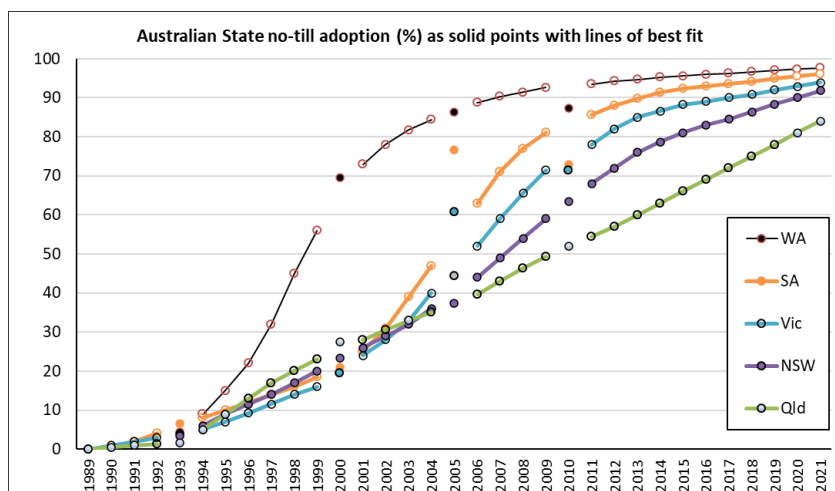


Introduction

The benefits of glyphosate to stop soil erosion through enabling no-tillage are undisputable. Similarly the associated improved soil quality and soil health are well documented. No-tillage has increased soil biological activity with numerous studies showing increased earthworm activity on soils with a long history of no-tillage and glyphosate use. No-tillage has also increased the storage of soil carbon and with a 40 year safe history of use. The benefits of glyphosate use for mitigating against droughts is clear and evidenced by farmers, from the Australian drought continent, having greater than 90% no-tillage and glyphosate use (Crabtree 2010). Tillage kills earthworms and promotes erosion (images below).



So where is the smoking gun?

The evidence that glyphosate causes non-Hodgkin's lymphoma (NHL) is nil, but it originates in the studies of anti-glyphosate activists and their badly designed "studies". The recent Californian Court cases on the issue shed no light on the evidence as there was no evidence requirement, in this jurisdiction, to "show cause". The lawyers needed only to convince jurors and the lawyers were well incentivized to do so taking large payment percentages in the possible victories. A 2020 court case proposed to be held in Australia is likely to be more partial and it seems that this has made no progress – here they will have to show cause.

In contrast, the longitudinal study in the USA of 57,000 farmers and farm workers with a 20 year use of glyphosate shows no difference in NHL incidence compared with those who have not used it. It appears that activists that are attacking glyphosate are using a back-door strategy against biotechnology but are prepared to remove glyphosate as collateral damage. Curiously, the defence of glyphosate appears poor and since it has come off patent it is not a lucrative sales product. This leaves independent people with more responsibility to defend it.

Well organized activist "science"

For 25 years a network of coherent activist scientists, that are hostile to biotechnology, have been trying to remove biotech from agriculture. They include; Australia's Dr Judy Carman, India's Dr Vanda Shiva, USA's Dr Don Huber and Mr Jeffery Smith, France's Dr Giles Seralini and more. Indeed, I have publicly challenged four of these on more than one occasion for their biased and poor scientific works. The continued growth of GM crops has likely forced this group to change their tactics to attack glyphosate. Most of their publications have been discredited and the GM acreage with Roundup Ready technology has increased.

In the past four years, regulatory authorities in the EU, Korea, Japan, Australia, New Zealand, Canada and the USA have reaffirmed that exposure to glyphosate does not cause cancer. More than 800 scientific studies and reviews, including independent safety assessments, affirm that glyphosate does not cause cancer. The study found no connection between cancer and glyphosate. So how could the International Agency for Research into Cancer (IARC) conclude that glyphosate probably causes cancer? I have read several of the activists' papers which the IARC uses in their monologs and the methodologies are obtuse or misleading. Prof Bruce Chassy summarized them by saying "the experiments were improperly designed and poorly executed, and the analysis and conclusions are faulty." Indeed, if you criticise their scientific approach they send defamation letters. Indeed, many of us have received 2-3 such defamation notices.

I emailed Kurt Straif of the IARC in Sept 2015 asking if could he tell me what the defining evidence that made them give their classification, his response was evasive. Prof Chassy then responded to Kurt and myself in this open email by saying; "Given the paucity of evidence supporting this conclusion, and the evidence contrary, many experts question IARC's classification.... please explain? No clarity was forth coming.

Why defend glyphosate?

Conflicts are not enjoyable to most people and they can result in personal attacks and financial loss. Consequently, there is a general inclination among agriculturalists that it is easier to submit to the momentum against glyphosate than to defend it. Further, we in the West can rationalize that we can survive with other tools. However, the reality is that this tool is very powerful on weeds, and it is very cheap and safe with an LD50 of 5.6 g/kg. If the activists succeed in taking this tool from us then the other herbicides could easily fall, as they logic will be "these other chemicals are 5-100 times more toxic than glyphosate".

Further, Africa desperately needs this herbicide to feed their peoples. Indeed, tillage is the status quo here and this has to change as they begin their journey to sustainably feed themselves. The heart of their continent is like Brasil being a warm wet sub-tropical environment with loamy soils dominating. With ongoing tillage they will see massive soil erosion and starvation as their population doubles in the next 20 years. The best people on earth to defend the technology are those who understand the power, safety and benefits of the tool.

Conclusion

We as a global CA group are the impartial-credible group that should defend glyphosate and if we don't then we are not being honest with ourselves nor the soil.