

CORRESPONDENCE

Comment on Fate of Glyphosate in an Oregon Forest Ecosystem

Sir: Most authors compose their scientific articles such that (1) the research can be duplicated by others if they so desire and (2) sufficient data in enough detail are presented such that the reader can judge for himself whether the conclusions reached are valid. A recent article (Newton et al., 1984) does neither. All conclusions are based upon the analyses of glyphosate herbicide, its metabolite, and an impurity by using three referenced analytical methods, all of which according to the Literature Cited section are "unpublished results". How is the reader either to duplicate the experiments or judge their validity if he cannot evaluate the analytical methods that were used? Such an article short-circuits the efforts of those

who are dedicated to the development and open inspection of contemporary analytical methodology.

Literature Cited

Newton, M.; Howard, K. M.; Kelpsas, B. R.; Danhaus, R.; Lottmann, C. M.; Dubelman, S. *J. Agric. Food Chem.* 1984, 32, 1144.

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Received for review October 19, 1984.

Rebuttal on Fate of Glyphosate in an Oregon Forest

Sir: Moye criticizes on the basis that our work on the fate of glyphosate in the ecosystems cannot be duplicated nor verified or judged without a full writeup of our analytical methodology. He is correct only if we will not share the methodology.

Our paper reported a study of ecosystems and was not intended to focus on analytical technology. Glyphosate methodology is generally involved especially if the metabolite, AMPA, and the product impurity, NNG, are assayed as well. A further complication was the need to standardize the method so that it can be applied with acceptable recovery to all target matrices (leaves, soil, shrubs, etc.) in a large scale (ca. 2000 forestry samples). An exact description of the method is thus beyond the scope of this article. The method is based on ion-exchange isolation and cleanup steps and HPLC chromatography of each isolated moiety with appropriate post-column reaction detection (ninhydrin reaction for glyphosate and AMPA, Griess reaction for NNG). Substantial simplification of the working principle for inclusion in an ecological article would not have allowed proper reproduction in other laboratories. However, the full method is available

to interested parties based on individual requests to Dr. S. Dubelman, Monsanto Co., 800 N. Lindbergh Blvd., St. Louis, MO 63167.

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Received for review January 14, 1985.