



USDA, National Agricultural Statistics Service
Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING JULY 20

AGRICULTURAL SUMMARY

Hot, dry conditions placed stress on major field crops with some northern areas getting relief in the form of weekend rain showers, according to the Indiana Field Office of USDA's National Agricultural Statistics Service. Winter wheat harvest made good progress followed by baling of straw. Double cropped soybeans were being planted further north than usual. Earlier planted corn fields began to enter the critical pollination stage. Some corn acreage was sprayed with fungicides. Detasseling began in many seed corn fields.

FIELD CROPS REPORT

There were 6.1 **days suitable for field work**. Sixty-three percent of the **corn** acreage is reported to be in good to excellent **condition** compared with 48 percent last year at this time. Thirty-eight percent of the corn acreage has **silked** compared with 80 percent last year and 67 percent for the 5-year average. Thirty-nine percent of the **soybean** acreage is **blooming** compared with 65 percent last year and 57 percent for the 5-year average. **Soybean condition** is rated as 58 percent good to excellent compared with 45 percent last year at this time.

Ninety-four percent of the **winter wheat** acreage has been **harvested** compared with 98 percent last year and 96 percent for the 5-year average. By area, 88 percent has been harvested in the north, 94 percent in the central region and 99 percent in the south. The second cutting of **alfalfa hay** is 62 percent complete compared with 87 percent last year and 76 percent for the 5-year average.

Major activities during the week included: scouting fields, spraying herbicides and fungicides, baling hay and straw, detasseling seed corn, mowing roadsides and ditches, attending county fairs, hauling grain to market, and tending to livestock.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated as 21% excellent, 45% good, 23% fair, 8% poor and 3% very poor. Livestock are in mostly good condition with some heat related stress being reported.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
	Percent			
Corn Silked	38	8	80	67
Soybeans Blooming	39	18	65	57
Winter Wheat Harvested	94	68	98	96
Alfalfa – 2nd Cutting	62	37	87	76

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excellent
	Percent				
Corn	4	9	24	46	17
Soybean	4	10	28	44	14
Pasture	3	8	23	45	21

SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

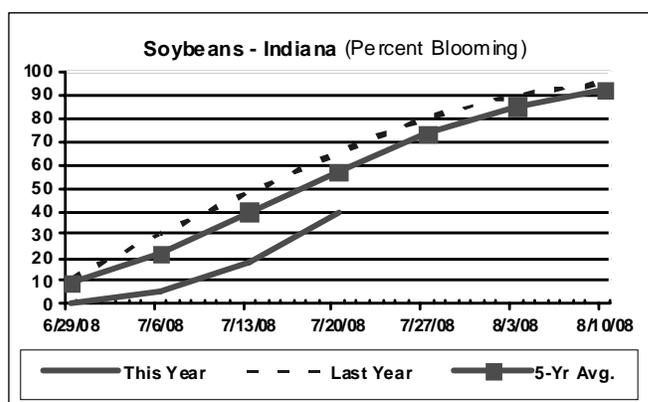
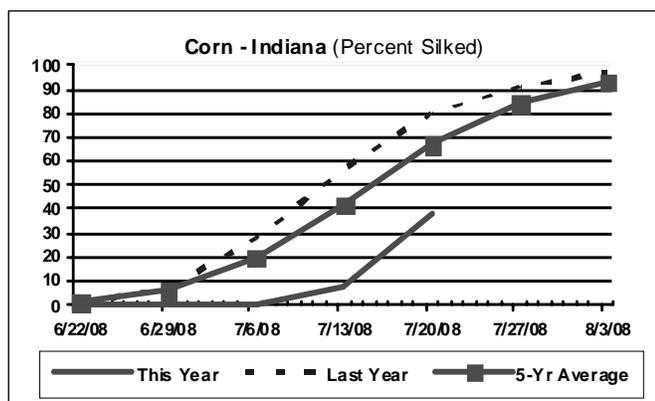
	This Week	Last Week	Last Year
	Percent		
Topsoil			
Very Short	2	1	20
Short	14	3	35
Adequate	76	77	45
Surplus	8	19	0
Subsoil			
Very Short	1	1	28
Short	9	3	39
Adequate	76	73	33
Surplus	14	23	0
Days Suitable	6.1	4.5	5.0

CONTACT INFORMATION

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http://www.nass.usda.gov/Statistics_by_State/Indiana/

Crop Progress

Other Agricultural Comments And News



(Similar conditions occurring across Indiana)

Corn Pollination Underway in Many Ohio Corn Fields

During the past week, tassels began appearing in corn fields that were planted in late April and early May. However the pollination period is going to vary widely across the state this year. According to the National Agricultural Statistics Service (<http://www.nass.usda.gov/oh/>), about a third of our corn acreage was planted on or before May 4, then due to persistent rainy conditions, another third of our corn was planted over the next three weeks, and the remaining third of our acreage was planted (or replanted) in late May and early June. The late planted corn will not be tasselling until early to mid August. The pollination period, the flowering stage in corn, is the most critical period in the development of a corn plant from the standpoint of grain yield determination. Stress conditions such as drought or hail damage have the greatest impact on yield potential during the reproductive stage. The following are some key steps 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. Under very dry conditions, silk emergence may be delayed, and such "asynchronization" of pollen shed and silking may result in poor kernel set and reduced grain yields. However, in some years under favorable growing condition, silks may actually emerge before tassels fully emerge and pollen shed starts in certain hybrids. On a typical midsummer day, peak pollen shed occurs in the morning between 9:00 and 11:00 a.m. followed by a second round of pollen shed late in the afternoon. Pollen may be shed before the tassel fully emerges ("stretches out"). Pollen shed begins in 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 mid morning 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. For more information on the potential for pollen drift contaminating non-transgenic (GMO) corn, consult Extension Fact Sheet AGF-135, Managing "Pollen Drift" to Minimize Contamination of Non-GMO Corn; it's available online at <http://ohioline.osu.edu/agf-fact/0153.html>.

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 rainstorm 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.

Pollen of a given plant rarely fertilizes all the silks of the same plant. Under field conditions 97% or more of the kernels produced by each plant may be pollinated by other plants in the field. The

(Continued on Page 4)

Weather Information Table

Week ending Sunday July 20, 2008

Station	Past Week Weather Summary Data							Accumulation				
	Air Temperature				Precip.		Avg	April 1, 2008 thru July 20, 2008				
							4 in	Precipitation			GDD Base 50°F	
	Hi	Lo	Avg	DFN	Total	Days	Soil Temp	Total	DFN	Days	Total	DFN
Northwest (1)												
Chalmers_5W	88	57	74	-1	0.24	1		15.96	+2.17	45	1386	-253
Francesville	87	57	74	+2	0.46	1		14.31	+0.37	45	1397	-101
Valparaiso_AP_I	90	58	76	+3	0.33	2		7.02	-7.69	39	1464	+2
Wanatah	90	56	74	+3	0.81	2	81	11.42	-2.77	45	1349	-47
Winamac	88	56	75	+2	0.61	2	79	15.28	+1.34	46	1389	-109
North Central(2)												
Plymouth	90	58	75	+2	1.05	1		13.31	-1.30	47	1377	-185
South_Bend	91	58	76	+4	0.80	2		10.86	-2.79	45	1473	+28
Young_America	87	60	76	+2	0.08	2		19.19	+5.80	46	1449	-79
Northeast (3)												
Columbia_City	89	54	73	+1	0.48	2	67	15.52	+1.78	46	1347	-32
Fort_Wayne	89	59	76	+2	0.54	1		15.71	+3.06	49	1524	+6
West Central(4)												
Greencastle	87	57	74	-3	0.00	0		29.65	+14.04	47	1427	-311
Perrysville	90	61	77	+3	0.05	1	83	21.73	+6.66	47	1622	-7
Spencer_Ag	91	59	75	+1	0.00	0		32.40	+16.36	53	1565	-60
Terre_Haute_AFB	90	59	76	+0	0.00	0		25.09	+9.92	41	1678	-58
W_Lafayette_6NW	88	58	76	+3	0.00	0	77	16.32	+2.47	53	1515	-17
Central (5)												
Eagle_Creek_AP	90	63	77	+2	0.00	0		24.19	+10.10	52	1708	-11
Greenfield	88	59	75	+0	0.00	0		25.58	+10.25	53	1491	-145
Indianapolis_AP	88	61	77	+2	0.02	1		21.08	+6.99	49	1732	+13
Indianapolis_SE	89	59	76	+0	0.00	0		22.71	+8.11	45	1495	-201
Tipton_Ag	89	58	74	+2	0.01	1	80	17.79	+3.87	52	1425	-55
East Central(6)												
Farmland	89	58	73	+0	0.21	1	77	16.77	+2.82	49	1387	-49
New_Castle	86	57	73	-1	0.00	0		22.02	+6.77	49	1391	-79
Southwest (7)												
Evansville	93	60	78	-1	0.03	1		19.73	+4.84	40	2009	-22
Freelandville	90	63	77	+1	0.00	0		22.88	+7.50	44	1754	-46
Shoals_8S	92	54	74	-3	0.00	0		19.69	+3.12	44	1614	-111
Stendal	92	60	77	-1	0.00	0		24.52	+7.98	57	1866	-29
Vincennes_5NE	93	60	77	+2	0.00	0	81	19.70	+4.32	39	1812	+12
South Central(8)												
Leavenworth	92	60	77	+2	0.00	0		19.74	+3.01	65	1838	+115
Oolitic	90	57	74	-2	0.00	0	80	22.51	+6.81	48	1543	-98
Tell_City	93	63	77	-1	0.00	0		19.82	+3.14	39	1936	+20
Southeast (9)												
Brookville	92	58	76	+2	0.00	0		18.94	+3.90	51	1593	+51
Greensburg	90	59	76	+3	0.00	0		22.62	+7.42	47	1648	+41
Scottsburg	91	56	76	-1	0.00	0		18.98	+3.49	49	1796	+13

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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.

The above weather information is provided by AWIS, Inc.
For detailed ag weather forecasts and data visit the AWIS home page at www.awis.com

Corn Pollination Underway in Many Ohio Corn Fields (Continued)

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. As noted above, poor kernel set is more often associated with poor timing of pollen shed with silk emergence – with silks emerging after pollen shed (poor “nick”). However, hybrids rarely seldom exhibit this problem unless they experience extreme drought stress.

Dr. Bob Nielsen, the corn extension specialist at Purdue University, has written two good articles on the flowering stages of pollen shed

and silk emergence which contain excellent images of the pollination process. They're available online at –

Nielsen, R.L. 2007. Tassel Emergence and Pollen Shed. Corny News Network, Purdue Univ. [On-Line]. Available at <http://www.agry.purdue.edu/ext/corn/news/timeless/Tassels.html>

Nielsen, R.L. 2007. Silk Emergence. Corny News Network, Purdue Univ. [On-Line]. Available at <http://www.agry.purdue.edu/ext/corn/news/timeless/Silks.html> .

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