

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

On January 24, 2012, the shareowners of Monsanto Company (the “Company”), upon recommendation of the Board of Directors, approved the Monsanto Company 2005 Long-Term Incentive Plan (as Amended and Restated as of January 24, 2012) (the “Amended 2005 Plan”). The 2005 Plan, which is substantially similar in purpose and design to the prior version of the Monsanto Company 2005 Long-Term Incentive Plan, as amended, authorizes the grant of several types of stock-based awards, including non-qualified stock options, stock appreciation rights, restricted stock awards, restricted stock units, unrestricted stock awards, qualified performance-based awards under Section 162(m) of the Internal Revenue Code, and cash awards and dividend and interest equivalent awards.

A summary of the material features of the Amended 2005 Plan is set forth in the Company’s definitive Proxy Statement dated Dec. 9, 2011 (the “Proxy Statement”) under the caption “Proxy Item No. 4: Approval of the Monsanto Company 2005 Long-Term Incentive Plan (as Amended and Restated as of January 24, 2012),” which description is incorporated herein by reference. A copy of the Amended 2005 Plan can be found in Appendix D to the Proxy Statement and is incorporated herein by reference. The summary of the Amended 2005 Plan contained herein and in the Proxy Statement are qualified in their entirety by reference to the full text of the Amended 2005 Plan.

ITEM 9.01. FINANCIAL STATEMENTS AND EXHIBITS.

(d) Exhibits.

The following exhibits are incorporated herein by reference:

Exhibit 10 Monsanto Company 2005 Long-Term Incentive Plan (as Amended and Restated as of January 24, 2012) (incorporated by reference to Appendix D to the Monsanto Company Proxy Statement dated Dec. 9, 2011, File No. 1-16167).†

Exhibit 99 Description of the Monsanto Company 2005 Long-Term Incentive Plan (as Amended and Restated as of January 24, 2012) (incorporated by reference to pages 74-83 of the Monsanto Company Proxy Statement dated Dec. 9, 2011, File No. 1-16167).

† Represents management contract or compensatory plan or arrangement.

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.

MONSANTO COMPANY

Dated: March 26, 2012

By:

/s/ Jennifer L. Woods

Name: Jennifer L. Woods

Title: Assistant Secretary

EXHIBIT INDEX

Exhibit No.	Description of Exhibit
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