**Module 8 Pests & IPM: Summative Assessment Discussion**

**Read the entire assignment through and then return here to review the following information before you begin the assignment:**

Explore the [International Survey of Herbicide Resistant Weeds](http://weedscience.org) and answer the questions below. On the International Survey of Herbicide Resistant Weeds Home page, examine the trends of herbicide resistant weeds. In the left column chose "*Summaries*" by "*US State Map"* and by "*Countr*y". By moving your cursor over the states and scrolling down the list of countries, compare the number of herbicide resistant weed species across a range of geographical regions. You can also view the data in as a “*Global* Map.”

You will also use the following information in the proposed scenario:

Dow AgroSciences developed a transgenic trait for resistance to 2,4-D, an herbicide that controls broadleaf weeds (dicot plants) that has been transferred to soybean, corn and cotton crops. The trait is stacked or added to soybeans that also have resistance to glyphosate, and another herbicide called glufosinate.

Monsanto has produced a transgenic trait for resistance to an herbicide called dicamba, that they are stacking (or adding to) soybeans that have glyphosate resistance. Some formulations of the dicamba herbicide are volatile, and there is risk that when farmers spray dicamba it will drift into neighboring fields and field edges, potentially damaging other crops and wild plants in field edges and natural ecosystems. These field edges and other plants often provide habitat for beneficial organisms, such as pollinators, pest predators, and wildlife.

**Directions**

Read the following scenario and in approximately **450-500 words** answer the questions below. I suggest you write your response in a separate document and then copy and paste it into Canvas. Once you have posted your own answers, you need to **respond to ONE classmate**. Your response should be approximately **150 words**.

Assume you manage a 200 acre corn and soybean farm in Southern Pennsylvania. You keep up with the latest technological advances in farming and use seeds from either Dow or Monsanto depending on what your seed salesperson recommends. You are proud of your farm and strive to keep your crops free from both weeds and harmful insects that could damage your crop and cut into your profits. Your immediate neighbors on the East side have a large organic vegetable production farm. Based on what you have observed on the above website, the information mentioned above, and from what you have learned through the readings in this module, answer the following questions:

What are some potential problems you might encounter if you adopt seeds with the new herbicide traits listed above? How do these problems differ between now and in the future?

What other weed control strategies could you use to control glyphosate-resistant weeds?

How might your pest management system affect your neighbors? Are there strategies you can use to mitigate potential harm to your neighbors’ fields?

If you were farming in Thailand or Egypt instead of in Pennsylvania, what might explain differences in the number of herbicide resistant species you encounter there compared to your farm in the United States? If you farmed in Canada, Australia, or Western Europe what might explain the herbicide resistant species you encounter there?

**Consider the following possible questions when responding to a classmate:**

How do their answers differ from yours? Are there suggestions you can make to help them improve their IPM practices-for weeds as well as insects? Do they have possible solutions you could use on your farm? Is there a question you have about why or how they answered the way they did?