Brown Beans

I got this article from my colleague, Clarke McGrath. I thought this was a nice explanation and would address some of the same concerns I have been hearing this past week. Although many acres of soybeans have already received a post-emerge application of Group 14 herbicides, this is a good reminder for folks with later planted beans.

Do Post Emerge Burners Hurt Soybean Yields?

We are getting this question a lot with the number of brown bean fields that popped up over the last week; it doesn’t take long (or a very high rate) for the Group 14’s to burn soybean tissue when we have good growing conditions.

We’ve worked with these products for decades, but as they faded from use in the years where glyphosate could stand alone, we forgot how visually disturbing it can be to have a field of beans turn from green to brown over lunch break. So… does burning our soybean fields like that reduce yield? It can… but the vast majority of the time it does not. Our experiences tell us this, and some research done a while back in Illinois and Iowa (sponsored by checkoff funds from the Soybean Research and Development Council) did a good job of ID’ing when we can run into trouble; Injury from postemergence herbicides is not a good predictor of soybean yield loss. There are a number of factors that likely influence the potential for postemergence herbicide injury to cause soybean yield reductions. These high risk factors include late planting dates, late herbicide applications, and poor environmental conditions for soybean recovery, such as low soil moisture and high temperatures. If no visual injury develops from the postemergence herbicide, there is a minimal risk of soybean yield reductions. However, just because herbicide injury is observed, soybean yields are not necessarily reduced.

Soil, Water and Wind

A summary of results from the latest Iowa Farm and Rural Life Poll shows the majority of farmers are aware of and support Iowa's Nutrient Reduction Strategy (NRS). You can find this report at "Farmer Perspectives on Iowa's Nutrient Reduction Strategy". Awareness is often a critical first step toward action.

Still in its infancy, the NRS was first implemented in Iowa in 2013 with the goal of addressing both point sources and non-point sources of nitrogen and phosphorus loss to Iowa’s water bodies by 45%.
For the three-year, multi-location study, more than 95% of the (288) postemergence herbicide applications did not reduce soybean yield regardless of the herbicide or level of soybean injury observed. Significant yield loss occurred in only 3.5% of the treatments. These few instances often did not correlate to severe early-season injury and were usually associated with late herbicide applications to late-planted soybeans. These factors (late-planted soybean and late-season herbicide applications) were more conducive to environmental conditions that may have not been ideal for soybean recovery.

**Nitrogen Concerns**

Last year at this time we were already seeing considerable loss of nitrogen in our corn crop. For the most part, minus some potholes, our corn crop in NC Iowa is looking good and there are little to no signs of nitrogen deficiency. Based on some observations from work done by John Sawyer, Extension Soil Fertility Specialist, you can see suggestions about rainfall and applications of nitrogen in this article [Nitrogen Issues So Far this Spring](#). Please note the date of that article was June 9 so the figures showing rainfall will have changed since then. As an update, I gleaned the following rainfall amounts from April 1 to June 29 for both this year and last year compared to average. See table below.

<table>
<thead>
<tr>
<th>Location</th>
<th>Rainfall (inches) April 1-June 29 2015</th>
<th>Average</th>
<th>Rainfall (inches) April 1-June 29, 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarion</td>
<td>16.41</td>
<td>12.63</td>
<td>20.43</td>
</tr>
<tr>
<td>Eldora</td>
<td>14.6</td>
<td>12.9</td>
<td>21.68</td>
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<tr>
<td>Fort Dodge</td>
<td>19.12</td>
<td>12.7</td>
<td>16.32</td>
</tr>
<tr>
<td>Hampton</td>
<td>16.64</td>
<td>13.19</td>
<td>23.12</td>
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<tr>
<td>Humboldt</td>
<td>19.12</td>
<td>12.17</td>
<td>18.1</td>
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<tr>
<td>Iowa Falls</td>
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<td>Webster City</td>
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<td>12.18</td>
<td>17.13</td>
</tr>
</tbody>
</table>

Source: Iowa Mesonet

Iowa Nutrient Reduction Strategy

Reducing Nutrient Loss: Science Shows What Works

Iowa Nutrient Research Center

Iowa Farm and Rural Life Poll: Iowa
Weeds Week, 5 locations - Aug 3-7
- http://www.aep.iastate.edu/weeds/

Iowa Drainage School, Nashua - Aug 25-27
- http://www.aep.iastate.edu/ids/

CCA Exam Review - online course (new for 2015!)
- http://www.aep.iastate.edu/cca/

The following is a partial list of farmland leasing meetings being organized by our ISUEO Farm Management Team. Contact your local County Extension office to register. Registration fees apply in most counties.

Cerro Gordo, August 19 at 1:30 p.m., at the Beem Center at NIACC. Call 641-423-0844 to register.

Franklin, August 11 at 7:00 p.m., at the United Methodist Church. Call 641-456-4811 to register.

Hamilton, August 5 at 1:30 p.m., at the Hamilton Co. Extension Office. Call 515-832-9597 to register.

Hardin, August 19 at 7:00 p.m., at Ellsworth CC, Hamilton Auditorium. Call 641-648-4850 to register.

Humboldt, August 4 at 1:30 p.m., at Humboldt Co. Extension Office. Call 515-332-2201 to register.

Webster, August 20 at 1:30 p.m., at Webster Co. Extension Office. Call 515-576-2119 to register.

Wright, August 20, at 9:00 a.m., at Wright Co. Extension Office. Call 515-532-3453 to register.