

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

**SCHEDULE 13D**

Under the Securities Exchange Act of 1934

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**Metabolix, Inc.**

(Name of Issuer)

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**Common Stock**

(Title of Class of Securities)

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**591018809**

(CUSIP Number)

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**D. J. Smith**  
**Executive Vice President, Secretary and General Counsel**  
**Archer-Daniels-Midland Company**  
**4666 Faries Parkway**  
**P.O. Box 1470**  
**Decatur, IL 62525**  
**Telephone: (217) 424-5200**

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(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

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**November 15, 2006**

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box .

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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CUSIP No. 591018809

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (Entities Only)  Archer-Daniels-Midland Company I.R.S. Identification No. 41-0129150	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) ( a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (See Instructions)  WC	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  1,216,797
	8	SHARED VOTING POWER  0
	9	SOLE DISPOSITIVE POWER  1,216,797
	10	SHARED DISPOSITIVE POWER  0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,216,797	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  6.27% based on 19,394,430 shares outstanding	
14	TYPE OF REPORTING PERSON (See Instructions)  CO	

**Item 1. Security and Issuer.**

This Statement on Schedule 13D relates to the common stock (the "Common Stock") of Metabolix, Inc., a Delaware corporation (the "Company"). The principal executive offices of the Company are at 21 Erie Street, Cambridge, MA 02139.

**Item 2. Identity and Background.**

The person filing this Statement is Archer-Daniels-Midland Company, a Delaware corporation ("ADM"), 4666 Faries Parkway, P.O. Box 1470, Decatur, Illinois 62525. ADM is one of the world's largest processors of soybeans, corn, wheat and cocoa. ADM is also a leader in soy meal and oil, ethanol, high fructose corn syrup and flour. In addition, ADM produces value-added food and feed ingredients.

Set forth in Appendix I with respect to each director and executive officer of ADM are his or her name, business address and present principal employment or occupation and the name and principal business and address of any corporation or other organization in which such employment or occupation is carried on. No other person other than persons listed in Appendix I might be deemed to control ADM.

During the last five years, neither ADM, nor to the best of ADM's knowledge, any person named in Schedule I attached hereto, has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) nor have any of such persons been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction as a result of which such person was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Each of the directors and executive officers of ADM, except M. Brian Mulrone, Antonio Maciel Neto, Vikram Luthar, Ismael Roig and Mark Zenuk is a United States citizen. Messrs. Mulrone and Zenuk are Canadian citizens. Messr. Maciel is a Brazilian citizen. Messr. Luthar is an Indian citizen. Messr. Roig is a Venezuelan citizen.

**Item 3. Source and Amount of Funds or Other Consideration.**

On November 15, 2006, concurrent with the Company's initial public offering, ADM acquired 535,714 shares of Common Stock from the Company in a private placement at a price of \$14.000 per share. On the same date, 833,333 shares of convertible preferred stock owned by ADM were converted into 681,083 shares of Common Stock of the Company. ADM originally acquired the shares of convertible preferred stock from the Company on January 19, 2006 at a price of \$6.00 per share. All purchases of the Common Stock and convertible preferred stock were made from ADM's working capital.

**Item 4. Purpose of Transaction.**

ADM holds its shares of the Common Stock of the Company for investment purposes. ADM may, from time to time, depending on market conditions and other considerations, purchase additional shares or dispose of some or all of the shares held by it.

Except as set forth above, ADM has no plans nor proposals which relate to or would result in any of the actions enumerated in clauses (a)-(j) of Item 4 of Schedule 13D under the Securities Exchange Act of 1934, as amended.

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**Item 5. Interest in Securities of the Issuer.**

The Company is believed to have 19,394,430 shares of Common Stock outstanding. ADM beneficially owns 1,216,797 shares of the Common Stock or approximately 6.27% of the outstanding Common Stock and has sole power to vote or to direct the vote and sole power to dispose of or to direct the disposition of such shares. ADM does not own or have the right to acquire, directly or indirectly, any additional shares of Common Stock of the Company. None of ADM's directors or executive officers beneficially own any of the Common Stock of the Company.

Except for the transactions described in Item 3 above, during the past sixty days there have been no transactions in shares of Common Stock of the Company by ADM or by ADM's directors or executive officers.

**Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.**

The Company has an agreement with ADM Polymer Corporation ("Polymer"), a subsidiary of ADM, establishing an alliance whereby the Company and Polymer will produce *PHA Natural Plastics* (the "Plastics"), an environmentally sustainable alternative to petrochemical-based plastics. The arrangement is comprised of two primary agreements: (1) the Technology Alliance and Option Agreement and (2) the Commercial Alliance Agreement.

The Technology Alliance and Option Agreement provided Polymer with an option, exercised by Polymer on July 12, 2006, to enter into a commercial alliance for further research, development, manufacture, use and sale of the Plastics. The Commercial Alliance Agreement establishes the activities and obligations of the Company and Polymer by which they will commercialize the Plastics. The activities include: the establishment of a Joint Sales Company (the "JSC") to market and sell the Plastics, the construction of a manufacturing facility and the conducting of research, development, manufacturing, sales and marketing services by the Company and Polymer. The JSC will be a limited liability company, formed and equally owned by the Company and Polymer to serve as the entity that establishes and develops the commercial market for the Plastics. The Company and Polymer will each have a 50% equity and voting interest in the JSC. Although the JSC will be a 50-50 joint venture, Polymer will be advancing a disproportionate share of the financial capital needed to construct the manufacturing plant and to fund the activities of the JSC. Consequently, all profits (after payment of royalties, reimbursements and fees) from the JSC will be distributed to Polymer until Polymer's disproportionate investment in the JSC has been returned in full. Once Polymer has recouped such amounts, the profits of the JSC will be distributed equally to the parties.

**Item 7. Material to Be Filed as Exhibits.**

None.

**Signature**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: November 21, 2006

ARCHER-DANIELS-MIDLAND COMPANY

/s/ D. J. Smith

D. J. Smith

Executive Vice President, Secretary and General Counsel

**Attention: Intentional misstatements or omissions of fact  
constitute Federal Criminal violations (See 18 U.S.C. 1001)**

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## Appendix I

Set forth below with respect to each director and executive officer of ADM are his or her name and (a) his or her business address (unless another address is set forth, the business address of each person is 4666 Faries Parkway, P.O. Box 1470, Decatur, Illinois 62525); (b) his or her present principal employment or occupation and the name and (if not ADM) principal business of any corporation or other organization in which such employment or occupation is carried on and the address of such corporation or other organization (which, unless another address is set forth, is the same as the business address set forth for such person).

### DIRECTORS

G. Allen Andreas: (a) see above; (b) Chairman of ADM.

Alan L. Boeckmann: (a) 6700 Las Colinas Boulevard, Irving, TX 75039; (b) Chairman and Chief Executive Officer, Fluor Corporation.

Mollie Hale Carter: (a) 2090 S. Ohio, Salina, KS 67401; (b) Chairwoman, Chief Executive Officer and President, Sunflower Bank and Vice President, Star A, Inc.

Roger S. Joslin: (a) see above; (b) Former Vice Chairman of the Board of State Farm Mutual Automobile Insurance Company.

Antonio Maciel Neto: (a) Avenida Tancredo Neves, 274, Bloco B - Sala 121, 41820-020 Salvador, Bahia Brazil; (b) Chief Executive Officer of Suzano Papel e Celulose (a Brazilian paper and pulp company).

Patrick J. Moore: (a) 150 N. Michigan Avenue, Chicago, IL 60601; (b) Chairman and Chief Executive Officer of Smurfit-Stone Container Corporation.

M. Brian Mulroney: (a) 1981 McGill College Avenue, Suite 1100, Montreal, Quebec, Canada H3A 3C1; (b) Senior Partner, Ogilvy Renault.

Thomas F. O'Neill: (a) 181 W. Madison Street, 35th Floor, Chicago, IL 60602; (b) Principal, Sandler O'Neill & Partners, L.P.

O. Glenn Webb: (a) P.O. Box 2500, Bloomington, IL 61702; (b) Retired Chairman of the Board and President, GROWMARK, Inc.

Kelvin R. Westbrook: (a) 120 S. Central Ave., Suite 150, Clayton, MO 63105; (b) President and Chief Executive Officer, Millennium Digital Media, L.L.C.

Patricia A. Woertz: (a) see above; (b) President and Chief Executive Officer of ADM.

### OTHER EXECUTIVE OFFICERS

David J. Smith: (a) see above; (b) Executive Vice President, Secretary and General Counsel.

William H. Camp: (a) see above; (b) Executive Vice President (Global Processing).

John D. Rice: (a) see above; (b) Executive Vice President (Global Marketing and Risk Management).

Lewis W. Batchelder: (a) see above; (b) Senior Vice President (Agricultural Services).

Michael D'Ambrose: (a) see above; (b) Senior Vice President (Human Resources).

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Edward A. Harjehausen: (a) see above; (b) Senior Vice President (Food and Feed Ingredients).

Brian F. Peterson: (a) see above; (b) Senior Vice President (Corporate Affairs).

Douglas J. Schmalz: (a) see above; (b) Senior Vice President and Chief Financial Officer.

Margaret M. Loebel: (a) see above; (b) Group Vice President (Finance).

Steven R. Mills: (a) see above; (b) Group Vice President and Controller.

Raymond V. Preiksaitis: (a) see above; (b) Group Vice President (Information Technologies).

Vikram Luthar: (a) see above; (b) Vice President-Treasurer.

Mark Bemis: (a) see above; (b) Vice President (Cocoa Operations).

J. Kevin Burgard: (a) see above; (b) Vice President (Specialty Food Ingredients).

Mark J. Cheviron: (a) see above; (b) Vice President (Security and Corporate Services).

Craig A. Fischer: (a) see above; (b) Vice President (Wheat Processing).

Dennis C. Garceau: (a) see above; (b) Vice President (Manufacturing and Technical Services).

Shannon Herzfeld: (a) see above; (b) Vice President (Government Relations).

Craig E. Huss: (a) see above; (b) Vice President (Transportation and Logistics).

Matthew J. Jansen: (a) see above; (b) Vice President (Grain Group).

Michael Lusk: (a) see above; (b) Vice President (Insurance and Risk Management).

Randy Moon: (a) see above; (b) Vice President (Human Resources).

Dennis Riddle: (a) see above; (b) Vice President (Corn Processing).

Kenneth A. Robinson: (a) see above; (b) Vice President (Commodity Risk Management).

Ismael Roig: (a) see above; (b) Vice President (Planning and Business Development).

Scott A. Roney: (a) see above; (b) Vice President (Compliance and Ethics).

A. James Shafter: (a) see above; (b) Vice President and Assistant General Counsel.

Stephen Yu: (a) see above; (b) Vice President (Asia-Pacific Operations).

Mark Zenuk: (a) see above; (b) Vice President (European Operations).