| MONSANTO CO /NEW/<br>Form 8-K                           |                           |                                   |
|---|---------------------------|-----------------------------------|
| April 18, 2008  |                           |                                   |
| As Filed with the Securities and Exchange Commission    | on on April 18, 2008      |                                   |
|   |                           |                                   |
|   |                           |                                   |
| 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): April | 18, 2008 (April 16, 2008) |                                   |
|   |                           |                                   |
| 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 |  |  |  |  |  |
|----------------|--|--|--|--|--|
| (Fo            | (Former Name or Former Address, If Changed Since Last Report)  |  |  |  |  |
|                |  |  |  |  |  |
|                | eck the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligations under any of the following visions (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-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d2(b))  |  |  |  |  |
| []             | Pre-commencement 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 | of Certain Officers  |

On April 16, 2008, Monsanto Company s Board of Directors elected Janice L. Fields to the Board of Directors. The Board appointed Ms. Fields to its Nominating and Corporate Governance Committee, Public Policy and Corporate Responsibility Committee, and Science and Technology Committee.

Ms. Fields is an Executive Vice President and Chief Operating Officer of McDonald s USA, LLC. Ms. Fields has spent 29 years with McDonald s Corporation, and her career has spanned a variety of disciplines. Prior to her current role, Ms. Fields served as President of McDonald s Central Division.

Ms. Fields will be entitled to receive the same compensation for service as a director as is provided to other directors of the Company under the Non-Employee Director Equity Incentive Compensation Plan (the Plan). Under the Plan, each non-employee director receives an annual base retainer having a value of \$165,000. Additional annual retainers are paid as follows: (i) \$25,000 to each of the chair of the Audit and Finance Committee, the chair of the People and Compensation Committee and the chair of the Nominating and Corporate Governance Committee; (ii) \$15,000 to each of the chair of the Public Policy and Corporate Responsibility Committee and the Science and Technology Committee; and (iii) \$10,000 to each member of the Audit and Finance Committee (other than the chair of that Committee). A non-employee chairman of the board of directors would receive an additional annual retainer of \$40,000. Half of the aggregate retainer for each director is payable in deferred common stock, and the remainder is payable, at the election of each director, in the form of restricted common stock, deferred common stock, current cash and/or deferred cash. The Plan also provides that each non-employee director will receive a grant of restricted stock upon commencement of service as a member of the board of directors equal to the annual base retainer divided by the closing price of a share of our common stock on the commencement date.

A Press Release announcing the appointment of Ms. Fields as director as described above is attached hereto as Exhibit 99.

#### ITEM 9.01 Financial Statements and Exhibits

| (d) | Exhibits. | The following | g document | t is filed | as an | exhibit to | this report: |
|-----|-----------|---------------|------------|------------|-------|------------|--------------|
|     |           |               |            |            |       |            |              |

Exhibit 99 Press Release dated April 16, 2008

#### **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: April 18, 2008

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| MONSANTO COMPANY             |        |                     |
|------------------------------|--------|---------------------|
| By:/s/ Christopher A. Martin |        |                     |
| Name: Christopher A. Martin  |        |                     |
|                              | Title: | Assistant Secretary |
|                              |        |                     |
| 3                            |        |                     |
|                              |        |                     |
|                              |        |                     |

### EXHIBIT INDEX

Exhibit Number Description of Exhibit

99 Press Release dated April 16, 2008

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