OPP Docket
Environmental Protection Agency Docket Center (EPA/DC), (28221T)
1200 Pennsylvania Ave NW
Washington, DC 20460-0001
USA

1 July 2013

To whom it may concern,

re: Docket No. EPA-HQ-OPP-2012-0132 FRL-9384-3 tolerances for residues of glyphosate in or on multiple commodities

We are writing on behalf of GM Freeze, and GeneWatch UK. We are calling for a moratorium on these developments until key questions relating to the safety, socio-economic and cultural impacts of GM crops and animals are answered. We believe that people have the right to choose whether nor not to purchase and consume GM food from any source, and therefore we support full labelling of all products using GM ingredients or derived from them, including products from animals reared on GM feed.

We object to the proposed increase in tolerance for glyphosate on the raw agricultural commodity forage and hay teff at 100 parts per million (ppm) and oilseed crops, group 20 at 40 ppm for the following reasons:

1. Exposure of people to and farm animals to increased residues

Permitting an increase in tolerances to glyphosate residues in oilseeds and forage and hay teff will increase the exposure to this herbicide (and its breakdown product AMPA) of people, livestock and poultry consuming products produced from the crops or produced from animal fed these crops.

There is a growing body of scientific evidence that the exposure to low levels of glyphosate in diet or water, or being exposed to the chemical during application, can be harmful to health. A recent independent assessment of the safety of glyphosate concluded[i]:

> "A substantial body of evidence demonstrates that glyphosate and Roundup cause teratogenic effects and other toxic effects on reproduction, as well as genotoxic effects. From an objective scientific standpoint, attempts by industry and government regulatory bodies to dismiss this research are unconvincing and work against the principle that it is the responsibility of industry to prove that its products are safe and not the responsibility of the public to prove that they are unsafe. The precautionary principle would suggest that glyphosate and its commercial formulations should undergo a new risk assessment, taking full account of the entirety of the peer-reviewed scientific literature as well as the industry-sponsored studies. Experience to date suggests that the new risk assessment should be conducted with full public transparency by scientists who are independent of industry."

Furthermore the study concluded that the current Acceptable Daily Intake (ADI) adopted in the European Union "is unreliable and could potentially result in exposures that cause harm to humans".

Numerous scientific papers link glyphosate to a range of health effects, such as endocrine disruption,[ii,iii,iv and v] birth defects[vi and vii] and genotoxicity/cancer risk.[viii, ix and x] Research shows that

the formulation of the herbicide can influence its toxicity and the ability of glyphosate to penetrate cells.[xi]

We believe the current evidence indicating that glyphosate is biologically active at lower concentrations than believed at the time approvals were first granted for glyphosate and elevated residue levels is strong enough to mean that glyphosate residue tolerance should be considerably lower than at present, not higher. We therefore call upon the EPA to reject the present petition.

2. Risks to the environment

The proposal to increase tolerances for glyphosate residues strongly suggests that current tolerances cannot be met for the crops concerned and/or that elevated residue limits are intended to permit increased application rates of glyphosate on those crops (either by applying more concentrated formulations or by increasing the number of applications). Both scenarios are likely to be linked with the growing need to cope with weeds resistant to glyphosate (eg, in Monsanto's Roundup Ready, or RR, crops).

Glyphosate is already widely used in agriculture, horticulture, forestry and for general weed control (including domestic use). In 2011 650,000 tonnes of products containing glyphosate were used world-wide.[xii] Glyphosate is proven to enter surface waters through washing off paved surfaces[xiii] or leaching from soil.[xiv] It can also drift into non-target areas during application. Thus wildlife species are already exposed to its effects in these ways. An increase in tolerance to residues prompting an increase in glyphosate use will increase exposure to wildlife and the wider environment.

Glyphosate can affect wildlife species in two main ways:

- directly through the toxic affect of the active ingredient and adjuvants used in formulated products
- indirectly through its herbicidal action destroying plants species rely on for food and/or habitats on farms.

Amphibians are very vulnerable to exposure to glyphosate at levels that could be found in the general environment.[xv ,xvi and xvii] Globally there is a general decline in the numbers of amphibians,[xviii] and greater exposure to glyphosate due increased tolerance to residues and increased application rates and/or concentrations of formulations could accelerate the decline with potentially serious ecological consequences. Harmful effects of glyphosate have also been recorded in other species, including fish,[xix] mussels[xx] and earthworms.[xxi]

The destruction of weed cover in fields where glyphosate is applied can have an indirect harmful impact on wildlife in farmed areas. Some species can coexist with farming, but there is now very good evidence that RR crops can seriously disrupt this delicate balance by greatly reducing weeds providing food and cover for a range of insects, birds and mammals. In the US an increase in concentration of glyphosate sprayed onto oilseed crops, such as RR soya, or more frequent spraying could increase the rate of decline of Monarch butterflies. This species uses Milkweed, once common in soya fields,[xxii] to lay its eggs and provide food for its larvae once hatched. The 15-year decline in Monarchs at their overwintering forests in Mexico has been partly linked to the very large reduction in Milkweed in the Midwest soya and maize belt following the introduction of RR crops.[xxiii and xxiv] Research shows that the disturbed soil in arable fields are ideal for Milkweed, and more occur in fields rather on margins or other habitats, so losses in field are more critical than losses elsewhere.[xxv]

The importance of the presence of weeds for other wildlife has not been extensively researched in the US, but large-scale trials in the UK (1999-2003) found that weed management in RR beet crops using glyphosate damaged farmland wildlife through statistically significant reductions in weed and weed seed abundance (the latter providing food for farmland birds in Winter).[xxvi and xxvii]

The proposed changes in tolerance to glyphosate residues implies an increase in the amounts of glyphosate being applied to the crops concerned will follow. Such an increase will impact on

wildlife, and therefore we urge the EPA to reject the petition.

3. Monitoring low-level exposure

An increase in tolerances for glyphosate residues will inevitably mean increased exposure to glyphosate and its breakdown product AMPA for humans and farm animals. We are very concerned that the current exposure to people (especially farm workers), animals and the environment is poorly monitored at present, so drawing conclusions about the increased harm caused by low-level exposure to glyphosate residues in food, feed, air or water arising from the proposed residue increases is very difficult. No increase in residue tolerances should be permitted until the implications of current exposure to this herbicide to people, farm animals and the environment are fully understood. We believe existing scientific evidence should result in a reduction in tolerances rather than the proposed increases.

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Campaign Director GM Freeze

Director GeneWatch UK

Notes

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