

From: [Chassy, Bruce](#)
To: [SACHS, ERIC S \(AG/1000\)](#)
Cc: [Wayne Parrott](#)
Subject: Re: Chatter: New issue making the rounds
Date: Tuesday, September 13, 2011 11:40:26 AM

Eric

I see the attachment, you want me to send it to chatter for you?

Bruce

On Sep 13, 2011, at 11:32 AM, SACHS, ERIC S (AG/1000) wrote:

Bruce and Wayne,

I attempted from my Blackberry to provide our response to the USGS studies to AgBioChatter. If you don't see it, I wanted you to have it. We will finalize soon but it is in pretty good shape. Given your interest, I hope it helps. Feedback is always welcome.

Regards,

From: SACHS, ERIC S [AG/1000]
Sent: Tuesday, September 13, 2011 11:26 AM
To: 'AgBioChatter@yahoogroups.com' <AgBioChatter@yahoogroups.com>
Subject: Re: Chatter: New issue making the rounds

Monsanto experts have reviewed these studies and prepared the following background and comment. This is still a draft document but it is sufficiently complete to share with this group and receive your feedback. Our team would welcome your comments.

Due to size, it is necessary to share as an attachment.

Eric

From: Bruce Chassy [mailto:bruce.chassy@usgs.gov]
Sent: Tuesday, September 13, 2011 11:05 AM
To: AgBioChatter@yahoogroups.com <AgBioChatter@yahoogroups.com>
Subject: Re: Chatter: New issue making the rounds

Colleagues,

I downloaded and read these papers quickly. It will be interesting to see if the anti-GM chemophobes try to make anything out of them. This is not my area of science but at first glance the papers seem to be very well planned and executed science. The authors have a publication record of similar kinds of studies. One paper characterizes the amount of glyphosate that gets into the air and where it goes from there; the second characterizes glyphosate in run-off (which turns out to be around 1% of the application). My first impression is that the papers report good observational science directed at assessing how much glyphosate is in water, no more no less. This is useful information. In fact, if you want to spin it, there appears

to be so little run-off and glyphosate is so non-toxic, that one might conclude the findings support continued high level application of glyphosate. The authors, however, avoid all such issues and stick to reporting their observations. That's how I read them anyway.

The papers are very manner of fact and non-inflammatory. They simply measure and report their observations. They do not mention potential effects on biota, nor do they discuss the implications of their measurements for the systems they study; they do note the toxicity (or lack thereof) of glyphosate. In discussing why there is so much glyphosate being used today, in the glyphosate in water paper, the introduction specifically notes that glyphosate is being used on GM crops at very high percentages of the crop planted and it gives examples. The authors go on to say:

Glyphosate use, particularly on GM crops, has replaced the use of other herbicides in the production of row crops. Glyphosate is considered by some to be more environmentally benign in comparison with other herbicides because: (1) it strongly sorbs to soil particles, limiting the potential for transport; (2) it has a shorter half-life compared with many other herbicides; (3) the use of glyphosate has resulted in a reduction in the number of herbicide applications to control weeds; (4) the use of glyphosate results in lower fossil fuel usage owing to an increase in conservation tillage; (5) it has a low toxicity to mammals, birds and most aquatic fauna.⁴

Is this an issue? I think not. Run-off is a fact of life. The actual levels measured are extremely low and such low concentrations in water are highly unlikely to adversely effect biota. Off the top of my head I think they are way too low to do harm to glyphosate's main target, plant cells that might be part of the aqueous system being studied. So be very careful when dealing with claims that it is horrible that glyphosate is everywhere. Point out 1) the paper does not claim harmful effects, 2) reports levels that are far below the known thresholds of glyphosate toxicity, and 3) glyphosate is only present in water because it can replace other more toxic herbicides (as well as support less costly, more efficient, and more eco-friendly production of crops of course).

TAKE HOME MESSAGE: DOSE AND EXPOSURE MATTERS, mere presence of a chemical in an ecosystem or ecological niche is by itself meaningless. The antis always conveniently forget this.

Regards

Bruce

From: Wayne Parrott <wparrott@uga.edu>
To: "AgBioChatter@yahoogroups.com" <AgBioChatter@yahoogroups.com>
Sent: Tuesday, September 13, 2011 7:23 AM
Subject: Chatter: New issue making the rounds