

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

Amendments to Monsanto Company Long-Term Incentive Plan, as amended and restated, and Monsanto Company 2005 Long-Term Incentive Plan

Effective Sept. 1, 2010, the Monsanto Company Long-Term Incentive Plan, as amended and restated (the "LTIP"), and the Monsanto Company 2005 Long-Term Incentive Plan (the "2005 LTIP") were further amended to modify the definition of "Change of Control" as follows:

- The threshold for acquisitions of Monsanto stock which would constitute a Change of Control is increased to 30% of outstanding shares;
- An exception was added to provide that the passive acquisition of Monsanto stock shall not constitute a Change of Control if the acquisition resulted from Monsanto's share repurchases; and
- A Business Combination shall not constitute a Change of Control if Monsanto shareowners beneficially own more than 50% of the outstanding shares and the combined voting power of the then-outstanding shares of the combined company.

No other amendments were made to the LTIP or the 2005 LTIP. The text of the Fifth Amendment to the LTIP is included as Exhibit 10.1 to this Form 8-K and is incorporated herein by reference. The text of the Fourth Amendment to the 2005 LTIP is included as Exhibit 10.2 to this Form 8-K and is incorporated herein by reference.

Additional information concerning the LTIP or the 2005 LTIP, which have substantially the same terms, may be found in Monsanto Company's 2009 Proxy Statement, which was filed with the SEC on Dec. 7, 2009. The text of the LTIP and the 2005 LTIP, and prior amendments to such plans, have been previously filed as exhibits to Monsanto's SEC filings, as indicated below in the Exhibit Index.

Terms and Conditions of Option Grants and Restricted Stock Unit Grants.

On Aug. 26, 2010, Monsanto Company's People and Compensation Committee (the "Committee") adopted terms and conditions for future option grants and restricted stock unit grants under the Monsanto Company 2005 Long-Term Incentive Plan (the "2005 LTIP"). No options or restricted stock units were awarded. The terms and conditions are similar to those previously approved under the 2005 LTIP; however provisions related to vesting following the occurrence of a Change of Control under the 2005 LTIP have been modified to incorporate a double trigger.

Options. Options are non-qualified options that are not intended to qualify as incentive stock options as defined in Section 422 of the Internal Revenue Code. The options will generally vest ratably over three years and expire on the tenth anniversary of the grant date. However, all or a portion of an option may be forfeited in the event the optionee voluntarily terminates employment or vesting may be accelerated in the event an optionee experiences a Retirement, death, Disability, or involuntary Termination of Service, or if a Change of Control occurs.

Restricted Stock Unit Grants. An award of restricted stock units (each, a "Unit"), represents the right to receive one share of Monsanto Company common stock for each Unit upon vesting. The number of Units subject to vesting will be determined by the People and Compensation Committee based on the Company's attainment of specified performance goals relating to equally weighted earnings per share, cash flow and return on capital goals for the defined two-year performance period, and may be up to two

times the number of Units initially awarded based on Company performance against the goals. In order for any Units to vest, the 162(m) Performance Goal must be attained, which goal provides that the Company must have positive Net Income (as defined) for the defined two-year performance period. Units may be forfeited or vesting may be prorated if a participant experiences a Retirement Event, death, Disability, or voluntary or involuntary Termination of Service, or if a Change of Control occurs prior to expiration of the three-year Service Period. Participants may also receive a cash payment equal to the value of the cash dividends the participant would have been paid with respect to the number of shares received had the participant owned the shares at all times during the Service Period. Awards of Units are subject to the Company's Recoupment Policy.

These summary descriptions of the terms and conditions of option grants and terms and conditions of restricted stock unit grants are qualified in their entirety by reference to the terms and conditions of option grants and terms and conditions of restricted stock unit grants, copies of which are included as Exhibits 10.3 and 10.4, respectively, to this Form 8-K and incorporated herein by reference.

2011 Annual Incentive Plan

On Aug. 26, 2010, Monsanto Company's People and Compensation Committee (the "Committee") approved the Monsanto Company Fiscal Year 2011 Annual Incentive Plan (the "2011 Plan"). The 2011 Plan covers the performance period Sept. 1, 2010 through Aug. 31, 2011. Eligibility includes regular employees who do not participate in a local sales or business-specific annual incentive plan. The 2011 Plan excludes from eligibility all employees employed in the U.S. who are members of a collective bargaining unit with whom incentive compensation was the subject of good faith bargaining.

Funding of the 2011 Plan is determined by the Company's attainment of certain financial goals related to sales (10% weighting), diluted earnings per share (50% weighting) and cash flow (40% weighting) and the determination by the Committee that such attainment satisfies certain subjective performance criteria as determined by the Committee. Various performance levels are approved by the Committee with a payout level (as a percentage of target award pool) associated with each level of performance as follows: (i) threshold, 35%, (ii) target, 100%, and (iii) outstanding, 200%.

The award pool will be funded at no less than 20% of target level funding in the event the Company pays dividends with respect to each of its financial quarters ending during the performance period. In the event the Company pays dividends with respect to each quarter, but does not attain the threshold level of performance with respect to the diluted earnings per share goal, the incentive pool may not fund at greater than 20% of the target level of funding. One or more of the financial goals may be funded at above the outstanding level, provided the overall incentive pool would be capped at 200% of target level unless the Committee determines in its discretion to fund above 200%. Regardless of the attainment of any one or more of the 2011 Plan's financial goals, the Committee, in its sole discretion, shall determine whether the award pool should be funded and the amount of such funding, if any.

The 2011 Plan also contains provisions and exceptions relating to new hires, changes in base compensation, changes in employment status, including termination of employment, and other specific situations.

This summary description of the 2011 Plan does not purport to be complete and is qualified in its entirety by reference to the 2011 Plan, a copy of which is filed as Exhibit 10.5 hereto and incorporated by reference herein.

ITEM 9.01 Financial Statements and Exhibits.

(d) Exhibits. The following documents are filed as an exhibit to this report:

- 10.1 Fifth Amendment, effective Sept. 1, 2010, to the Monsanto Company Long-Term Incentive Plan, as amended and restated. †
- 10.2 Fourth Amendment, effective Sept. 1, 2010, to the Monsanto Company 2005 Long-Term Term Incentive Plan. †
- 10.3 Form of Terms and Conditions of Option Grant Under the Monsanto Company Long-Term Incentive Plan and the Monsanto Company 2005 Long-Term Incentive Plan, as approved on Aug. 26, 2010. †
- 10.4 Form of Terms and Conditions of Fiscal Year 2011 Restricted Stock Unit Grant Under the Monsanto Company 2005 Long-Term Incentive Plan, as approved on Aug. 26, 2010. †
- 10.5 Fiscal Year 2011 Annual Incentive Plan Summary, as approved by the People and Compensation Committee of the Board of Directors on Aug. 26, 2010. †
- 10.6 Monsanto Company Long-Term Incentive Plan, as amended and restated, effective April 24, 2003 (formerly known as Monsanto 2000 Management Incentive Plan) (incorporated by reference to Appendix C to Notice of Annual Meeting and Proxy Statement dated March 13, 2003, File No. 1-16167).†
- 10.7 First Amendment, effective Jan. 29, 2004, to the Monsanto Company Long-Term Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10.16.1 of the Form 10-Q for the period ended Feb. 29, 2004, File No. 1-16167). †
- 10.8 Second Amendment, effective Oct. 23, 2006, to the Monsanto Company Long-Term Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10.18.2 of the Form 10-K for the period ended Aug. 31, 2006, File No. 1-16167). †
- 10.9 Third Amendment, effective June 14, 2007, to the Monsanto Company Long-Term Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10.19.3 of Form 10-K for the period ended Aug. 31, 2007, File No. 1-16167).†
- 10.10 Fourth Amendment, effective Sept. 1, 2007, to the Monsanto Company Long-Term Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10.19.4 of Form 10-K for the period ended Aug. 31, 2007, File No. 1-16167).†
- 10.11 Monsanto Company 2005 Long-Term Incentive Plan, effective Jan. 20, 2005 (incorporated by reference to Exhibit 10.1 of Form 8-K, filed Jan. 26, 2005, File No. 1-16167). †
- 10.12 First Amendment, effective Oct. 23, 2006, to the Monsanto Company 2005 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.18.2 of the Form 10-K for the period ended Aug. 31, 2006, File No. 1-16167). †
- 10.13 Second Amendment, effective June 14, 2007, to the Monsanto Company 2005 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20.2 of Form 10-K for the period ended Aug. 31, 2007, File No. 1-16167). †
- 10.14 Third Amendment, effective Sept. 1, 2007, to the Monsanto Company 2005 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.20.3 of Form 10-K for the period ended Aug. 31, 2007, File No. 1-16167). †

† Represents management contract or compensatory plan or arrangement.

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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: September 1, 2010

MONSANTO COMPANY

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

EXHIBIT INDEX

Exhibit No.	Description of Exhibit
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