



# Indiana Crop & Weather Report

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## CROP REPORT FOR WEEK ENDING AUGUST 22

Farmers are getting equipment ready and cleaning grain bins in preparation for the upcoming harvest season. Corn and soybean harvest is expected to begin early in some areas of the state, according to the Indiana Agricultural Statistics Service. Major activities during the week included chopping silage, harvesting tobacco, selling grain, mowing roads, baling hay, attending the state fair and care of livestock.

### CORN

**Corn** condition declined from last week with 28 percent of the crop rated good to excellent compared with 66 percent at this time last year. Ninety-seven percent of the corn crop has reached the **dough** stage compared with 80 percent last year and 73 percent for the average. Sixty percent of the corn acreage is in the **dent** stage compared with 32 percent last year and 20 percent for the 5-year average. By region, 54 percent of the corn acreage is in the dent stage in the north, 66 percent in the central and 61 percent in the south.

### SOYBEANS

Soybean **condition** declined from last week and is rated 27 percent good to excellent compared with 70 percent last year. Ninety-seven percent of the soybean acreage is **setting pods** compared with 85 percent last year and 81 percent for the 5-year average. By region, 99 percent of the soybean acreage is setting pods in the north, 97 percent in the central and 94 percent in the south. Seven percent of the soybean acreage is **shedding leaves** compared with 4 percent last year and 1 percent for the average.

### OTHER CROPS

**Pasture condition** declined from last week and was rated 5 percent good, 32 percent fair, 35 percent poor and 28 percent very poor. Third cutting of **alfalfa** hay is 87 percent complete compared with 63 percent last year. Tobacco harvest is 25 percent complete.

### DAYS SUITABLE and SOIL MOISTURE

For the week ending Friday, 6.4 days were rated **suitable for fieldwork**. **Topsoil moisture** was rated 33 percent very short, 45 percent short and 22 percent adequate. **Subsoil moisture** was rated 35 percent very short, 50 percent short and 15 percent adequate.

### CROP PROGRESS

| Crop                   | This Week | Last Week | Last Year | 5-Year Avg |
|------------------------|-----------|-----------|-----------|------------|
| Percent                |           |           |           |            |
| Corn in Dough          | 97        | 82        | 80        | 73         |
| Corn Dent              | 60        | 30        | 32        | 20         |
| Soybeans Podding       | 97        | 88        | 85        | 81         |
| Soybeans Shedding Lv   | 7         | NA        | 4         | 1          |
| Alfalfa, Third Cutting | 87        | 75        | 63        | NA         |

### CROP CONDITION

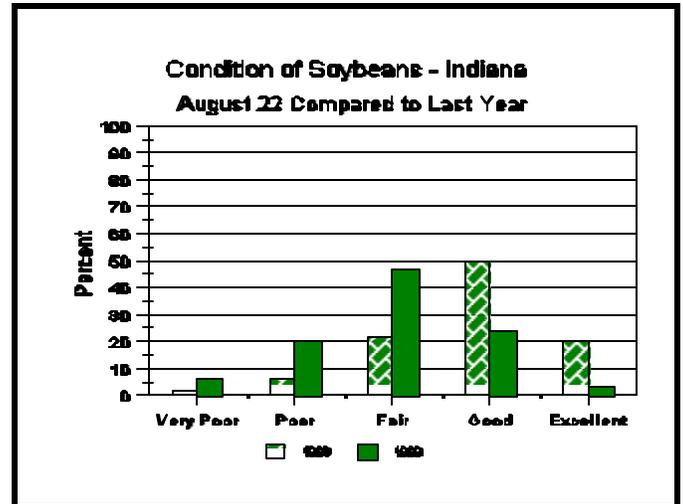
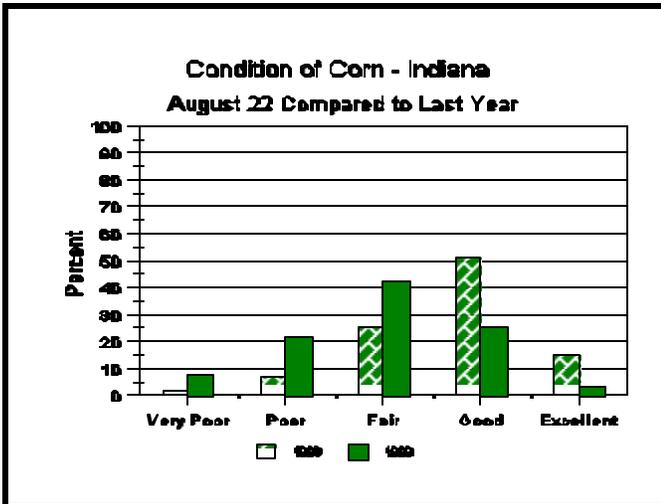
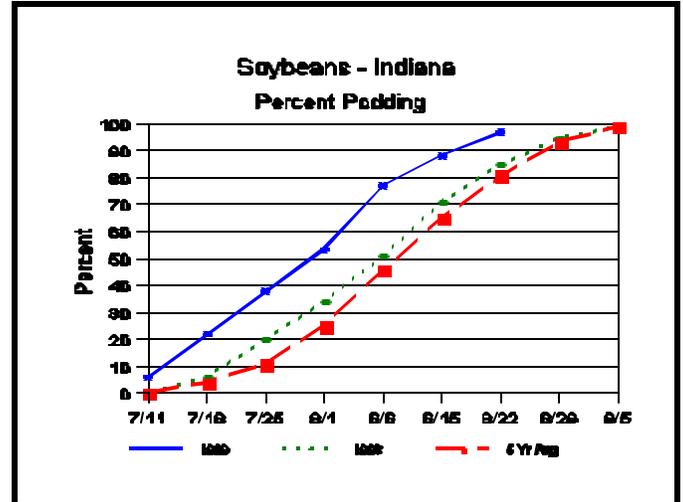
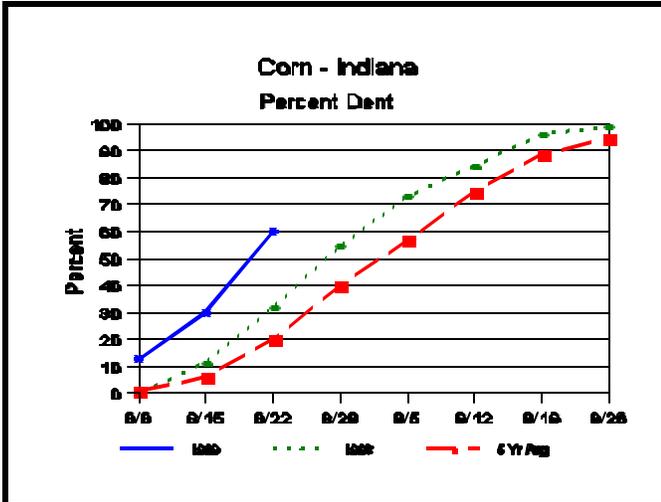
| Crop     | Very Poor | Poor | Fair | Good | Excellent |
|----------|-----------|------|------|------|-----------|
| Percent  |           |      |      |      |           |
| Corn     | 8         | 22   | 42   | 25   | 3         |
| Soybeans | 6         | 20   | 47   | 24   | 3         |
| Pasture  | 28        | 35   | 32   | 5    | 0         |

### SOIL MOISTURE

|                | This Week | Last Week | Last Year |
|----------------|-----------|-----------|-----------|
| Percent        |           |           |           |
| <b>Topsoil</b> |           |           |           |
| Very Short     | 33        | 35        | 1         |
| Short          | 45        | 44        | 23        |
| Adequate       | 22        | 21        | 73        |
| Surplus        | 0         | 0         | 3         |
| <b>Subsoil</b> |           |           |           |
| Very Short     | 35        | 34        | 1         |
| Short          | 50        | 51        | 13        |
| Adequate       | 15        | 15        | 83        |
| Surplus        | 0         | 0         | 3         |

--Ralph W. Gann, State Statistician  
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# Crop Progress



## A Pre-Harvest Yield Estimation Technique for Corn

Corn growers often desire to predict grain yields 4 to 6 weeks ahead of harvest in order to help develop grain marketing plans. The desire to predict yields in individual fields is particularly keen when growing conditions have been unusual. A number of yield prediction methods exist, but the one most commonly used is probably the Yield Component Method.

Also called the Slide Rule Yield Calculator, this method was developed by the University of Illinois many years ago. The advantage of this method is that it can be used shortly after pollination is complete, when kernel development is easily determined. The accuracy of the Yield Component Method is often questionable, however, due to the fact that an average kernel weight value is figured into the calculation in order to determine yield.

Select several sites in the field. At each site, measure off a length of row equal to 1/1000th acre. For 30-inch rows, this would be 17 feet 5 inches. Count the number of harvestable ears in the 1/1000th acre. On every fifth ear, count the number of kernel rows per ear and determine the average. On the same ears, count the number of kernels per row and determine the average.

Calculate estimated yield for each site in the field by multiplying ear number by average row number by average kernel number, then dividing that result by 90. The value of '90' represents the average kernel weight (90,000 kernels/56 pound bushel). Repeat the procedure for each site and average the yields of all sites to estimate yield for the field.

(Continued on Page 4.)

# Weather Data

## Week ending Sunday August 22, 1999

| Station                  | Past Week Weather Summary Data |    |     |     |         |      |      | Accumulation                |                                       |      |               |      |   |   |
|--------------------------|--------------------------------|----|-----|-----|---------|------|------|-----------------------------|---------------------------------------|------|---------------|------|---|---|
|                          | Air                            |    |     |     | Precip. |      |      | Avg<br>4 in<br>Soil<br>Temp | April 1, 1999 thru<br>August 22, 1999 |      |               |      |   |   |
|                          | Temperature                    |    |     |     | Precip. |      |      |                             | Precipitation                         |      | GDD Base 50°F |      |   |   |
|                          | Hi                             | Lo | Avg | DFN | Total   | Days | Temp | Total                       | DFN                                   | Days | Total         | DFN  |   |   |
| <b>Northwest (1)</b>     |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Valparaiso_Ag            | 85                             | 51 | 68  | -3  | 0.65    | 1    |      | 17.21                       | -1.47                                 | 55   | 2450          | +286 |   |   |
| Wanatah                  | 86                             | 40 | 63  | -7  | 0.45    | 2    | 75   | 17.67                       | -0.56                                 | 55   | 2088          | +17  |   |   |
| Wheatfield               | 89                             | 49 | 68  | -3  | 0.57    | 2    |      | 22.47                       | +4.70                                 | 49   | 2472          | +349 |   |   |
| Winamac                  | 87                             | 50 | 67  | -4  | 0.65    | 1    | 74   | 17.90                       | -0.13                                 | 45   | 2487          | +297 |   |   |
| <b>North Central (2)</b> |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Logansport               | 87                             | 54 | 68  | -3  | 0.46    | 2    |      | 17.56                       | +0.34                                 | 58   | 2521          | +274 |   |   |
| Plymouth                 | 87                             | 50 | 66  | -6  | 0.67    | 2    |      | 19.33                       | +1.03                                 | 59   | 2438          | +146 |   |   |
| South_Bend               | 86                             | 53 | 69  | -2  | 0.59    | 2    |      | 15.50                       | -2.06                                 | 47   | 2564          | +411 |   |   |
| Young_America            | 85                             | 55 | 72  | +2  | 0.00    | 0    |      | M                           | I                                     | S    | S             | I    | N | G |
| <b>Northeast (3)</b>     |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Bluffton                 | 87                             | 52 | 68  | -4  | 0.55    | 2    | 72   | 14.99                       | -2.35                                 | 49   | 2561          | +256 |   |   |
| Fort_Wayne               | 88                             | 50 | 68  | -4  | 0.39    | 2    |      | 13.54                       | -2.74                                 | 51   | 2516          | +267 |   |   |
| <b>West Central (4)</b>  |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Crawfordsville           | 89                             | 45 | 68  | -5  | 0.12    | 1    | 73   | 14.72                       | -4.66                                 | 55   | 2375          | -38  |   |   |
| Perrysville              | 88                             | 50 | 68  | -4  | 0.12    | 1    | 78   | 15.27                       | -4.19                                 | 52   | 2557          | +193 |   |   |
| Terre_Haute_Ag           | 94                             | 53 | 72  | -1  | 0.18    | 2    | 78   | 16.48                       | -2.96                                 | 55   | 2901          | +381 |   |   |
| W_Lafayette_6NW          | 87                             | 48 | 68  | -4  | 0.03    | 1    | 77   | 18.96                       | +0.92                                 | 52   | 2565          | +325 |   |   |
| <b>Central (5)</b>       |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Castleton                | 90                             | 54 | 71  | -3  | 0.45    | 2    |      | 16.32                       | -2.71                                 | 63   | 2677          | +194 |   |   |
| Greenfield               | 91                             | 55 | 70  | -2  | 0.03    | 1    |      | 13.41                       | -6.79                                 | 56   | 2654          | +261 |   |   |
| Indianapolis_AP          | 89                             | 55 | 71  | -2  | 0.04    | 1    |      | 14.94                       | -3.39                                 | 54   | 2813          | +314 |   |   |
| Indianapolis_SE          | 89                             | 53 | 70  | -4  | 0.08    | 1    |      | 14.11                       | -4.92                                 | 60   | 2586          | +103 |   |   |
| Tipton_Ag                | 87                             | 48 | 67  | -4  | 0.00    | 0    | 72   | 14.03                       | -4.31                                 | 48   | 2354          | +177 |   |   |
| <b>East Central (6)</b>  |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Farmland                 | 88                             | 46 | 67  | -4  | 0.07    | 2    | 69   | 15.73                       | -2.09                                 | 57   | 2475          | +351 |   |   |
| New_Castle               | 88                             | 50 | 67  | -5  | 0.18    | 1    |      | 15.59                       | -3.89                                 | 57   | 2279          | +105 |   |   |
| <b>Southwest (7)</b>     |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Dubois_Ag                | 95                             | 51 | 72  | -2  | 0.00    | 0    | 84   | 17.97                       | -3.13                                 | 50   | 2796          | +262 |   |   |
| Evansville               | 94                             | 54 | 74  | -3  | 0.02    | 1    |      | 18.66                       | +0.09                                 | 53   | 3016          | +111 |   |   |
| Freelandville            | 87                             | 57 | 71  | -3  | 0.10    | 1    |      | 21.19                       | +1.84                                 | 50   | 2771          | +168 |   |   |
| Shoals                   | 90                             | 53 | 71  | -3  | 0.00    | 0    |      | 17.47                       | -3.53                                 | 45   | 2671          | +156 |   |   |
| Vincennes_5NE            | 91                             | 55 | 72  | -2  | 0.07    | 2    | 74   | 20.42                       | +1.07                                 | 68   | 2874          | +271 |   |   |
| <b>South Central (8)</b> |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Bloomington              | 91                             | 55 | 72  | -2  | 0.13    | 1    |      | 15.60                       | -4.22                                 | 47   | 2822          | +269 |   |   |
| Tell_City                | 96                             | 57 | 76  | +2  | 0.01    | 1    |      | 16.37                       | -4.83                                 | 46   | 3122          | +346 |   |   |
| <b>Southeast (9)</b>     |                                |    |     |     |         |      |      |                             |                                       |      |               |      |   |   |
| Butlerville              | 94                             | 50 | 71  | -4  | 0.31    | 1    | 77   | 16.02                       | -3.39                                 | 61   | 2730          | +144 |   |   |
| Scottsburg               | 94                             | 52 | 72  | -2  | 0.46    | 1    |      | 14.76                       | -5.16                                 | 43   | 2891          | +303 |   |   |

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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## Estimation (Continued)

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For example, let's say in Site #1 you counted 24 harvestable ears. Sampling every fifth ear resulted in an average row number of 16 and an average number of kernels per row of 30. The estimated yield for that site would  $(24 \times 16 \times 30)$  divided by 90, which equals 128 bushels per acre.

Since weight per kernel will vary depending on hybrid and environment, this yield estimator should only be used to estimate 'ballpark' grain yields. For example, yield will be overestimated in a year with poor grain fill conditions (e.g., low kernel weight from a drought year) and underestimated in a year with excellent grain fill conditions (e.g., large kernel weight from non-stress grain fill period).

Remember that this method of estimating pre-harvest grain yield in corn indeed provides only an estimate. This method will probably get you within plus or minus 30 bushels of the actual yield. Obviously, the more sampling performed within a field, the more accurately you will 'capture' the variability of yield throughout the field. Use the yield estimates obtained by this method for general planning purposes only.

--R.L. (Bob) Nielsen, Agronomy Dept., Purdue Univ.

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