 percent of the topsoil and 44 percent of the subsoil rated as short to very short.

CORN AND SOYBEANS

Corn condition is rated 57 percent good to excellent compared to 66 percent last week. Seventy-seven percent of the corn acreage is **silking**, ahead of 52 percent last year, but behind 81 percent for the 5-year average. Eleven percent of the corn is in the dough stage, behind 5 percent for the 5-year average. Seventy-nine percent of the soybean acreage is **blooming**, well ahead of 48 percent last year and equal to the 5-year average. Thirty-two percent of the crop is **setting pods**, ahead of the 5-year average of 28 percent. **Condition** of the soybean crop is 59 percent good to excellent, down from 65 percent a week ago.

WINTER WHEAT

Winter wheat **harvest** is 99 percent complete, ahead of 97 percent for both last year and the 5-year average for this date. Harvest is complete in all but the northern region where only 4 percent of the crop remains to be harvested.

OTHER CROPS

Pasture condition was rated 29 percent good to excellent, down from 46 percent last week.

DAYS SUITABLE and SOIL MOISTURE

For the week ending Friday, 6.4 days were rated **suitable for fieldwork**. **Topsoil moisture** was rated 20 percent very short, 32 percent short, 45 percent adequate and 23 percent surplus. **Subsoil moisture** was rated 13 percent very short, 31 percent short, 54 percent adequate and 2 percent surplus.

CROP PROGRESS

Crop	This Week	Last Week	Last Year	5-Year Avg
Percent				
Alfalfa 2nd Cutting	79	53	74	81
Corn Silked	77	40	52	81
Corn Dough	11	1	0	15
Soybeans Blooming	79	65	48	79
Soybeans Podding	32	15	9	28
Wheat Harvested	99	89	97	97

CROP CONDITION

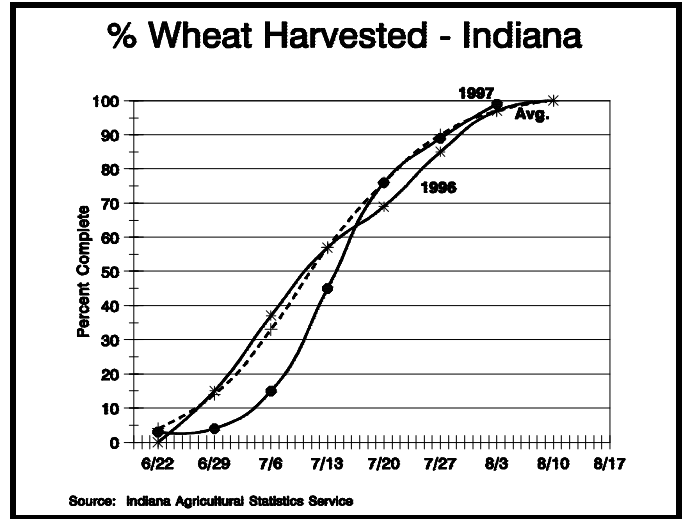
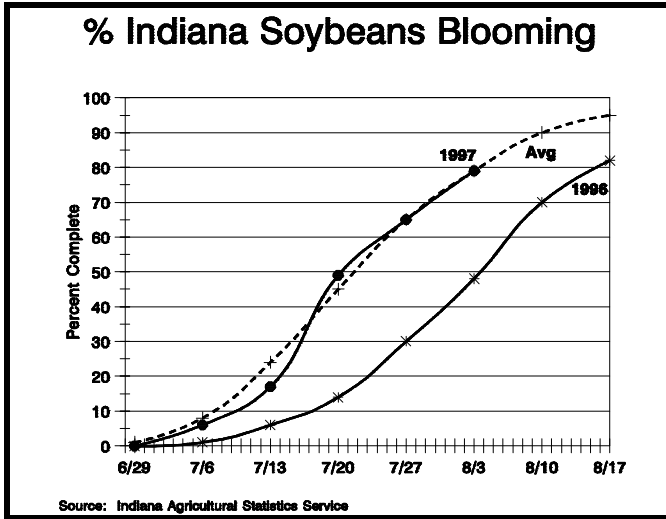
Crop	Very Poor	Poor	Fair	Good	Excellent
Percent					
Corn	3	9	31	50	7
Soybeans	3	7	31	50	9
Pasture	9	27	35	27	2

SOIL MOISTURE

	This Week	Last Week	Last Year
Percent			
Topsoil			
Very Short	20	8	1
Short	32	23	12
Adequate	45	55	69
Surplus	3	14	18
Subsoil			
Very Short	13	5	1
Short	31	24	11
Adequate	54	61	78
Surplus	2	10	10

--Ralph W. Gann, State Statistician
--Lance Honig, Agricultural Statistician
E-Mail Address: nass-in@nass.usda.gov
<http://info.aes.purdue.edu/agstat/nass.html>

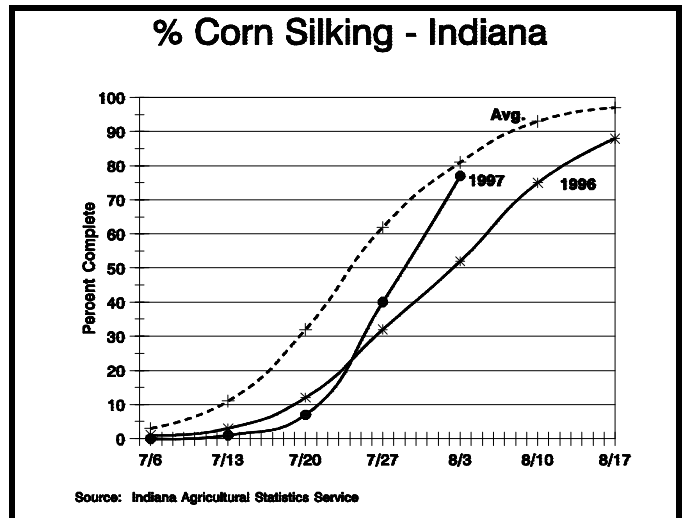
Crop Progress



Key Steps in Corn Pollination

The flowering stage in corn is the most critical period in the development of a corn plant from the standpoint of grain yield determination. Drought, high temperature stress, as well as hail damage and insect feeding have the greatest impact on yield potential during the reproductive stage. The following is an overview of key steps and phases in the corn pollination process.

- Pollen shed usually begins two to three days prior to silk emergence and continues for five to eight days with peak shed on the third day. On a typical midsummer day, the shedding of pollen is in the morning between 9:00 and 11:00 a.m.
- The tassel is usually fully emerged and “stretched out” before any pollen is shed. Pollen shed begins at the middle of the central spike of the tassel and spreads out later over the whole tassel with the lower branches last to shed pollen.
- Pollen grains are borne in anthers, each of which contains a large number of pollen grains. The anthers open and the pollen grains pour out in early to midmorning after dew has dried off the tassels. Pollen is light and is often carried considerable distances by the wind. However, most of it settles within 20 to 50 feet.
- Pollen shed is not a continuous process. It stops when the tassel is too wet or too dry and begins again when temperature conditions are favorable. Pollen stands little chance of being washed off the silks



during a rain storm as little to none is shed when the tassel is wet. Also, silks are covered with fine, sticky hairs which serve to catch and anchor pollen grains.

- Under favorable conditions, pollen grain remains viable for only 18 to 24 hours. However, the pollen grain starts growth of the pollen tube down the silk channel within minutes of coming in contact with a silk and the pollen tube grows the length of the silk and enters the female flower (ovule) in 12 to 28 hours.
- A well developed ear shoot should have 750 to 1,000 ovules (potential kernels) each producing a silk. The silks from near the base of the ear emerge first and those from the tip appear last. Under good conditions, all silks will emerge and be ready for pollination within 3 to 5 days and this usually provides adequate time for all silks to be pollinated before pollen shed ceases.

(Continued on Page 4.)

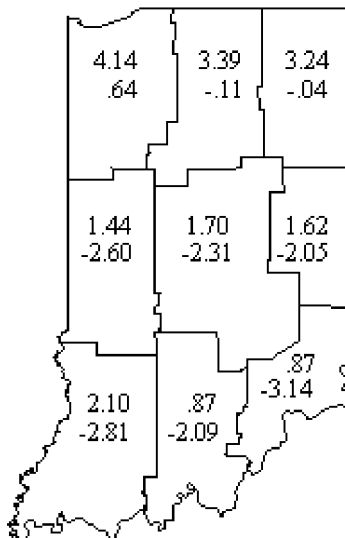
Average Daily Values for week ending Monday morning August 4, 1997

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	82	54	-3	.02	16.35	+3.38	130	1668	-96
	Kentland	83	58	-3	.00	12.90	-3.24	126	1820	-141
	Winamac	81	59	-2	.35	15.62	-.04	144	1766	-125
NC	South Bend	83	59	-2	.04	9.49	-5.85	149	1732	-89
	Waterford Mills	84	56	-3	.02	14.68	+3.31	140	1720	-143
NE	Prairie Heights	82	60	+0	.07	12.24	-2.75	151	1715	+57
	Columbia City	82	59	-1	.00	15.08	-.14	124	1730	-23
	Fort Wayne	82	60	-3	.01	15.48	+1.24	148	1744	-176
	Bluffton	83	60	-2	.00	18.41	+3.07	152	1803	-169
WC	West Lafayette	84	57	-2	.00	14.62	-1.07	144	1853	-60
	Lafayette	86	60	+0	.00	13.96	-1.73	158	1922	+10
	Perrysville	84	58	-4	.00	11.34	-6.40	126	1889	-295
	Crawfordsville	85	56	-2	.00	12.40	-3.06	126	1756	-150
	Terre Haute 8s	89	63	+1	.00	13.24	-4.01	173	2077	-63
C	Tipton	82	58	-2	.00	14.63	-1.27	145	1722	-159
	Indianapolis	86	63	+0	.00	9.35	-6.77	171	1957	-172
	Indian Creek	87	61	+0	.00	12.95	-3.57	140	1964	-48
EC	Farmland	83	57	-2	.00	12.58	-2.95	125	1804	-6
	Liberty	85	60	-1	.00	13.30	-3.77	136	1903	-86
SW	Vincennes	86	61	-2	.00	20.54	+3.36	140	2053	-120
	Dubois	88	63	+0	.06	18.75	+1.19	171	2018	-125
	Evansville	87	66	-1	.00	13.82	-2.87	182	2177	-233
SC	Bedford	86	62	-1	.08	18.92	+1.08	166	1972	-110
	Louisville	89	69	+2	.22	15.47	-1.79	194	2231	-138
SE	Butlerville	86	61	-2	.00	16.31	-.85	163	1947	-274

DN = departure from normal.

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

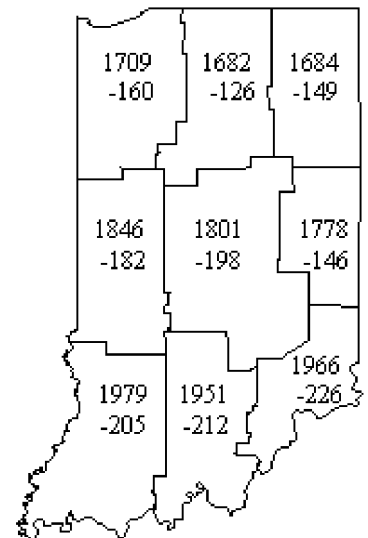
Rainfall for Past 4 Weeks
and Departure from Normal



Rainfall of 1 Inch or More
for Past 7 Days
as of Monday morning



Growing Degree Days
and Departure since April 1



Pollination (continued)

● Pollen of a given plant rarely fertilizes the silks of the same plant. Under field conditions 97 percent or more of the kernels produced by each plant are pollinated by other plants in the field.

● The amount of pollen is rarely a cause of poor kernel set. Each tassel contains from 2 to 5 million pollen grains which translates to 2,000 to 5,000 pollen grains produced for each silk of the ear shoot. Shortages of pollen are usually only a problem under conditions of extreme heat and drought. Poor seed set is more often associated with poor timing of pollen shed with silk emergence (silks emerging after pollen shed).

--Peter Thomison, Ohio State University

The INDIANA CROP WEATHER REPORT (USPS 675-770), (ISSN 0442-817X) is issued weekly April through November by the Indiana Agricultural Statistics Service, Purdue University, 1148 AgAd Bldg, Rm 223, West Lafayette IN 47907-1148. 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, Purdue University, 1148 AgAd Bldg, Rm 223, West Lafayette IN 47907-1148.