



USDA, National Agricultural Statistics Service
Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING JULY 10

AGRICULTURAL SUMMARY

A week of mostly dry conditions continued to place stress on crops around the state, according to the Indiana Field Office of USDA's National Agricultural Statistics Service. Reporters indicate corn and soybean yields will be reduced in many fields if measurable precipitation isn't received soon. Corn and soybean condition continued to decline last week. Winter wheat harvest was winding down in the central and southern regions. Spraying for weeds along with spot spraying for insects continued in several soybean fields. Pastures are rapidly drying up causing the feeding of hay in some areas.

FIELD CROPS REPORT

There were 6.8 **days suitable for fieldwork**. Corn **condition** declined and is rated 34 percent good to excellent compared with 75 percent last year at this time. Thirty-one percent of the corn acreage has **silked** compared with 57 percent last year and 27 percent for the 5-year average. One percent of the corn acreage has reached the **dough** stage compared with 3 percent last year and 1 percent for the 5-year average. Forty-six percent of the soybean acreage is **blooming** compared with 41 percent last year and 29 percent for the average. Two percent of the soybean acreage is **setting pods** compared with 7 percent last year and 4 percent for the average. Soybean **condition** also declined and is rated 37 percent good to excellent compared with 69 percent last year.

Eighty-six percent of the **winter wheat** acreage is **harvested** compared with 93 percent last year and 78 percent for the 5-year average. By area, wheat harvest is 66 percent complete in the north, 91 percent complete in the central region and 98 percent complete in the south. Second cutting of **alfalfa hay** is 69 percent complete compared with 42 percent last year and 42 percent for the average.

Major activities during the week included baling hay and straw, cleaning up and repairing equipment, attending FSA offices, hauling grain to market, mowing roadsides and pastures, hauling manure and taking care of livestock.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition declined and is rated 21 percent good, 42 percent fair, 26 percent poor and 11 percent very poor. Livestock are in mostly good condition.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
Percent				
Corn Silked	31	8	57	27
Corn in Dough	1	NA	3	1
Soybeans Blooming	46	25	41	29
Soybeans Podding	2	NA	7	4
Winter Wheat Harvested	86	53	93	78
Alfalfa Second Cutting	69	32	42	42

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excellent
Percent					
Corn	7	20	39	30	4
Soybeans	7	17	39	34	3
Pasture	11	26	42	21	0

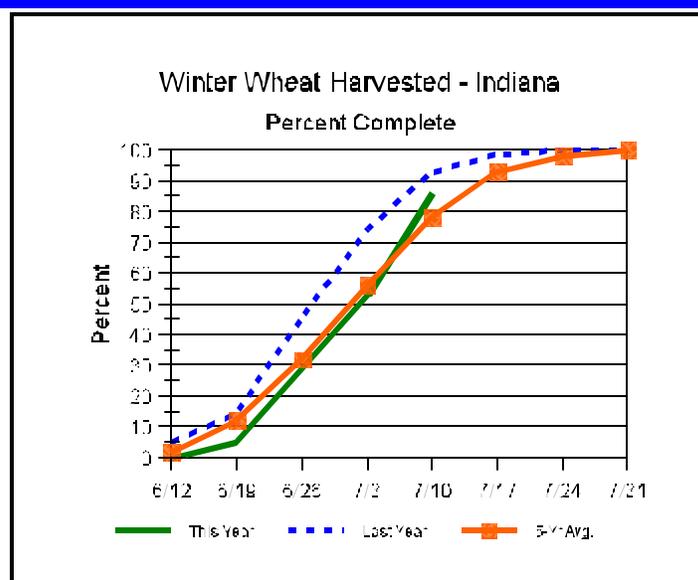
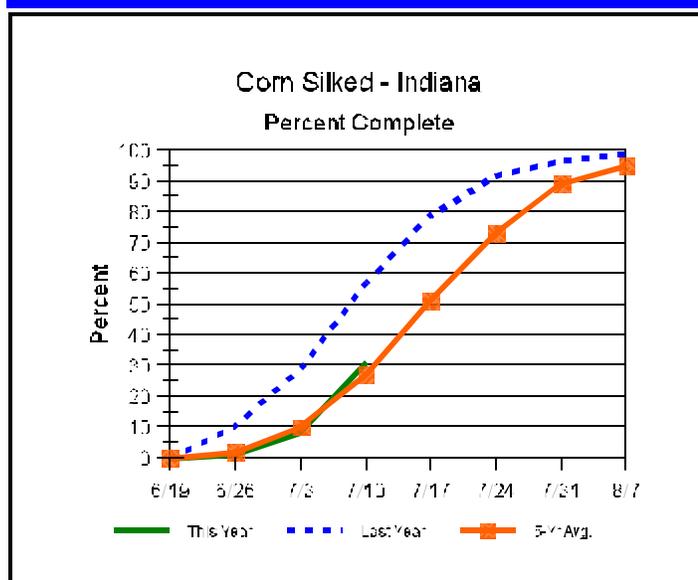
SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
Percent			
Topsoil			
Very Short	37	24	1
Short	45	42	16
Adequate	18	33	75
Surplus	0	1	8
Subsoil			
Very Short	24	15	0
Short	47	43	13
Adequate	29	41	80
Surplus	0	1	7
Days Suitable	6.8	6.0	5.4

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Crop Progress



Other Agricultural Comments And News

Phytophthora Root Rot of Soybean

This has been the hottest and driest June in a long time. Why would soil-borne diseases, in particular water-dependent pathogens become important?

The causal organism of *Phytophthora* root rot, *Phytophthora sojae*, is a fungus-like plant pathogen that thrives in wet soil conditions. This plant pathogen has a unique life history. Although direct infection of the soybean root can occur from vegetative growth of the pathogen, the more typical inoculum is a motile spore, the zoospore. When free water is available in the soil, these spores are released by the pathogen and can swim to seek out host plant tissue. The swimming distance is probably less than 1 inch, but this is far enough for many of these spores to find and attach to soybean roots. Conditions favorable for infection occurred in early spring.

In principle, the dry conditions through much of May and June would decrease the risk for most soil-borne diseases. However, planting seems to be pushed earlier into the spring every year. Planting into cool and wet soils increases the risk for soil-borne fungi that prefer these conditions. *Phytophthora sojae* is one of these. Although planting operations progressed smoothly this spring, there were occasions when planting into intensively tilled ground was followed by heavy rain events. This led to crusting-over of the seed furrow. Crusting can physically inhibit seed

germination, but it also increases the chance for soil-borne fungi to attack the slowly growing, stressed young seedlings. Thus, poor plant stands are the result of physical barrier plus soil-borne disease.

Early plantings also favor infection of soybean root systems that do not lead to immediate plant death. Depending on infection severity, various amounts of the root system may be affected. Depending on how much of the root system is rotted, diseased plants will exhibit symptoms of moisture stress and nutrient deficiency, even when soil moisture and fertility are adequate for growth of healthy plants. Drought will add further stress to these plants and may prevent them from "hanging on". Thus, conditions during the past three weeks may have pushed such plants over the edge and lead to plant death.

The pathogen survives as robust, thick-walled oospores, which are either imbedded in host tissue or released to the soil environment as the plant tissue withers away. The life history of this pathogen makes management with crop rotation impractical, because spores can easily survive several years without a soybean crop. Purdue research has detected this pathogen in virtually every Indiana soybean field that has been sampled. Seed treatment fungicides are

(Continued on Page 4)

Weather Information Table

Week ending Sunday July 10, 2005

Station	Past Week Weather Summary Data							Accumulation				
	Air			Precip.	Days	Avg 4 in Soil	April 1, 2005 thru July 10, 2005					
	Temperature						Total	DFN	Temp	Precipitation		GDD Base 50°F
	Hi	Lo	Avg	Total	DFN	Days				Total	DFN	
Northwest (1)												
Chalmers_5W	94	54	73	-1	0.09	1		5.85	-6.62	27	1441	+69
Valparaiso_AP_I	92	55	73	+1	0.21	1		6.14	-7.26	27	1348	+138
Wanatah	94	52	73	+2	0.28	1	82	7.61	-5.19	31	1289	+139
Wheatfield	89	56	72	+0	0.61	5		9.74	-2.90	56	1350	+165
Winamac	92	55	73	+1	0.18	1	80	6.62	-6.08	35	1386	+140
North Central (2)												
Plymouth	90	55	72	-2	0.41	1		5.50	-7.76	31	1307	+8
South_Bend	91	53	73	-1	0.55	1		4.77	-7.68	29	1374	+181
Young_America	90	55	72	-2	0.48	1		9.33	-2.85	30	1401	+136
Northeast (3)												
Columbia_City	89	56	72	+0	0.30	2	78	9.03	-3.51	35	1285	+153
Fort_Wayne	91	55	73	+0	0.03	1		6.12	-5.43	36	1346	+91
West Central (4)												
Greencastle	89	54	72	-3	0.00	0		12.65	-1.18	27	1358	-99
Perrysville	91	54	73	-2	1.30	1	81	9.45	-4.14	27	1523	+168
Spencer_Ag	88	56	73	-2	0.00	0		12.06	-2.31	32	1365	+13
Terre_Haute_AFB	93	55	75	-1	0.00	0		10.92	-2.55	30	1544	+92
W_Lafayette_6NW	92	53	73	-1	0.35	1	83	6.18	-6.35	31	1447	+177
Central (5)												
Eagle_Creek_AP	88	59	74	-2	0.00	0		9.91	-2.66	31	1595	+157
Greenfield	88	58	74	-2	0.03	1		12.68	-0.79	35	1413	+51
Indianapolis_AP	89	60	75	+0	0.17	1		10.96	-1.61	31	1546	+108
Indianapolis_SE	89	53	73	-3	0.00	0		10.14	-2.74	29	1429	+16
Tipton_Ag	89	55	71	-3	0.12	1	81	10.27	-2.24	32	1296	+71
East Central (6)												
Farmland	88	52	72	-2	0.01	1	75	8.93	-3.81	33	1303	+119
New_Castle	89	53	72	+0	0.02	1		12.03	-1.80	27	1191	-23
Southwest (7)												
Evansville	93	62	77	-1	0.11	1		9.45	-4.09	25	1726	+7
Freelandville	90	63	76	+0	0.02	2		9.82	-4.15	28	1628	+116
Shoals	91	62	76	+1	0.05	1		12.22	-2.74	38	1598	+151
Stendal	92	62	77	+1	0.01	1		10.81	-4.34	27	1736	+136
Vincennes_5NE	92	60	77	+1	0.04	1	80	13.52	-0.45	32	1689	+177
South Central (8)												
Leavenworth	92	64	77	+3	0.31	1		10.26	-4.87	28	1636	+188
Oolitic	89	56	73	-2	0.02	2	81	12.12	-2.07	35	1429	+59
Tell_City	92	59	77	+0	0.24	1		10.72	-4.48	24	1830	+214
Southeast (9)												
Brookville	91	57	75	+2	0.00	0		11.20	-2.29	28	1463	+186
Milan_5NE	89	58	74	+1	0.12	2		12.07	-1.42	45	1446	+169
Scottsburg	92	60	75	-2	0.22	2		12.17	-1.71	35	1572	+72

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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Phytophthora Root Rot of Soybean (Continued)

available but do not provide full season protection because they decompose while exposed to the soil environment and lose activity as the growing season progresses. The more practical management of the disease is host plant resistance. Two types of resistance are recognized: partial resistance, which slows down the rate of disease development, and race-specific resistance, which provides complete protection, but is effective against only some races of the pathogen. Under current extreme weather conditions partial resistance may not provide sufficient protection from the disease. Race-specific resistance provides a much greater degree of protection, but to take advantage of this resistance it is critical to know the race of *Phytophthora sojae* present in a

particular field. If a *Phytophthora* problem is suspected in a field it needs to be determined if the soybean variety has any type of resistance. If it has a specific gene for resistance, such as *Rps1c* or *Rps1k*, then in future plantings soybean varieties with different resistance genes should be used. Care needs to be taken because the pathogen can adapt to resistance, particularly when soybeans with the same resistance gene are grown repeatedly in a field. Less than 50% of currently available commercial cultivars in northern states have race-specific resistance.

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TIME VALUE

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