



Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING JULY 16

Many fields of corn went through the pollination stage last week and overall conditions have been favorable for this critical process for corn, according to the Indiana Agricultural Statistics Service. Rain continued in some areas, slowing field activities. Growth and development of soybean plants have been hindered by wet soil conditions and weeds in some fields. Major activities included spraying, baling hay, mowing roads, scouting for insects and preparing for county fairs.

CORN AND SOYBEANS

Corn **condition** is rated 84 percent good to excellent compared with 85 percent last week and 58 percent last year at this time. Sixty-seven percent of the corn acreage has **silked** compared with 59 percent last year and 23 percent for the average. Planting of double crop **soybean** acreage is virtually complete. Soybean **condition** improved and is rated 71 percent good to excellent compared with 64 percent last week and 59 percent last year. Sixty-one percent of the soybean acreage is **blooming** compared with 72 percent last year and 34 percent for the average. Sixteen percent of the soybean acreage is **setting pods** compared with 17 percent last year and 5 percent for the average

WINTER WHEAT

Winter wheat **harvest** made excellent progress in the northern areas last week. Ninety-nine percent is harvested compared with 98 last year and 81 percent for the 5-year average.

OTHER CROPS

Pasture condition is rated 16 percent excellent, 56 percent good, 25 percent fair and 3 percent poor. Second cutting of **alfalfa hay** is 79 percent complete compared with 88 percent a year ago and 52 percent for the 5-year average.

DAYS SUITABLE and SOIL MOISTURE

For the week ending Friday, 5.0 days were rated **suitable for fieldwork**. **Topsoil moisture** was rated 5 percent short, 81 percent adequate and 14 percent surplus. **Subsoil moisture** was rated 1 percent very short, 13 percent short, 77 percent adequate and 9 percent surplus.

CROP PROGRESS

Crop	This Week	Last Week	Last Year	5-Year Avg
	Percent			
Wheat Harvested	99	83	98	81
Corn Silking	67	28	59	23
Soybeans Blooming	61	38	72	34
Soybeans Podding	16	5	17	5
Alfalfa, Second Cutting	79	52	88	52

CROP CONDITION

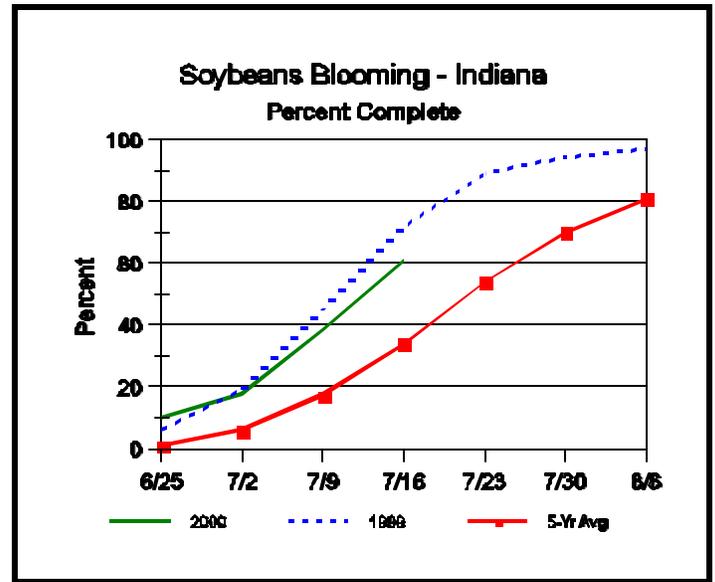
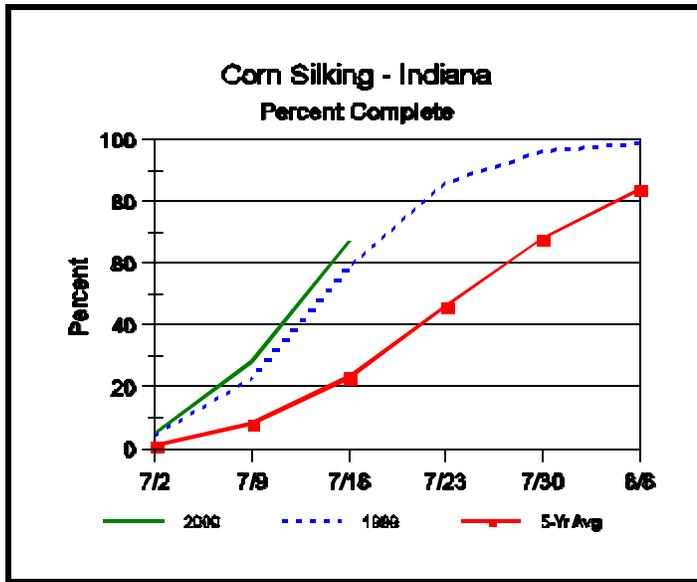
Crop	Very Poor	Poor	Fair	Good	Excellent
	Percent				
Corn	1	3	12	52	32
Soybeans	1	6	22	55	16
Pasture	0	3	25	56	16

SOIL MOISTURE

	This Week	Last Week	Last Year
	Percent		
Topsoil			
Very Short	0	0	25
Short	5	4	46
Adequate	81	71	28
Surplus	14	25	1
Subsoil			
Very Short	1	2	14
Short	13	15	47
Adequate	77	71	37
Surplus	9	12	2

--Ralph W. Gann, State Statistician
 --Bud Bever, Agricultural Statistician
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Crop Progress



The Impact of Excessive Rainfall on Soybeans

- Water, water everywhere — how will my soybeans fare?

Significant quantities of rain have fallen over the past two months with the heaviest amounts in the last two weeks falling north of a line from Princeton to Muncie, Indiana. Knox and Dubois Counties received amounts in the 4 to 4.5 inch range during this period with heavy rains occurring on June 17. Reporting stations in Tippecanoe, Whitley and Porter counties recorded 5.5 to more than 7 inches during this same period with heavy rainfall on June 24. Much of this rain fell on soils that were already quite wet from and, in some cases, already saturated from previous rainfall.

The net result of all of this rain is saturated soils in much of the state with significant ponding and some flooding. Anytime these types of wetness problems occur, the immediate question relates to the length of time that a given crop can survive if covered by water. For soybeans, the length of time that a plant can remain completely submerged and survive is between 2 and 4 days assuming the soils were not saturated when the flooding occurred. The length of time is also related to temperature and cloud cover. Hot, sunny conditions may result in death of the plant

after 2 days or less while, with cool, cloudy conditions, soybeans may survive after 4 days or more. If a portion of the plant is exposed, soybeans have been known to survive after 7 days of partial submersion. If flooding occurs in fields where the soils have already been saturated for a few days, the soybean plants are less likely to survive.

Soybeans require well-aerated soils to grow vigorously. Saturated soils, with no water on the above ground portion of the plant, can result in poor root and plant growth and some plant death from root rot diseases. After only a few days of saturated soils, soybean plants become a lighter green color due in part to poor nitrogen fixation since little oxygen is present in these saturated soils. In addition to the saturated soils, night-time temperatures have been too cool for good soybean plant growth. Soybeans perform best with night-time temperatures in the 70 to 80 degree range. During the last two-week period, we have had a number of cloudy days that have also contributed to the poor growth and light green or yellow color of the soybeans. Finally, post-emergence herbicides are being applied to a soybean crop under considerable stress and in many cases adding yet another stress to the plants and contributing to the light green to yellow color.

(Continued on Page 4.)

Weather Data

Week ending Sunday July 16, 2000

Station	Past Week Weather Summary Data							Accumulation				
	Air Temperature				Precip.		Avg	April 1, 2000 thru July 16, 2000				
							4 in	Precipitation		GDD Base 50°F		
	Hi	Lo	Avg	DFN	Total	Days	Soil Temp	Total	DFN	Days	Total	DFN
Northwest (1)												
Valparaiso_Ag	86	61	73	+0	0.59	2		19.48	+5.29	54	1340	-30
Wanatah	86	57	72	-2	0.88	3	79	17.13	+3.47	45	1335	+30
Wheatfield	87	59	74	+1	0.99	1		16.59	+3.16	38	1419	+74
Winamac	85	58	72	-2	1.34	3	79	14.34	+0.88	41	1395	-11
North Central (2)												
Logansport	85	60	74	+0	1.50	4		14.72	+1.81	48	1440	+8
Plymouth	84	59	72	-3	0.52	4		15.87	+1.78	48	1305	-161
South_Bend	85	58	72	-2	0.56	3		15.89	+2.72	50	1348	-5
Young_America	85	57	73	-2	0.71	4		15.04	+2.13	44	1506	+74
Northeast (3)												
Bluffton	85	58	72	-3	0.19	3	75	14.80	+1.37	48	1447	-20
Fort_Wayne	86	58	73	-3	0.07	2		16.72	+4.51	45	1423	+1
West Central (4)												
Crawfordsville	87	55	74	-2	1.16	3	78	14.04	-0.43	43	1420	-144
Perrysville	88	60	74	-1	0.23	2	78	14.93	+0.42	44	1529	+0
Terre_Haute_Ag	89	60	76	+1	1.21	3	78	19.70	+5.19	45	1781	+149
W_Lafayette_6NW	86	58	74	+0	1.81	5	74	15.40	+2.07	45	1522	+86
Central (5)												
Castleton	86	59	74	-2	0.85	4		17.87	+3.95	56	1566	-26
Greenfield	86	59	74	-2	0.00	0		18.07	+3.46	47	1576	+40
Greensburg	88	60	75	+2	0.74	4		19.01	+4.39	54	1632	+121
Indianapolis_AP	87	60	76	+0	0.25	2		16.08	+2.59	41	1665	+50
Indianapolis_SE	86	59	73	-3	0.30	3		16.42	+2.50	43	1549	-43
Tipton_Ag	85	58	72	-3	0.73	4	74	13.55	+0.19	45	1361	-27
East Central (6)												
Farmland	86	58	73	+0	0.24	3	71	18.29	+4.82	49	1451	+107
New_Castle	82	56	70	-4	0.02	2		17.39	+2.70	46	1263	-112
Southwest (7)												
Dubois_Ag	91	60	78	+3	0.59	3	80	14.44	-1.26	51	1802	+163
Evansville	92	63	80	+2	1.76	1		13.19	-1.17	44	1946	+31
Freelandville	91	62	78	+2	2.68	2		16.50	+1.68	37	1758	+65
Shoals	90	59	76	+1	0.89	2		17.61	+1.68	48	1662	+41
Vincennes_5NE	91	61	78	+2	1.20	2	80	17.85	+3.15	45	1734	+41
South Central (8)												
Bloomington	88	59	75	-2	0.00	0		15.42	+1.08	38	1571	-79
Tell_City	92	66	80	+3	1.38	1		16.55	+0.47	39	1872	+68
Southeast (9)												
Scottsburg	91	59	77	+2	0.90	2		17.71	+2.86	41	1778	+99

 DFN = Departure From Normal (Using 1961-90 Normals Period).
 GDD = Growing Degree Days.
 Precipitation (rain or melted snow/ice) in inches.
 Precipitation Days = Days with precipitation of 0.01 inch or more.
 Air Temperatures in Degrees Fahrenheit.

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The bottom line is that growing conditions are far from ideal for the soybean crop. Warm night-time temperatures, bright sunny days and a few days free of added rainfall will bring this crop around and change its appearance significantly. These changes need to occur shortly since the soybean plant has moved into the reproductive stages of growth and continued stresses can begin to take a toll on yield potential.

Ellsworth P. Christmas, Purdue University

Soybean Sudden Death Syndrome

- Conditions are looking more favorable for sudden death syndrome in soybeans

In Pest & Crop #14, I speculated about the chances for sudden death syndrome in

soybeans this year. An important predisposing factor for SDS is heavy rainfall during early pod filling. During the past few days, many areas in Indiana have received heavy rain. Scott Abney, a USDA-ARS soybean pathologist at Purdue, has already seen SDS in a few fields. Affected plants have been in low areas where soils have been wet. The recent heavy rains may bring on symptoms over a wider area. In scouting for SDS, fields that are most advanced in development should be looked at first. These are the ones most likely to show symptoms. Even though no remedial action is possible, it is useful to know which fields, and where in these fields, the problem exists. This information can be useful for future planting decisions.

Gregory Shaner, Dept. of Botany and Plant Pathology, Purdue University

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