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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
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FORM 11-K

(Mark One)

(X) ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT
OF 1934

For the fiscal year ended December 31, 2007

OR

() TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE
ACT OF 1934

For the transition period from _____ to _____

Commission file number 333-115185

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A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

MYCOGEN CORPORATION DEFERRED SAVINGS PLAN
9330 Zionsville Road
Indianapolis, Indiana 46268-1054

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

THE DOW CHEMICAL COMPANY
2030 DOW CENTER
Midland, Michigan 48674

REQUIRED INFORMATION

Financial Statements as of December 31, 2007 and 2006, and for the Year Ended December 31, 2007,
Supplemental Schedule as of December 31, 2007, and Independent Auditors' Report.

Exhibits

23 Consent of Independent Registered Public Accounting Firm

SIGNATURE

The Plan: Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

MYCOGEN CORPORATION DEFERRED SAVINGS PLAN

DATE: 6/23/08

BY:

Gordon Slack
Vice President – Finance and
Member, Dow AgroSciences Employee Benefits
Committee

Mycogen Corporation Deferred Savings Plan

Financial Statements as of December 31, 2007 and
2006, and for the Year Ended December 31, 2007,
and Independent Auditors' Report

MYCOGEN CORPORATION DEFERRED SAVINGS PLAN

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NOTE: All other schedules required by Section 2520.013-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.	



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INDEPENDENT AUDITORS' REPORT

To the Committee for the Administration of
Mycogen Corporation Deferred Savings Plan:

We have audited the accompanying statements of net assets available for benefits of Mycogen Corporation Deferred Savings Plan (the "Plan") as of December 31, 2007 and 2006, and the related statement of changes in net assets available for benefits for the year ended December 31, 2007. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2007 and 2006, and the changes in net assets available for benefits for the year ended December 31, 2007, in conformity with accounting principles generally accepted in the United States of America.

As described in Note 1 to the financial statements, the Plan merged into the The Dow Chemical Company Employees' Savings Plan effective December 31, 2007.

Deloitte & Touche LLP

June 23, 2008

MYCOGEN CORPORATION DEFERRED SAVINGS PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS AS OF DECEMBER 31, 2007 AND 2006

	2007	2006
ASSETS —		
Plan interest in Master Trust:		
Investments	\$ -	\$24,662,671
Participant loans	<u>-</u>	<u>155,525</u>
Total investments	<u>-</u>	<u>24,818,196</u>
Total assets		24,818,196
LIABILITIES — Distribution payable for excess contributions	<u>-</u>	<u>36,800</u>
NET ASSETS AVAILABLE FOR BENEFITS AT FAIR VALUE	-	24,781,396
ADJUSTMENTS FROM FAIR VALUE TO CONTRACT VALUE FOR FULLY BENEFIT-RESPONSIVE INVESTMENT CONTRACTS	<u>-</u>	<u>5,294</u>
NET ASSETS AVAILABLE FOR BENEFITS	<u>\$ -</u>	<u>\$24,786,690</u>

See notes to financial statements.

MYCOGEN CORPORATION DEFERRED SAVINGS PLAN

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS FOR THE YEAR ENDED DECEMBER 31, 2007

ADDITIONS:

Investment income — Plan interest in The Dow Chemical Company Master Trust investment income	<u>\$ 2,408,641</u>
Contributions:	
Participants	1,526,975
Employer	<u>468,415</u>
Total contributions	<u>1,995,390</u>
Total additions	<u>4,404,031</u>

DEDUCTIONS:

Administrative expenses	584
Benefits paid to participants	<u>2,894,121</u>
Total deductions	<u>2,894,705</u>

TRANSFERS OUT — Net 26,296,016

NET DECREASE IN ASSETS AVAILABLE FOR BENEFITS (24,786,690)

NET ASSETS AVAILABLE FOR BENEFITS:

Beginning of year	<u>24,786,690</u>
End of year	<u>\$ -</u>

See notes to financial statements.

MYCOGEN CORPORATION DEFERRED SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2007 AND 2006, AND FOR THE YEAR ENDED DECEMBER 31, 2007

1. DESCRIPTION OF THE PLAN

Mycogen Corporation (the "Company" or "Mycogen") Deferred Savings Plan (the "Plan") participates in a Master Trust with The Dow Chemical Company Employees' Savings Plan. Effective December 31, 2007, the Plan was amended and merged into The Dow Chemical Company Employees' Savings Plan. Accordingly, on December 31, 2007, all assets of the Plan were transferred to The Dow Chemical Company Employees' Savings Plan. This transfer is included as the transfers out — net in the statement of changes in net assets available for benefits.

The following description of the Plan provides only general information. Participants should refer to the Plan document or Summary Plan Description for a more complete description of the Plan's provisions.

General — The Plan, which became effective February 1, 1987, is a defined contribution profit sharing and retirement plan, subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), and covers substantially all employees of Mycogen and its participating subsidiaries. Employees of Mycogen are generally eligible to participate in the Plan as soon as administratively feasible following the date the eligible employee (as defined) both completes an hour of service and attains age 21.

Mycogen has been appointed as administrator of the Plan and investment fiduciary.

Employee Contributions — Participants may elect to contribute 1% to 30% for nonhighly compensated employees and 1% to 20% for highly compensated employees of their eligible compensation, as defined, to the Plan, subject to certain limitations imposed by the Internal Revenue Code (the "Code"). Additionally, participants who are at least 50 years old during the Plan year can make catch-up contributions to the Plan, subject to certain limitations imposed by the Code. Contributions are made in investment options as directed by the participant.

Company Contributions — Mycogen may, at its sole discretion and without any obligation to do so, make a matching contribution each pay period on behalf of each qualified participant, as defined in the Plan. When the Company contributes to the Plan, the contribution to each participating employee's account is an amount equal to 100% of the first 2% and 25% of the next 4% of employee contributions, with a limit of \$3,000 per year. Contributions are made in investment options as directed by the participant.

Temporary Investments — Temporary investments of the Master Trust are investments in short-term money market funds in the respective investment funds.

Account Valuation — Participant account balances reflect the total contributions made to the Plan by the employee and the Company, plus investment results (which are allocated on a pro rata basis), less expenses and withdrawals.

Vesting — Participants' contributions and allocated amounts of investment income or loss are fully vested at all times. Employer contributions may become fully vested upon participant retirement from the Company, death while an employee, becoming disabled while an employee, or upon partial or full

termination of the Plan. Otherwise, the participant's vested interest in matching and discretionary contribution accounts, if any, is based upon months of service varying by participation date with employees being fully vested in matching and discretionary accounts after 60 months of service. Under the December 31, 2007 merger and transfer of assets to The Dow Chemical Company Employers Savings Plan, a participant's interest in their matching and discretionary contributions became fully vested.

Forfeitures — Forfeitures of a participant's nonvested portion of his or her matching account occurs when a participant terminates and receives a distribution under the Plan or incurs 60 consecutive one-month periods of severance. Forfeited amounts are held in a separate account. There were forfeitures of \$0 and \$4,590 available as of December 31, 2007 and 2006, respectively. These amounts will be allocated to Plan participants or used to reduce future employer contributions in accordance with the provisions of the Plan.

Benefits Distribution — On termination of services due to death, disability, or retirement, a participant becomes fully vested and will receive a lump-sum amount equal to the value of the participant's interest in his or her account. For termination of services for other reasons, a participant may receive the value of the vested interest in his or her account as a lump-sum distribution or in annual installments generally not to exceed five years. Withdrawals of a participant's account during the participant's employment are limited to financial requirements meeting the hardship provisions of the Plan, attainment of age 59-1/2, or through borrowings under the loan provisions of the Plan.

Participant Loans — Participants may borrow from their accounts a minimum of \$500, up to a maximum of the lesser of \$50,000 or 50% of the account balance credited from employee contributions and rollovers (subject to the provisions of the Plan). Loans are to be repaid over a term not to exceed 5 years or 30 years for the purchase of a primary residence. Effective June 16, 2003, any new loan shall have a fixed term not to exceed five years.

The loans are secured by the balance in the participant's account and bear interest at a rate commensurate with prevailing interest rates, as determined quarterly by the Plan administrator. Interest rates ranged from 7.75% to 8.25% at December 31, 2007. Principal and interest are paid ratably through semimonthly or weekly payroll deductions.

Investments — Participants direct the investment of their contributions into various investment options offered by the Plan.

Administration — Expenses to administer the Plan are paid by Mycogen and certain bank fees are allocated to the individual participant accounts. The assets of the Master Trust for the Plan and The Dow Chemical Company Employees' Savings Plan are held by Fidelity Management Trust Company ("Fidelity") who acts as independent trustee, custodian, and recordkeeper for all the investments in the Master Trust. Fidelity manages certain Plan investments in the Master Trust, such as shares of commingled funds. Effective December 31, 2007, the Plan was amended and merged into The Dow Chemical Company Employees' Savings Plan, and the Master Trust was amended to remove Mycogen Corporation as a party to the trust agreement.

Amendment or Termination — The Plan does not have an expiration date. The Company, however, may at any time terminate, amend, or modify the Plan, in accordance with the Plan, subject to certain rights of the Plan participants. Upon termination of the Plan, each participant is entitled to receive the entire balance in his or her account in accordance with the terms of the Plan.

Transfers Out — Net — The amount of assets transferred from the Plan into The Dow Chemical Company Employees' Savings Plan related to the December 31, 2007, amendment was \$26,296,016.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND RECENT ACCOUNTING PRONOUNCEMENTS

Basis of Accounting — The financial statements for the Plan have been prepared in accordance with accounting principles generally accepted in the United States of America. Investment transactions are accounted for on the trade date, and dividend and interest income are recorded when earned.

Use of Estimates — The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of net assets available for benefits, disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of changes in net assets available for benefits during the reporting period. Actual results could differ from those estimates.

Risks and Uncertainties — The Plan and Master Trust invest in common stock and various investment instruments, including pooled funds. Investment securities, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the financial statements.

Investment Valuation and Income Recognition — Investments in the Plan and Master Trust consisting of common stock of The Dow Chemical Company, common/collective trusts, mutual funds, and common stock are stated at fair value. The fully benefit-responsive investment contracts are stated at fair value and then adjusted to contract value. Common stock of The Dow Chemical Company is stated at fair value based upon the quoted market value of such securities at year-end. Temporary investments and participant loans receivable are stated at cost, which approximate fair value.

Investments of the interest income fund included in the Master Trust consist of Synthetic Guaranteed Investment Contracts ("synthetic GICs") (see Note 3). Synthetic GICs operate similarly to an insurance company separate account investment contract, except that the assets are placed in a separate custodial account (owned by the Master Trust) rather than such assets being held in a separate account of the insurance company. In addition to holding certain assets, synthetic GICs include features designed to provide participant liquidity at book value, as well as periodic interest crediting rates. The liquidity feature is also known as "benefit responsiveness." Some portions of the synthetic GICs may be referred to as "wrap contracts" or "wrapper contracts," and those terms may also be used synonymously with "synthetic GICs." Synthetic GICs may be issued by banks, insurance companies, and other financial institutions. The synthetic GICs provide for prospective crediting interest rate adjustments based on the interest earnings and fair value of the underlying trust assets. The crediting interest rates are reset monthly or quarterly, depending on the contract, and the contracts provide that the crediting interest rates cannot be less than zero.

Changes in fixed income market conditions and interest rates may affect the yield to maturity and the market value of the underlying investments. Such changes could have a material impact on the synthetic GICs future interest crediting rates. In addition, participant withdrawals from and transfers out of the interest income fund made according to Plan provisions are paid at contract value, but funded through the market value liquidation of the underlying investments. This process of funding participant withdrawals and transfers from market value liquidations of underlying investments may also have an

effect on future interest crediting rates. The difference between the Fund's contract value and the related market value of the underlying Fund investments is represented in the Plan's statements of net assets available for benefits as the "adjustments from fair value to contract value for fully benefit-responsive investment contracts."

Futures — A futures contract is a contractual agreement to make or take delivery of a standardized quantity of a specific grade or type of commodity or financial instrument at a specified future date in accordance with terms specified by a regulated future exchange. These contracts involve elements of market risk in excess of amounts recognized in the statements of net assets available for benefits. The credit risk associated with these contracts is minimal as they are traded on organized exchanges and settled daily. Upon entering into a futures contract, the Master Trust is required to deposit either in cash or securities an amount ("initial margin") equal to a certain percentage of the notional value of the contract. Subsequent payments are then made or received by the Plan, depending on the daily fluctuation in the value of the underlying contracts.

The fair value of futures contracts in the statements of net assets available for benefits is zero at December 31, 2007 and 2006, as settlements are by cash daily. Changes in fair value are accounted for as net appreciation (depreciation) in fair value of investments.

As of December 31, 2007, the plan held open interest rate futures contracts, as well as U.S. Treasury futures contracts.

Benefits Payable — Amounts payable to persons who have withdrawn from participation are not recorded as a liability of the Plan. There were no benefits payable to participants who have withdrawn from participation in the Plan as of December 31, 2007 and 2006.

Federal Income Tax Status — The Internal Revenue Service (IRS) has determined and informed the Company by a letter dated February 22, 2002, that the Plan is qualified and the trust established under the Plan is tax exempt under the appropriate sections of the Code. Although the Plan has been amended since receiving the determination letter, the Plan administrator believes that the Plan is designed and is currently being operated in compliance with the applicable provisions of the Code and as a result, no provision for taxes has been recorded in the Plan's financial statements.

3. RECENT ACCOUNTING PRONOUNCEMENTS

Accounting for Fully Benefit-Responsive Contracts Held by Certain Investment Companies — The financial statements reflect the adoption of Financial Accounting Standards Board Staff Position, FSP AAG INV-1 and SOP 94-4-1, *Reporting of Fully Benefit-Responsive Contracts Held by Certain Investment Companies Subject to the AICPA Investment Company Guide and Defined-Contribution Health and Welfare and Pension Plans* (the "FSP"). As required by the FSP, the statements of net assets available for benefits present investment contracts at fair value, as well as an additional line item showing an adjustment of fully benefit-responsive contracts from fair value to contract value at December 31, 2007 and 2006. The statement of changes in net assets available for benefits is presented on a contract value basis and was not affected by the adoption of the FSP.

All of the Plan's synthetic GICs are considered to be fully benefit-responsive and are, therefore, recorded at contract value in accordance with the FSP. The average yield for the Plan's synthetic GICs was approximately 5.2% for the year ended December 31, 2007. The crediting interest rate was approximately 5.2% at December 31, 2007. There are no reserves against the contract value for credit risk of the contract issuer or otherwise.

4. MASTER TRUST

Effective August 29, 2003, the Company created the Master Trust for the purpose of commingling certain investments of the Plan and The Dow Chemical Company Employees' Savings Plan. The net assets of the Master Trust are held by Fidelity, who acts as the independent trustee, custodian, and recordkeeper. Effective December 31, 2007, the Master Trust Agreement was amended to remove the Mycogen Corporation Deferred Savings Plan from the trust.

The net assets of the Master Trust as of December 31, 2007 and 2006, are as follows:

Master Trust — Net Assets	2007	2006
Investments at fair value as determined by quoted market prices:		
The Dow Chemical Company common stock:		
Dow Stock fund	\$ 611,896,319	\$ 700,084,735
Leveraged Employee Stock Ownership Plan (LESOP) fund (allocated shares) ¹	382,413,262	475,331,891
Common/collective trusts	1,171,686,855	1,074,041,294
Mutual funds	2,134,600,659	1,860,582,120
Common stock	71,335,954	69,841,918
Temporary investments	40,743,531	36,230,551
Participant loans	104,330,360	106,606,698
Synthetic GICs	<u>1,544,224,332</u>	<u>1,494,335,906</u>
Investments at fair value	6,061,231,272	5,817,055,113
Adjustments from fair value to contract value	<u>(24,680,008)</u>	<u>2,868,685</u>
Total	<u>6,036,551,264</u>	<u>5,819,923,798</u>
Other assets and liabilities of the Master Trust:		
Accrued interest and dividends receivable	17,822,047	6,298,501
Accrued liabilities	<u>(19,720,137)</u>	<u>(16,371,434)</u>
Total	<u>(1,898,090)</u>	<u>(10,072,933)</u>
Total net assets in the Master Trust	<u>\$6,034,653,174</u>	<u>\$5,809,850,865</u>

Master Trust — Net Investment Income

Net appreciation as determined by quoted market prices:

Common stock of The Dow Chemical Company:		
Dow Stock fund		\$ 3,437,588
LESOP fund ¹		3,602,597
Common/collective trusts		70,713,387
Mutual funds		77,591,401
Common stock		<u>19,002,786</u>
Net appreciation		174,347,759
Dividends		191,564,815
Interest		<u>89,063,908</u>
Total Master Trust net investment income		<u>\$454,976,482</u>

¹ Participants of the Plan do not participate in the LESOP.

As of December 31, 2007 and 2006, the plans participating in the Master Trust held the following interests in the Master Trust net assets:

		2007		2006
The Dow Chemical Company Employees' Savings Plan	100.0 %	\$ 6,034,653,174	99.6 %	\$ 5,785,027,375
Mycogen Corporation Deferred Savings Plan			0.4	<u>24,823,490</u>
Total Master Trust net assets available for benefits	<u>100 %</u>	<u>\$ 6,034,653,174</u>	<u>100 %</u>	<u>\$ 5,809,850,865</u>

The net investment income relating to the Master Trust was allocated daily to the participating plans by the trustee based on the Plan's interest in the individual funds of the trust.

5. RECONCILIATION OF FINANCIAL STATEMENTS TO FORM 5500

The following is a reconciliation of net assets available for benefits per the financial statements to the Form 5500 as of December 31, 2006:

Net assets available for benefits per the financial statements	\$24,786,690
Adjustment from contract value to fair value for fully benefit-responsive investment contracts	<u>(5,294)</u>
Net assets available for benefits per the Form 5500	<u>\$24,781,396</u>

6. RELATED-PARTY TRANSACTIONS

All transactions with Fidelity qualify as party-in-interest transactions.

7. VOLUNTARY COMPLIANCE RESOLUTION

Effective January 1, 2005, the Company amended the Plan to exclude from coverage an employee working as a "seasonal employee" expected to perform unskilled labor for a period not to exceed six months. Although the employees intended to be excluded from coverage form a distinct job class of employees, the description of their job class contained in the amendment references "seasonal" and "six months," which may cause the Plan to violate Code Section 410(a). The Plan has filed an application under the IRS Voluntary Compliance Resolution Program and has received a favorable compliance statement as of June 9, 2008. The Company has amended the definition provided in the Plan and is in compliance with Code Section 410(a).

* * * * *

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-115185 of The Dow Chemical Company on Form S-8 of our report dated June 23, 2008 (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the Plan merger into The Dow Chemical Company Employees' Savings Plan effective December 31, 2007), appearing in this Annual Report on Form 11-K of the Mycogen Corporation Deferred Savings Plan for the year ended December 31, 2007.

Deloitte & Touche LLP

Midland, Michigan
June 23, 2008

END