



Indiana Crop & Weather Report

INDIANA AGRICULTURAL STATISTICS SERVICE
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CROP REPORT FOR WEEK ENDING JUNE 6

Rain slowed field activities in some areas last week as farmers were trying to finish up planting of corn and soybean fields. Heavy rain in a few areas caused ponding in some fields according to the Indiana Agricultural Statistics Service. Cutting and baling of hay continued around the state. Other major activities were side-dressing corn, post-emergence spraying of corn and soybeans, mowing roads and monitoring fields for insects.

CORN AND SOYBEANS

Corn planting is virtually complete statewide. Last year, corn planting was 95 percent complete and the 5-year average is 87 percent. Ninety-nine percent of the corn crop has **emerged** compared with 85 percent a year ago. Stands of corn look good in most fields. **Soybean planted** acreage advanced to 96 percent complete, far ahead of last year's 82 percent and the 5-year average of 69 percent. By area, soybean planting is 97 percent complete in the north, 98 percent in the central region and 89 percent in the south.

WINTER WHEAT

Virtually all of the **winter wheat** acreage has **headed**, on par with last year, but ahead of the 87 percent for the 5-year average. The **condition** of the winter wheat was 84 percent good to excellent compared with 65 percent last year.

OTHER CROPS

Pasture condition was rated 15 percent excellent, 68 percent good, 15 percent fair, and 2 percent poor. Transplanting of **tobacco** is 58 percent complete, compared with 41 percent last year and 37 percent for the average. First cutting of **alfalfa** hay is 70 percent complete compared with 72 percent last year and 46 percent for the 5-year average.

DAYS SUITABLE and SOIL MOISTURE

For the week ending Friday, 3.1 days were rated **suitable for fieldwork**. **Topsoil moisture** was rated 4 percent short, 74 percent adequate and 22 percent surplus. **Subsoil moisture** was rated 1 percent very short, 9 percent short, 77 percent adequate and 13 percent surplus.

CROP PROGRESS

Crop	This Week	Last Week	Last Year	5-Year Avg
Corn Planted	100	99	95	87
Corn Emerged	99	91	85	NA
Soybeans Planted	96	91	82	69
Soybeans Emerged	84	67	60	NA
Wheat Headed	100	98	100	87

CROP CONDITION

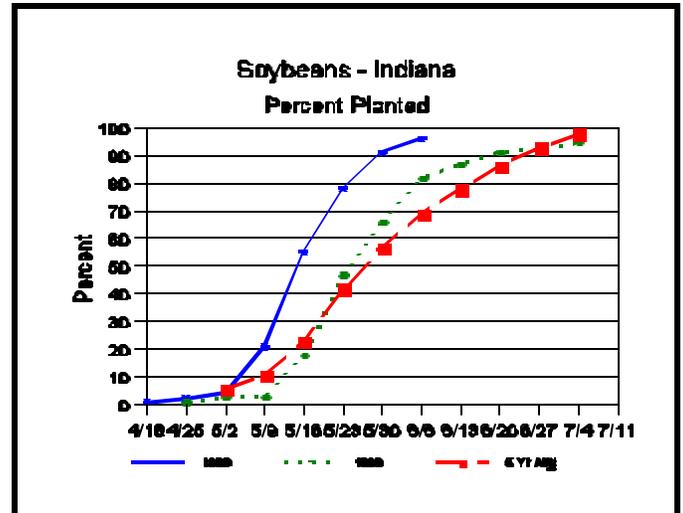
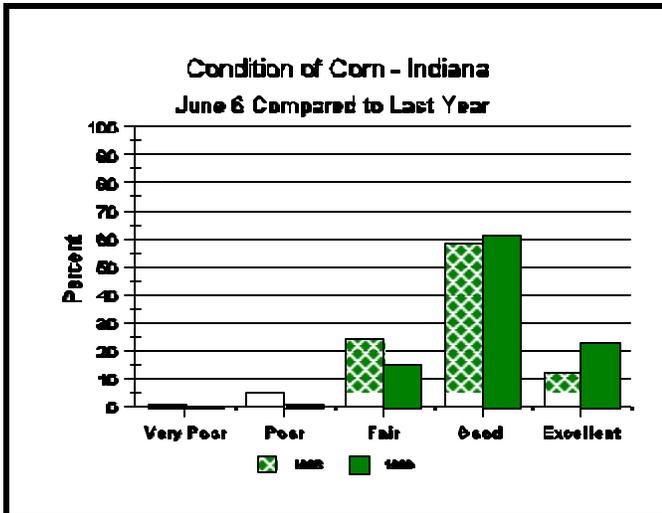
Crop	Very Poor	Poor	Fair	Good	Excellent
Corn	0	1	15	61	23
Soybeans	0	2	18	63	17
Winter Wheat 6/6	0	2	14	58	26
Winter Wheat 1998	3	8	24	50	15
Pasture	0	2	15	68	15

SOIL MOISTURE

	This Week	Last Week	Last Year
Topsoil			
Very Short	0	1	5
Short	4	10	17
Adequate	74	84	57
Surplus	22	5	21
Subsoil			
Very Short	1	1	2
Short	9	10	11
Adequate	77	83	67
Surplus	13	6	20

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



A Primer on Corn Seedling Root Development

Corn is a grass and has a fibrous type root system, as compared to soybeans or alfalfa which have tap root systems. Successful establishment of the corn plant's root system helps ensure successful establishment of the crop itself. Stunting or restriction of the root system, especially in young plants, will likely stunt the entire plant's development. To best understand rooting problems, it is important to understand that the corn plant actually establishes two distinct root phases, one more important than the other.

The Seminal (or Seed) Root System

Seminal roots originate near the seed and are comprised of the radicle and lateral seminal roots. This initial seminal root system anchors the young plant and absorbs water and nutrients for the first two to three weeks. Seminal roots cease new growth shortly after the coleoptile emerges at the soil surface. A young corn seedling depends primarily on the energy reserves of the kernel until permanent (nodal) roots develop. Within a few days after emergence of the coleoptile and first leaves from the soil, a second root system, the nodal roots, begin to develop from the crown or growing point.

If damage occurs to seminal roots or the mesocotyl before nodal roots become established, stunting or death of the plant will occur. Such damage includes salt injury from excessive rates of starter fertilizer, seedling blight, herbicide injury and insect feeding damage.

Nodal (Or Permanent) Root System

Nodal roots begin to elongate from the coleoptile crown shortly after growth stage VE and are distinctly visible by growth stage V1. An individual set of roots forms at each stalk node below-ground plus one or more above-ground nodes. By growth stage V6, the nodal roots are the main root system of the plant.

Four stalk nodes usually comprise the 'woody' triangle at the bottom of a corn stalk. The internode above the fourth node elongates about 0.5 inch, above which is found the fifth node (still below or just at the soil surface). Consequently, five sets of nodal roots will usually be detectable below ground (one set for each below ground stalk node).

(Continued on page 4.)

Weather Data

Week ending Sunday June 6, 1999

Station	Past Week Weather Summary Data							Accumulation				
	Air				Avg			April 1, 1999 thru				
	Temperature				Precip.			June 6, 1999				
	Hi	Lo	Avg	DFN	Total	Days	Temp	Total	DFN	Days	Total	DFN
Bloomington	88	60	72	+4	1.78	4		10.21	+0.79	29	793	+116
Bluffton	87	54	70	+3	1.53	3	69	6.84	-1.29	24	668	+112
Butler	89	58	73	+5	0.82	3	71	8.18	-1.04	34	763	+40
Castleton	86	57	71	+3	1.90	4		8.90	+0.08	34	724	+99
Crawfordsville	86	53	69	+1	1.89	4	69	9.10	+0.28	29	598	-30
Dubois_Ag	88	56	72	+4	2.32	4	77	9.27	-0.62	30	813	+128
Evansville	89	59	74	+3	2.71	5		11.72	+2.19	27	928	+101
Farmland	94	54	72	+6	1.18	4	66	7.77	-0.39	34	658	+171
Fort_Wayne	87	53	70	+4	1.92	4		10.71	+3.18	30	634	+117
Freelandville	87	60	72	+3	2.80	4		10.62	+0.90	30	791	+98
Greenfield	87	57	71	+4	1.85	4		7.87	-1.11	34	720	+124
Indianapolis_AP	87	61	72	+4	1.71	4		9.41	+1.01	34	796	+148
Indianapolis_SE	86	58	71	+3	2.05	4		8.65	-0.17	37	698	+73
Logansport	86	55	70	+4	1.03	4		9.80	+1.85	30	656	+118
New_Castle	85	54	68	+3	0.95	3		7.66	-1.63	31	582	+81
Perrysville	87	56	72	+5	1.65	3	74	8.73	-0.02	30	745	+151
Plymouth	89	52	70	+4	0.95	3		10.64	+2.18	30	639	+72
Scottsburg	88	58	73	+5	1.56	3		7.23	-2.18	24	836	+141
Shoals	87	57	70	+2	1.27	5		8.58	-1.65	26	750	+84
South_Bend	89	50	71	+6	0.56	4		9.27	+1.47	30	667	+177
Tell_City	87	61	74	+4	1.34	6		10.07	-0.37	22	915	+146
Terre_Haute_Ag	90	59	73	+5	2.48	4	74	9.65	+0.56	25	866	+208
Tipton_Ag	88	55	70	+5	1.71	4	68	8.33	-0.08	28	601	+96
Valparaiso_Ag	90	48	71	+6	0.89	3		9.35	+0.70	28	652	+140
Vincennes_5NE	88	59	72	+4	2.75	6	74	11.62	+1.90	37	819	+126
Wanatah	90	43	69	+5	0.85	4	73	9.67	+1.49	30	526	+64
W_Lafayette_6NW	88	57	71	+5	1.95	5	75	11.42	+3.10	28	684	+139
Wheatfield	89	51	70	+5	1.78	3		11.16	+3.16	25	659	+169
Winamac	88	53	69	+4	1.08	3		11.03	+3.02	27	652	+112
Young_America	88	54	69	+3	2.26	3		8.82	+0.87	28	606	+68

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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Roots (Continued)

Elongation of the internode above the fifth node 'pushes' the sixth node above ground. Continued elongation of subsequent stalk internodes will result in higher and higher placement of the remaining stalk nodes. Additional sets of nodal roots that form at above ground stalk nodes are usually assigned the 'fancy' name of brace roots, but are functionally identical to those nodal roots that form below ground. If surface soil conditions are suitable (moist and not excessively hot), brace roots can successfully enter the soil, proliferate and effectively scavenge the upper soil layer for water and nutrients.

–R. L. (Bob) Nielsen, Agronomy Dept., Purdue University

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