

ITEM 2.02. Results of Operations and Financial Condition.

On October 2, 2008, Monsanto Company issued a press release updating its guidance for fiscal year 2008. This press release is furnished as Exhibit 99 hereto and incorporated herein by reference.

The press release furnished herewith uses the non-GAAP financial measure of earnings per share (“EPS”) on an ongoing basis. Our ongoing EPS financial measure excludes certain after-tax items that we do not consider part of ongoing operations, which are identified as such in the reconciliation. We believe that our ongoing EPS financial measure presented with these adjustments best reflects our ongoing performance and business operations during the periods presented and is more useful to investors for comparative purposes. In addition, management uses the ongoing EPS financial measure as a guide in its budgeting and long-range planning processes, and as a guide in determining incentive compensation. The presentation of EPS on an ongoing basis is intended to supplement investors’ understanding of our operating performance. This non-GAAP financial measure may not be comparable to similar measures used by other companies. Information concerning Monsanto’s use of the non-GAAP financial measure free cash flow appears in Monsanto’s most recent Report on Form 10-Q.

We are furnishing the information contained in this report, including the Exhibit, pursuant to “Item 2.02 Results of Operations and Financial Condition” of Form 8-K promulgated by the SEC. This information shall not be deemed to be “filed” for the purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section, unless we specifically incorporate it by reference in a document filed under the Securities Act or the Exchange Act. By filing this report on Form 8-K and furnishing this information, we make no admission as to the materiality of any information in this report, including the Exhibit.

ITEM 9.01. FINANCIAL STATEMENTS AND EXHIBITS.

(d) Exhibits

The following exhibit is filed herewith:

Exhibit 99 Press Release, dated October 2, 2008, issued by Monsanto Company

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: October 7, 2008

MONSANTO COMPANY

By: /s/ Jennifer L. Woods
Name: Jennifer L. Woods
Title: Assistant Secretary

EXHIBIT INDEX

Exhibit No.	Description of Exhibit
99	Press Release, dated October 2, 2008, issued by Monsanto Company