MONSANTO CO /NEW/ Form 8-K December 22, 2010

As Filed with the Securities and Exchange Commission on December 22, 2010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 8-K

CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): December 22, 2010 (December 20, 2010)

MONSANTO COMPANY

(Exact Name of Registrant as Specified in its Charter)

Delaware 001-16167 43-1878297 State of Incorporation (Commission File Number) (IRS Employer Identification No.)

> 800 North Lindbergh Boulevard St. Louis, Missouri 63167 (Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: (314) 694-1000

Not Applicable (Former Name or Former Address, If Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligations under any of the following provisions (see General Instruction A.2. below):

[]	Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
[]	Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
[]Pre-comm	encement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
Γ] Pre-comm	encement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

On December 20, 2010, Frank V. AtLee III resigned from the Monsanto Company Board of Directors. Mr. AtLee has not advised the Company of any disagreement with the Company on any matter relating to its operations, policies or practices. A press release regarding this matter is attached hereto as Exhibit 99.

ITEM 9.01		Financial Statement	s and Exhibits
(d)	Exhibits.	The following document	is filed as an exhibit to this report:
Exhibit 9	9	Press Release dated December 21, 2010	
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SIGNATURES

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: December 22, 2010

MONSANTO COMPANY

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

EXHIBIT INDEX

Exhibit Number Description of Exhibit

99 Press Release dated December 21, 2010