

Pre-Harvest Use Of Glyphosate

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When you tell patients to get off gluten, have you ever heard "I have eaten bread products all my life, it can't be making me sick?" or "Isn't bread the staff of life?" Well I have some information that will make your gluten discussions a lot easier. I just discovered, wheat farmers for the last 24 years have been using Roundup® as a drying agent with increasing frequency. By spraying Roundup® on their wheat fields 7-10 days before they harvest, they can dry the field out faster, a process called "desiccation."

A wheat field often ripens unevenly, so by applying Roundup® pre-harvest, the greener parts of the field will dry out faster. Farmers like this practice because Roundup® poisons both weeds and wheat, allowing an earlier harvest. Drying crops when they are in the field means reduced commercial drying costs to farmers as well. But the major benefit to the farmer is an increased yield.



When you expose wheat to a toxic chemical like glyphosate, it actually releases more seeds resulting in a slightly greater yield. Monsanto literature encourages farmers to apply pre-harvest applications of Roundup® on many crops not just wheat. Barley, oats, canola, sunflower, flax, peas, lentils, dry beans and sugar cane are just a few examples. The reality is many of our grains, oils and sweeteners have been exposed to Roundup®.

My thanks to authors Samsel and Seneff for their brilliant paper linking gluten intoler-

ance to celiac disease. Experienced viewers know that we have 6-20 times more gluten sensitivity than diagnosed celiac.

Let's look at one of the graphs from their paper below and then highlight some of the mechanisms of how Roundup® is such an effective plant poison.

This graph represents the deaths due to intestinal infection and the amount of glyphosate applied to wheat. The bars in the graph represent the amount of increasing glyphosate that have been

applied since 1990. On the left side of the graph you can see that very little was used in 1990, 91 and 92 then the use increased. The intestinal deaths did not occur right away but rise as the amount of glyphosate is accelerated.

I know this graph does not establish a direct causal relationship. However you can see similar graphs below in the Samsel and Sen-eff article that show associations with thyroid cancer, acute kidney injuries and death rate from kidney disease. Interestingly, Louisiana has the highest rate of kidney failure in the United States, 26.34 per 100,000 vs. the rest of the US 14.55 per 100,000. Glyphosate has been a ripening agent on sugar cane, a major crop, since 1980.

You can see lots of reasons why glyphosate is so toxic in the article below. Let's look at four:

1. Glyphosate suppresses the shikimate pathway needed to make tryptophan, tyrosine, and phenylalanine in bacteria and plants. Since humans don't possess this pathway, we depend upon our ingested food and our gut microbes to provide these essential nutrients.

2. Glyphosate also negatively impacts human health through the chelation of minerals such as iron, cobalt, molybdenum and manganese. More recently magnesium has been identified as a mineral chelated by glyphosate. Depletions of these key minerals in our body and the plants we eat, limit enzymatic activity. Limit enzymes... limit life.

3. Interference with cytochrome enzymes, especially P450 which are critical for detoxifying environmental toxins of all kinds. Thus we are not only ingesting a toxin but we limit our ability to break down other toxins.

4. Glyphosate, patented as an antimicrobial, has been shown to disrupt gut bacteria in animals, preferentially killing beneficial forms and causing an overgrowth of pathogens. Evidence of disruption of gut bacteria by glyphosate is available for poultry, cattle, and swine. For example salmonella and clostridium are highly resistant to glyphosate, whereas bifidobacteria, and lactobacillus are killed.

You can see why Dr. Fasano, one of the world's experts on gluten sensitivity, says every time we eat wheat we get a leaky gut. The gut repairs but it is leaky until it does. Many people don't have diagnosable gluten intolerances yet; however, as we have discovered in the past, when you eat wheat your gut membranes are affected. A leaky gut is the portal to chronic diseases of all sorts, particularly autoimmunity.

I don't know about you but I am angry that financial gain is prevailing when it is clear that glyphosate causes serious harm to the microorganisms in our soil, the biochemistry of plants we eat and our own microbiome. Unfortunately, we can't depend upon the government to outlaw these practices. The profits and practices are too familiar to expect change to come quickly. But we can discuss these revelations with our family and patients, teaching them how to avoid and detox the poisons they are tempted with every day.

These are the kinds of conversations that when spoken in sincerity and from the heart, endear you to your patients. Yes, they are time consuming and difficult, but in the end it's the right thing to do. I don't know about you but with information like this the case for eating organic gets stronger every day.

Thanks for reading this week's edition. I'll see you next Tuesday.