

PALEY ROBERT A  
Form 4  
October 31, 2007

**FORM 4**

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

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, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
PALEY ROBERT A

(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)  
10/29/2007

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

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

\_\_\_\_ Director \_\_\_\_\_ 10% Owner  
 Officer (give title below) \_\_\_\_\_ Other (specify below)  
Vice President and Treasurer

6. Individual or Joint/Group Filing(Check Applicable Line)  
 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	10/29/2007		M		16,014	A	\$ 20.805	21,185	D	
Common Stock	10/29/2007		M		6,848	A	\$ 29.2175	28,033	D	
Common Stock	10/29/2007		S		100	D	\$ 94.88	27,933	D	
Common Stock	10/29/2007		S		1,100	D	\$ 94.9	26,833	D	
Common Stock	10/29/2007		S		1,400	D	\$ 94.91	25,433	D	

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Common Stock	10/29/2007	S	1,200	D	\$ 94.92	24,233	D	
Common Stock	10/29/2007	S	1,300	D	\$ 94.93	22,933	D	
Common Stock	10/29/2007	S	200	D	\$ 94.94	22,733	D	
Common Stock	10/29/2007	S	2,600	D	\$ 94.95	20,133	D	
Common Stock	10/29/2007	S	300	D	\$ 94.96	19,833	D	
Common Stock	10/29/2007	S	1,300	D	\$ 94.97	18,533	D	
Common Stock	10/29/2007	S	1,600	D	\$ 94.98	16,933	D	
Common Stock	10/29/2007	S	900	D	\$ 94.99	16,033	D	
Common Stock	10/29/2007	S	2,200	D	\$ 95	13,833	D	
Common Stock	10/29/2007	S	2,300	D	\$ 95.01	11,533	D	
Common Stock	10/29/2007	S	300	D	\$ 95.02	11,233	D	
Common Stock	10/29/2007	S	1,100	D	\$ 95.03	10,133	D	
Common Stock	10/29/2007	S	100	D	\$ 95.04	10,033	D	
Common Stock	10/29/2007	S	2,100	D	\$ 95.05	7,933	D	
Common Stock	10/29/2007	S	1,662	D	\$ 95.06	6,271	D	
Common Stock	10/29/2007	S	1,100	D	\$ 95.08	5,171	D	
Common Stock						6,800	I	By 401(k) Plan
Common Stock						232	I	By 401(k) Plan of Spouse

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

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(9-02)

number.

**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 of Underlying Securities (Instr. 3 and 4)	Amount or Number of Shares
Option (right to buy)	\$ 20.805	10/29/2007		M	16,014	11/15/2005 <sup>(1)</sup> 10/29/2014	Common Stock	16,014
Option (right to buy)	\$ 29.2175	10/29/2007		M	6,848	11/15/2006 <sup>(2)</sup> 10/28/2015	Common Stock	6,848

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
PALEY ROBERT A 800 N LINDBERGH BLVD ST LOUIS, MO 63167			Vice President and Treasurer	

## Signatures

/s/ Christopher A. Martin,  
Attorney-in-Fact

10/31/2007

\*\*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) One-third of the options became exercisable on November 15, 2005, one-third of the options became exercisable on November 15, 2006 and one-third of the options become exercisable on November 15, 2007, subject to the terms of the Monsanto Company Long Term Incentive Plan.

(2) One-third of the options became exercisable on November 15, 2006, one-third of the options become exercisable on November 15, 2007 and one-third of the options become exercisable on November 15, 2008, subject to the terms 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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