MONSANTO CO /NEW/

Form 4

September 19, 2007

FORM 4

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

OMB

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES** Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,

obligations may continue. See Instruction

Section 17(a) of the Public Utility Holding Company Act of 1935 or Section

30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * HOLLOWAY JANET M			2. Issuer Name and Ticker or Trading Symbol MONSANTO CO /NEW/ [MON]	5. Relationship of Reporting Person(s) to Issuer		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction	(Check all applicable)		
800 N. LINDBERGH BLVD.		VD.	(Month/Day/Year) 09/18/2007	Director 10% Owner _X Officer (give title Other (specify below) VP & Chief of Staff		
	(Street)		4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check		
ST. LOUIS, N	MO 63167		Filed(Month/Day/Year)	Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person		

(City)	(State)	(Zip) Tab	ole I - Non-	Derivative	Secui	rities Acquir	red, Disposed of,	or Beneficiall	y Owned
1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	Code (Instr. 8)	onor Dispos (Instr. 3, 4	ed of (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)
Common Stock	09/18/2007		Code V M(1)	Amount 10,700	(D)	Price \$ 29.2175	84,547	D	
Common Stock	09/18/2007		S <u>(1)</u>	400	D	\$ 75.45	84,147	D	
Common Stock	09/18/2007		S(1)	700	D	\$ 75.46	83,447	D	
Common Stock	09/18/2007		S(1)	500	D	\$ 75.47	82,947	D	
Common Stock	09/18/2007		S <u>(1)</u>	800	D	\$ 75.48	82,147	D	

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Common Stock	09/18/2007	S(1)	400	D	\$ 75.49	81,747	D	
Common Stock	09/18/2007	S <u>(1)</u>	5,300	D	\$ 75.5	76,447	D	
Common Stock	09/18/2007	S(1)	2,200	D	\$ 75.51	74,247	D	
Common Stock	09/18/2007	S <u>(1)</u>	300	D	\$ 75.52	73,947	D	
Common Stock	09/18/2007	S(1)	100	D	\$ 75.53	73,847	D	
Common Stock						5,347	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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(9-02)

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

1. Title of Derivative	2. Conversion	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if	4. Transaction	onDeriv		6. Date Exercisab Expiration Date		7. Title and A Underlying S	Securities
Security (Instr. 3)	or Exercise Price of Derivative Security		any (Month/Day/Year)	Code Securities (Instr. 8) Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		(Month/Day/Year)		(Instr. 3 and 4)		
				Code V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Share
Option (Right to Buy)	\$ 29.2175	09/18/2007		M <u>(1)</u>		10,700	11/15/2006 <u>(2)</u>	10/27/2015	Common Stock	10,70

Reporting Owners

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

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Signatures

Christopher A. Martin, Attorney-in-Fact

09/19/2007

**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.
- One third of the options became exercisable on November 15, 2006, one-third of the options become exercisable on November 15, 2007
- (2) 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. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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