MONSANTO CO /NEW/

Form 4

February 19, 2008

FORM 4

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

OMB Number: 3235-0287

Estimated average

Check this box if no longer subject to Section 16.

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Expires: January 31, 2005

OMB APPROVAL

Form 4 or Form 5 obligations may continue.

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

burden hours per response... 0.5

See Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * GRANT HUGH	2. Issuer Name and Ticker or Trading Symbol MONSANTO CO /NEW/ [MON]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)		
(Last) (First) (Middle)	3. Date of Earliest Transaction			
800 N. LINDBERGH BLVD.	(Month/Day/Year) 02/15/2008	X Director 10% OwnerX Officer (give title Other (specify below) Chairman, President & CEO		
(Street)	4. If Amendment, Date Original	6. Individual or Joint/Group Filing(Check		
ST. LOUIS, 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	le I - Non-l	Derivative	Secur	ities Acqui	red, Disposed of,	, or Beneficial	y 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. Securit onor Dispos (Instr. 3, 4	ed of	` ′	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	02/15/2008		M(1)	50,000	A	\$ 10.295	537,703	D	
Common Stock	02/15/2008		S(1)	100	D	\$ 114.51	537,603	D	
Common Stock	02/15/2008		S <u>(1)</u>	100	D	\$ 114.52	537,503	D	
Common Stock	02/15/2008		S <u>(1)</u>	200	D	\$ 114.79	537,303	D	
Common Stock	02/15/2008		S(1)	1,600	D	\$ 114.86	535,703	D	

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Comn Stock	02/15/2008	S <u>(1)</u>	1,100	D	\$ 115	534,603	D
Comn Stock	02/15/2008	S <u>(1)</u>	700	D	\$ 115.04	533,903	D
Comn Stock	02/15/2008	S(1)	900	D	\$ 115.05	533,003	D
Comn Stock	02/15/2008	S <u>(1)</u>	200	D	\$ 115.06	532,803	D
Comn Stock	02/15/2008	S <u>(1)</u>	100	D	\$ 115.09	532,703	D
Comn Stock	02/15/2008	S <u>(1)</u>	700	D	\$ 115.1	532,003	D
Comn Stock	02/15/2008	S <u>(1)</u>	100	D	\$ 115.12	531,903	D
Comn Stock	02/15/2008	S(1)	1,200	D	\$ 115.17	530,703	D
Comn Stock	02/15/2008	S(1)	500	D	\$ 115.6	530,203	D
Comn Stock	02/15/2008	S <u>(1)</u>	2,662	D	\$ 115.61	527,541	D
Comn Stock	02/15/2008	S <u>(1)</u>	300	D	\$ 115.62	527,241	D
Comn Stock	02/15/2008	S <u>(1)</u>	38	D	\$ 115.64	527,203	D
Comn Stock	02/15/2008	S <u>(1)</u>	700	D	\$ 115.65	526,503	D
Comn Stock	02/15/2008	S <u>(1)</u>	100	D	\$ 115.68	526,403	D
Comn Stock	02/15/2008	S <u>(1)</u>	300	D	\$ 115.69	526,103	D
Comn Stock	02/15/2008	S <u>(1)</u>	100	D	\$ 115.71	526,003	D
Comn Stock	02/15/2008	S <u>(1)</u>	300	D	\$ 115.73	525,703	D
Comn Stock	02/15/2008	S <u>(1)</u>	1,000	D	\$ 115.74	524,703	D
Comn Stock	02/15/2008	S <u>(1)</u>	700	D	\$ 115.75	524,003	D
Comn Stock	02/15/2008	S <u>(1)</u>	1,300	D	\$ 115.76	522,703	D
	02/15/2008	S(1)	1,400	D		521,303	D

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Common Stock					\$ 115.77		
Common Stock	02/15/2008	S <u>(1)</u>	100	D	\$ 115.78	521,203	D
Common Stock	02/15/2008	S <u>(1)</u>	1,600	D	\$ 115.81	519,603	D
Common Stock	02/15/2008	S(1)	700	D	\$ 115.82	518,903	D
Common Stock	02/15/2008	S <u>(1)</u>	100	D	\$ 115.83	518,803	D

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

Persons who respond to the collection of SEC 1474 information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control 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. Transactio Code (Instr. 8)	5. Number of or Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisal Expiration Date (Month/Day/Year		7. Title and A Underlying S (Instr. 3 and	Securities
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Share
Option (right to buy)	\$ 10.295	02/15/2008		M <u>(1)</u>	50,000	05/29/2004(2)	05/28/2013	Common Stock	50,00

Reporting Owners

Relationships					
Director	10% Owner	Officer	Other		
X		Chairman, President & CEO			

3 Reporting Owners

Signatures

Christopher A. Martin, by Power of Attorney 02/19/2008

**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 October 18, 2006.
- One-third of the options became exercisable on May 29, 2004, one-third of the options became exercisable on March 15, 2005 and one-third of the options became exercisable on March 15, 2006, subject to the terms of the Monsanto Company Long Term Incentive Plan.

Remarks:

The Reporting Person had multiple transactions on February 15, 2008. Due to a limitation on the number of transactions that or 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.

Signatures 4