MONSANTO CO /NEW/
Form 4
March 20, 2008

FORM 4

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

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL

OMB Number:	3235-0287
Expires:	January 31, 2005
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(Print or Type Responses)

1. Name and Address of Reporting Person *
HOLLOWAY JANET M

(Last) (First) (Middle)

800 N. LINDBERGH BLVD.

(Street)

ST. LOUIS, MO 63167

(City) (State) (Zip)

2. Issuer Name **and** Ticker or Trading Symbol
MONSANTO CO /NEW/ [MON]

3. Date of Earliest Transaction (Month/Day/Year)
03/18/2008

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

_____ Director _____ 10% Owner
__X__ Officer (give title below) _____ Other (specify below)
Sr VP Chief of Staff, Comm Rel

6. Individual or Joint/Group Filing(Check Applicable Line)
_X_ Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	03/18/2008		M(1)		10,700	A	$ 29.2175	61,557	D	
Common Stock	03/18/2008		S(1)		4,100	D	$ 109	57,457	D	
Common Stock	03/18/2008		S(1)		1,200	D	$ 109.01	56,257	D	
Common Stock	03/18/2008		S(1)		600	D	$ 109.02	55,657	D	
Common Stock	03/18/2008		S(1)		900	D	$ 109.04	54,757	D	

Common Stock	03/18/2008		S[(1)]	200	D	$ 109.05	54,557	D	
Common Stock	03/18/2008		S[(1)]	200	D	$ 109.08	54,357	D	
Common Stock	03/18/2008		S[(1)]	300	D	$ 109.1	54,057	D	
Common Stock	03/18/2008		S[(1)]	100	D	$ 109.16	53,957	D	
Common Stock	03/18/2008		S[(1)]	200	D	$ 109.17	53,757	D	
Common Stock	03/18/2008		S[(1)]	1,345	D	$ 109.2	52,412	D	
Common Stock	03/18/2008		S[(1)]	100	D	$ 109.21	52,312	D	
Common Stock	03/18/2008		S[(1)]	555	D	$ 109.22	51,757	D	
Common Stock	03/18/2008		S[(1)]	600	D	$ 109.24	51,157	D	
Common Stock	03/18/2008		S[(1)]	100	D	$ 109.3	51,057	D	
Common Stock	03/18/2008		S[(1)]	100	D	$ 109.32	50,957	D	
Common Stock	03/18/2008		S[(1)]	100	D	$ 109.33	50,857	D	
Common Stock							5,368	I	By 401(k) Plan

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(*e.g.*, puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount o Underlying Securities (Instr. 3 and 4)
				Code	V	(A)	(D)	Date Exercisable	Title

						Expiration Date		Amount or Number of Shares
Option (Right to Buy)	$ 29.2175	03/18/2008	M[(1)]	10,700	11/15/2006[(2)]	10/27/2015	Common Stock	10,700

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
HOLLOWAY JANET M 800 N. LINDBERGH BLVD. ST. LOUIS, MO 63167			Sr VP Chief of Staff, Comm Rel	

Signatures

Christopher A. Martin, Attorney-in-Fact	03/20/2008
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) The sales and stock option exercise reported on this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the Reporting Person on July 5, 2007.

(2) One third of the options became exercisable on November 15, 2006, one-third of the options became exercisable on November 15, 2007 and one-third of the options become exercisable on November 15, 2008, subject to the terms and conditions of the Monsanto Company Long Term Incentive Plan.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.
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