

Mail Stop 3561

March 25, 2008

Via Fax & U.S. Mail

Mr. Terrell K. Crews
Chief Financial Officer
800 North Lindbergh Boulevard
St. Louis, Missouri 63167

**Re: Monsanto Company
 Form 10-K for the year ended August 31, 2007
 Filed October 26, 2007
 File No. 001-16167**

Dear Mr. Crews:

We have reviewed your response letter dated March 18, 2008 and have the following comments. Unless otherwise indicated, we think you should revise your document in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Please respond to confirm that such comments will be complied with, or, if certain of the comments are deemed inappropriate, advise the staff of your reason. Your response should be submitted in electronic form, under the label "corresp" with a copy to the staff. Please respond within ten (10) business days.

Form 10-K for the year ended August 31, 2007

Notes to the Financial Statements

– General

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1. We note from your response to our prior comment 3 that you believe that given the dollar amounts of the related party transactions, the transactions were immaterial. However, we believe that the significance of a related party transaction may be independent of the dollar amount. As previously requested, please revise the notes to the financial statements in future filings to include disclosure of all related party transactions as required by paragraph 2 of SFAS No. 57.

Note 21. Commitments and Contingencies, page 95

2. We note from your response to our prior comment 9 that you have certain leases which contain renewal options and escalation provisions. Please confirm to us, and disclose in future filings, whether you recognize rental expense on a straight-line basis in accordance with paragraph 15 of SFAS No. 13. If you do not recognize rental expense on a straight-line basis, please explain to us why not.

You may contact Claire Erlanger at (202) 551-3813 or Jean Yu at (202) 551-3305 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3813 with any other questions.

Sincerely,

Linda Cvrkel
Branch Chief