MOSAIC CO

| Form 5 July 15, 201 | 2 | | | | | | | | | |
|---|--|--|--|---------------|---------|---|---|---|---|--|
| FORM | | | | | | | | OMB | APPROVAL | |
| - | UNITED | STATES SEC | | | | GE C | OMMISSIO | N OMB Number: | 3235-0362 | |
| Check thi no longer | | V | Washington, D.C. 20549 CATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES | | | | | | January 31, 2005 | |
| to Section Form 4 o 5 obligati may cont <i>See</i> Instru | r Form ANN ions inue. | | | | | | | | l average burs per 1.0 | |
| 1(b). | Filed pur ^{Ioldings} Section 17(| | | ng Comp | any A | Act of | 1935 or Section | on | | |
| | Address of Reporting S ROBERT L | Symbo | 2. Issuer Name and Ticker or Trading Symbol MOSAIC CO [MOS] | | | | 5. Relationship of Reporting Person(s) to Issuer | | | |
| (Last) | (First) (I | Middle) 3. Stat | 3. Statement for Issuer's Fiscal Year Ended | | | | (Check all applicable) | | | |
| | | | h/Day/Year) /2013 | | | XDirector10% Owner Officer (give titleOther (specify | | | | |
| C/O THE M COMPANY DRIVE, SU | Y, 3033 CAMPU | | 72013 | | | | below) | below) | | |
| | (Street) | | 4. If Amendment, Date Original Filed(Month/Day/Year) | | | | 6. Individual or Joint/Group Reporting | | | |
| | | | | | | | (che | ck applicable lir | ne) | |
| PLYMOUT | FH, MN 55441 | l | | | | | | 0 D i | | |
| _X_ Form Filed by O Form Filed by Mu Person | | | | | | | | | | |
| (City) | (State) | (Zip) T | able I - Non-De | rivative Se | curitie | es Acqu | uired, Disposed | of, or Benefici | ally Owned | |
| 1.Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, any (Month/Day/Yea | Code | 4. Securities | |)) | 5. Amount of Securities Beneficially Owned at end of Issuer's Fiscal Year (Instr. 3 and | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | |
| | | | | Amount | | Price | 4) | | | |
| Common Stock | Â | Â | Â | Â | Â | Â | 1,936 | I | By GRAT #2 dated September 1, 2009 | |
| Common Stock | 03/26/2013 | Â | G <u>(5)</u> | 1,960 | D | \$ 0 | 1,785 | I | By GRAT #3 dated March 23, 2010 | |

| Common Stock | 03/26/2013 | Â | G <u>(5)</u> | 1,960 | А | \$ 0 | 5,643 | Ι | Robert L. Lumpkins Revocable Trust |
|-----------------|------------|---|--------------|-------|---|------|-------|---|---|
| Common Stock | 05/14/2013 | Â | G <u>(6)</u> | 4,251 | D | \$ 0 | 1,443 | Ι | By GRAT #4 dated May 12, 2011 |
| Common Stock | 05/14/2013 | Â | G <u>(6)</u> | 4,251 | A | \$ 0 | 9,894 | Ι | Robert L. Lumpkins Revocable Trust |
| Common Stock | Â | Â | Â | Â | Â | Â | 8,648 | I | By GRAT #5 dated June 25, 2012 |

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

Persons who respond to the collection of information
contained in this form are not required to respond unless
the form displays a currently valid OMB control number.SEC 2270
(9-02)

 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) | Number | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | | 8. Pri Deriv Secu (Instr |
|---|---|---|---|---|--------|-----|--|--------------------|---|--|-----------------------------------|
| | | | | | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | |
| Restricted Stock Units | \$ 0 <u>(1)</u> | Â | Â | Â | Â | Â | (<u>3)</u> | (2) | Common Stock | 2,763 | Ì |
| Restricted Stock Units | \$ 0 <u>(1)</u> | Â | Â | Â | Â | Â | (4) | (2) | Common Stock | 4,878 | Ì |
| Restricted Stock Units | \$ 0 <u>(1)</u> | Â | Â | Â | Â | Â | (7) | (2) | Common Stock | 4,719 | Ì |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | | | | | |
|--|---------------|-----------|---------|-------|--|--|--|--|
| | Director | 10% Owner | Officer | Other | | | | |
| LUMPKINS ROBERT L C/O THE MOSAIC COMPANY 3033 CAMPUS DRIVE, SUITE E490 PLYMOUTH, MN 55441 | ÂX | Â | Â | Â | | | | |
| Signatures | | | | | | | | |
| s/Richard L. Mack, Attorney-in-Fact for Lumpkins | 0′ | 7/15/2013 | | | | | | |
| **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-for-One
- (2) Not Applicable
- (3) The restricted stock units vested on October 7, 2011. Vested shares will be delivered to the reporting person on October 7, 2013.
- (4) The restricted stock units vested on October 6, 2012. Vested shares will be delivered to the reporting person on October 6, 2014.

On March 26, 2013, the reporting person indirectly held 3,745 shares of MOS common stock in a grantor retained annuity trust for the

(5) benefit of himself and his daughter ("GRAT #3"). On that date, 1,960 of the shares were distributed by GRAT #3 to the Robert L. Lumpkins Revocable Trust in satisfaction of an annuity to reporting person and was exempt from reporting under Rule 16a-13, following which 1,785 shares remained held by GRAT #3.

On May 14, 2013, the reporting person indirectly held 5,694 shares of MOS common stock in a grantor retained annuity trust for the benefit of himself and his daughter ("GRAT #4"). On that date, 4,251 of the shares were distributed by GRAT #4 to the Robert L.

- (6) Lumpkins Revocable Trust in satisfaction of an annuity to the reporting person and was exempt from reporting under Rule 16a-13, following which 1,443 shares remained held by GRAT #4.
- (7) The restricted stock units vest on October 4, 2013. Vested shares will be delivered to the reporting person on October 4, 2015.

Note: File three copies of this Form, one of which must be manually signed. If space provided 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.