GOLD NUGGET

Common Herbicides Found To Increase Antibiotic Resistance In Disease-Causing Bacteria

Most doctors now will not prescribe antibiotics for common colds and other bacterial infections. Did you know that now a research team from the University of Canterbury in New Zealand has determined that various widely used herbicides can cause bacteria to also build up a resistance to antibiotics. These include the world's most commonly used herbicide Roundup, produced by agrochemical and biotechnology giant Monsanto. Roundup contains a chemical named glyphosate, which has been described by Dr. Stephanie Seneff, Senior Research Scientist at the MIT Computer Science and Artificial Intelligence Laboratory, as **"the most important factor in the development of multiple chronic diseases and conditions that have become prevalent in the Westernized societies."**

Other herbicides tested included Nufarm's Kamba as well as 2,4-D. The latter is a chemical that is a key ingredient in a herbicide developed by Dow AgroSciences. In June 2012, Reuters published a report detailing the findings of a World Health Organization unit that stated 2,4-D "possibly" causes cancer in humans.

Upon reading such reports, *it becomes quite baffling as to why these chemicals are sprayed upon the very food that we depend on consuming to fuel the healthy growth and maintenance of our bodily systems*. And it doesn't quite fall in alignment with reason and common sense that our society would allow these chemicals into the delicate and developing bodies of the next generation.

If herbicide exposure can indeed prompt disease-causing bacteria to build up a resistance to antibiotics, what concentrations are required to trigger this effect? Heinemann says, "The effects were detectable at herbicide concentrations that were above currently allowed residue levels on food. However, they were within the range of concentrations encountered during application of the herbicides."

Does this mean, that if bacterial resistance is generated even when herbicide is applied in accordance with legal restrictions in terms of concentration, that safety regulations need to be revised? Heinemann says, "This is a complicated question for several reasons. Importantly, the effects occur at concentrations above legally allowed levels in food. However, the effects of different kinds of agents are additive. For example, we found that aspirin and Kamba could induce the effect when together at concentrations that neither could on its own. The concentrations that may be in some (farm) animal feed in theory could be high enough to induce the effect. **For example, it is legal in New Zealand (and probably other countries too) to graze farm animals on paddocks recently sprayed with Roundup concentrations that can cause this effect."**

Even though these negative effects were not observed in concentrations of herbicide that are allowed to be present in the food supply, what implications may arise if we are consuming small amounts over a long period of time? Heinemann states, "We are only now testing whether peak concentration or long exposure to lower concentrations might be more important. I think that we are getting some interesting results but I'll have to leave it there till they've been through peer review."

Considering the detrimental problems that the herbicides in question can potentially inflict, both in terms of antibiotic resistance and in light of cancer concerns, it is time to start questioning the true value of such farming practices? **Is it really worth exposing ourselves to these chemicals — at any level — just to prevent the growth of weeds, which can be regulated in more natural ways?**

Farming Secrets says: Eradicating weeds to reduce the competition for nutrients and moisture is a myth.

Ref: Luke Sumpter of Reset