

EXHIBIT 29

Glyphosate Publications Recommendations for Process

Final Product:

- Two Manuscripts: one Mammalian Toxicology, one Ecotoxicology
 - Comprehensive in scope
 - But more emphasis placed on main issues (NCAP) and other important potential problem areas (e.g. Neurotoxicity)
- Only minimal, if any, delay; Ensures high quality manuscripts
- Less CanTox involvement, and thus, less \$\$\$\$

Steps:

1. Prepare Rough Outline of Manuscripts

- WHO: Monsanto Scientists (leads - Heydens, McKee, Wratten)
- WHEN: A.S.A.P.

2. CanTox Reference Document

- WHO: Monsanto Scientists (leads - Heydens, McKee, Wratten)
- WHAT:
 - Not a total rewrite - Fix errors & *major* problems
 - Re-arrange document according to outline of manuscripts
 - Eliminate any 'bad' parts
- WHEN: Completed 3 weeks prior to expert meeting - 1st or 2nd week of November if meeting is held in December
- Note: Reference Document has value. Monsanto will further refine reference document later for internal use and use with KIPs/experts outside Monsanto

**Glyphosate Publications
Recommendations for Process (cont'd)**

3. Write Draft Manuscripts

- WHO:
 - Mammalian Tox: lead - Heydens
 - Ecotoxicology: lead - McKee or Ulysses
 - Mike's time commitment on Cr3B2 is currently a significant competing factor
 - Mike thinks Ulysses can produce acceptable 1st draft with Mike's guidance & input
 - If Ulysses, more \$\$\$ needed for CanTox
 - Note: 'Beneficial Insects' & 'Shallow Water' issues not resolvable in this manuscript
- WHEN:
 - Start ASAP (WFH ~ October 12; MJM ?)
 - Completion?
- PROCESS: Manuscripts sent to Ian for editing by him; he sends to Experts

4. Meeting with Experts

- WHEN: In 1999 if at all possible - December 6-9 last chance
- Note: Monsanto scientists will meet individually with Experts prior to meeting as necessary to ensure familiarity with and understanding of data

**Glyphosate Publications
Recommendations for Process**

2. Meeting with Experts

- **WHAT:** 2-3 day meeting as planned previously
- **WHEN:** Possibly early December, more likely mid- to late January

**CanTox Glyphosate Background Document
Comments / Recommendations
September 30, 1999**

Section 3.1.1 (pp. 14-26)

- This section is an enumeration of fate & transport data with NO CONCLUSIONS.
- Need summary to help reader

Exposure section, pp. 26-61

- VERY CUMBERSOME and not necessary for mammalian tox. reviewers.
- Refer them to summary section/Tables so they don't waste time.

Use of "Worst Case" & "Reasonable Worst Case"

- Seem to be used interchangeably - use one or other
- Analysis is scewed toward worst case so advise using this term, not "Reasonable"
 - use of "Worst Case" supported by statement near bottom of p.61 (2nd-to-last paragraph)
- What is definition of "Reasonable Worst Case" ?

Section 3.2.5 - Total Exposures from All Pathways, pp. 63-66

This is the summary section for exposures and is the most important because it may be all that most people read. Therefore, it would be valuable to add some information on what important assumptions were used for all important routes of exposure. Two examples are:

Food residues

"There was no adjustment for market share."

Glyphosate Acute - Female Preschool Child

Drinking water - 45 ug/l "...is the highest values reported in the literature.

Sprayed at maximum rate in area where topsoil was removed."

4.0 HUMAN HEALTH RISK ASSESSMENT

4.1 Introductory paragraph, p.76

- Needs to be 'harder-hitting' summary sentence.

4.1.1 Metabolism and Pharmacokinetics Section, pp. 76-79

- Summary paragraph (last par. on p. 76/1st par. on p. 77) needs improvement.

- Last paragraph on p. 78 overemphasizes transport to bone. This was already highlighted in preceding paragraphs. Suggest deleting this study because:
 - study was only done to demonstrate adequacy of dosing for in vivo cytogenetics study
 - there is no human exposure i.p.
- p. 79, 2nd full paragraph - this is somewhat redundant and doesn't fit where presented. Suggest moving to bottom p.77/top p. 88 OR combining with par. 2 on p. 77.

4.1.2.1, Subchronic Toxicity Studies, p. 82

- As done in other sections, a summary of subchronic findings should be added.
 - in rodents, only see significant effects at/above 25,000 ppm
 - most significant was decreased B.W. gain
 - probably due to increased food intake
 - no organ weight toxicity (would have to position salivary gland lesion)
 - in dogs, no tox up to 2,000 mg/kg/day
 - overall, no significant toxic effects noted in subchronic studies conducted up to very high dose levels, doses which are orders of magnitude higher than human exposure

Salivary gland lesion explanation, pp. 83-84

- Paragraph contains the basic elements but could be 'beefed-up' and clarified somewhat.
- Alternatively, simply state in text of document that lesions do not appear to be related to b-adrenergic mechanism. Then, include Chuck's evaluation of this as an Appendix for those who want more information.

1-Yr dog study, p. 84

- Should this be moved to 'Chronic' section?
- How should we handle Ag. Canada's conclusion of possible effect in epididymides (lymphoid lesions) with lower NOEL (100 mg/kg/day vs. 500 mg/kg/day for EPA).
 - Add WHO IPCS conclusion?

Subchronic tox. studies with POEA, pp. 86,87

- Add short paragraph saying that subchronic studies have been conducted with dogs and rats. The only significant finding was the inability of animals to tolerate relatively high concentrations of surfactant in their diet. This is not surprising for a surfactant material which, by nature of what it is designed to do - surface-active properties - is designed to perturb membranes. This is consistent with their irritating properties found in the acute eye and skin irritation studies.

Oncogenicity study results, pp. 88-89

The following non-treatment related increases in tumors were highlighted:

- Rat study #1: testes interstitial cell (high dose),
thyroid C-cell (high dose males)

- Rat study #2: pancreatic islet cell (high dose males),
thyroid-Cell (mid & high dose females)
- Mouse study: renal tubule adenomas (high dose males)
- Taken together, don't look good.
- This will ultimately go away when all other chronics done for EU get released to public showing no tumor effects.
- *NOTE: THE RAT PANCREAS, LIVER(??) AND THYROID TUMORS ARE HIGHLIGHTED BY NCAP*

4.1.3, Genotoxicity, p. 90-92

- First 2 paragraphs seem out of place - don't fit in well. Delete or move further back with editing to make them fit in place. We originally suggested the 'disclaimer', but it has been modified to the point where it doesn't work well.
- Last sentence: In view of ... should be considered NON-mutagenic.