Assignment CROP 440/540 Week 7

A field corn grower near Mythtown, Central State, has called, and asked you to visit a field that he is worried about. He says the entire field looks sick, and he wants you to give an expert opinion on what you think is wrong. During your conversation, you learn that about a week ago, the grower asked a neighbor to spray the field with Distinct (which contains dicamba, a growth regulator herbicide[[1]](#footnote-1)) to control common ragweed and pigweed species. The corn is not Roundup Ready, and he suspects that his neighbor may have accidentally had some Roundup (which contains glyphosate, an EPSPS inhibitor) left in the tank when he sprayed the field. You tell the grower that you can meet him tomorrow to take a look at the corn field.

Please answer:

1. On your visit to the field, what type of injury symptoms would you expect to find if glyphosate is the cause of the problem?
2. How would you determine whether it was glyphosate or another type of amino acid synthesis inhibitor?

Which is an easier route of entry for a herbicide, a leaf or a root, and why?

Explain how the herbicide molecule, cuticle, and environment affect absorption.

Describe the difference between adsorption and absorption.

1. Dicamba is slightly similar to 2,4-D. Use EM8785, How Herbicides Work, as a guide to help you answer this question in the context of dicamba/2,4-D. Hint: because the questions center on glyphosate, it is not really necessary to know much about dicamba. [↑](#footnote-ref-1)