
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 11-K

x Annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2005

Commission File Number 1-5725

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

Quanex Corporation 401 (k) Savings Plan

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

Quanex Corporation
1900 West Loop South, Suite 1500
Houston, TX 77027

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Benefits Committee
Quanex Corporation

Re: Quanex Corporation 401(k) Savings Plan

We have audited the accompanying statements of net assets available for benefits of Quanex Corporation 401(k) Savings Plan (the "Plan") as of December 31, 2005 and 2004, and the related statements of changes in net assets available for benefits for the years then ended. 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 standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Plan is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included 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, 2005 and 2004, and the changes in net assets available for benefits for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of assets (held at end of year) as of December 31, 2005, is presented for the purpose of additional analysis and is not a required part of the basic financial statements, but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This schedule is the responsibility of the Plan's management. Such schedule has been subjected to the auditing procedures applied in our audit of the basic 2005 financial statements and, in our opinion, is fairly stated in all material respects when considered in relation to the basic financial statements taken as a whole.

/s/ DELOITTE & TOUCHE LLP
DELOITTE & TOUCHE LLP

June 21, 2006

QUANEX CORPORATION 401(k) SAVINGS PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	DECEMBER 31,	
	2005	2004
ASSETS:		
Participant-directed investments (see Note C)	\$ 85,172,406	\$ 78,168,414
Receivables:		
Employee contributions receivable	317,688	305,824
Employer contributions receivable	324,806	308,088
Total receivables	642,494	613,912
Total assets	85,814,900	78,782,326
LIABILITIES:		
Excess contributions payable	44,729	—
NET ASSETS AVAILABLE FOR BENEFITS	\$ 85,770,171	\$ 78,782,326

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QUANEX CORPORATION 401(k) SAVINGS PLAN
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE
FOR BENEFITS

	DECEMBER 31,	
	2005	2004
ADDITIONS:		
Contributions:		
Employer (net of forfeitures)	\$ 3,329,358	\$ 3,658,796
Employee	3,134,180	3,657,743
Total contributions	6,463,538	7,316,539
Investment income:		
Interest and dividends	\$ 3,654,448	\$ 1,595,410
Net appreciation in fair value of investments (see Note C)	2,255,961	6,549,696
Net investment income	5,910,409	8,145,106
Total additions	12,373,947	15,461,645
DEDUCTIONS:		
Benefits paid to participants	8,555,033	7,486,178
Administrative fees (see Note D)	10,716	14,338
Total deductions	8,565,749	7,500,516
INCREASE IN NET ASSETS	3,808,198	7,961,129
TRANSFERS BETWEEN PLANS (SEE NOTE G)	3,179,647	44,292
NET ASSETS AVAILABLE FOR BENEFITS:		
Beginning of year	78,782,326	70,776,905
End of year	\$ 85,770,171	\$ 78,782,326

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**Schedule H, Line 4i - Schedule of Assets (Held at End of Year)
December 31, 2004**

(a)	(b) Identity of issue, borrower, lessor or similar party	(c) Description of investment including maturity date, rate of interest, collateral, par, or maturity value	(d) Cost	(e) Current Value
*	Fidelity	Puritan Fund	\$ 2,334,202	\$ 2,389,350
*	Fidelity	Magellan Fund	11,689,532	12,732,856
*	Fidelity	Contrafund	9,075,145	11,875,681
*	Fidelity	Growth & Income Fund	10,151,597	10,148,706
*	Fidelity	Independence Fund	2,314,716	2,433,960
*	Fidelity	Overseas Fund	1,470,815	1,881,928
*	Fidelity	Balanced Fund	5,483,322	6,506,886
*	Fidelity	Blue Chip Fund	4,802,209	4,995,941
*	Fidelity	Asset Manager Fund	462,297	466,756
*	Fidelity	Low-Priced Stock Fund	4,931,960	6,078,143
*	Fidelity	Government Money Market Fund	9,665,444	9,665,444
	Templeton	Foreign Fund	1,190,814	1,387,824
	Neuberger & Berman	Partners Trust Fund	1,198,516	1,343,161
		Total Mutual Fund Assets	64,770,569	71,906,636
*	Quanex Corporation	Unitized common stock	4,269,729	6,657,949
*	Fidelity	Common/Commingled trust	4,106,505	4,106,505
	Participant loans	Loans maturing within 1.5 to 7 years, bearing interest at 5.0% to 10.5%	2,501,316	2,501,316
		Total Investments	<u>\$ 75,648,119</u>	<u>\$ 85,172,406</u>

* Party-in-Interest

**QUANEX CORPORATION 401(k) SAVINGS PLAN
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2005 AND 2004**

A. DESCRIPTION OF THE PLAN

The following description of the Quanex Corporation 401(k) Savings Plan (the "Plan"), formerly the Nichols 401(k) Savings Plan, provides only general information. Participants should refer to the Plan document for more complete information.

- (1) **General.** The Plan is a defined contribution plan, which covers substantially all salaried and non-union hourly employees at the Nichols Aluminum and Homeshield locations and bargaining unit employees at the Lincolnshire, Illinois facility. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA"). Fidelity Management Trust Company ("Fidelity" or the "Trustee") holds the assets of the Plan in trust. The Benefits Committee (the "Committee"), appointed by the Company's Board of Directors, serves as the Plan administrator.

The Piper Impact 401(k) Plan was merged into the Plan on December 14, 2005.
- (2) **Contributions.** Participants may elect to contribute from 1% to 50% (15% for bargaining unit employees at the Lincolnshire, Illinois facility) of their pretax annual compensation, as defined by the Plan, subject to certain Internal Revenue Code ("IRC") limitations. Company contributions are made based on a percentage of the employee's compensation for each individual with at least one year of service and vary by location as defined in the plan document.
- (3) **Participant Accounts.** Individual accounts are maintained for each Plan participant. Each participant's account is credited with the participant's contribution, the Company's contribution, and the participant's pro rata share of investment earnings. Participant accounts are also charged with withdrawals, administrative expenses and an allocation of any Plan losses. Investment earnings and losses allocations are based on individual participant account balances as of the end of the period in which the income is earned. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.
- (4) **Investments.** Participants direct the investment of contributions into various investment options offered by the Plan. The Plan currently offers 13 mutual funds, one common commingled trust and unitized Quanex stock as investment options for participants.
- (5) **Vesting and Forfeitures.** Participants are immediately vested in their contributions and earnings thereon. Vesting in the employer contribution is based on years of credited service. A participant is 20% vested for each year of credited service and fully vested after five years. If a participant terminates employment prior to becoming fully vested, the nonvested portion of the employer contributions are immediately forfeited by the participant and utilized to reduce future employer contributions. Amounts forfeited during 2005 and 2004 were \$95,235 and \$159,463, respectively. In 2005 and 2004, respectively, \$104,883 and \$159,462 of forfeitures were used to offset employer contributions. The amount available for future use in the forfeiture account totaled \$12,530 and \$15,222 at December 31, 2005 and 2004.
- (5) **Payment of Benefits.** The Plan is intended for long-term savings but provides for early withdrawals and loan arrangements under certain conditions. Upon termination of service, a participant may elect to receive a lump-sum distribution equal to the total amount of vested

benefits in his or her account. Terminated participants with account balances of less than \$1,000 will automatically receive a lump sum distribution (\$5,000 before March 28, 2005).

- (6) Participant Loans. Loans may be granted to a participant of the Plan at the Committee's discretion. Loan terms range up to five years or seven years if used for the purchase of a primary residence. Loans outstanding at December 31, 2005 mature within 1.5 to 7 years and bear interest at 5% to 10.5%. The interest rate charged is based on prime plus a percentage as defined by the Plan document. Interest on a participant's loan is allocated to the borrower's account.

B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

- (1) Accounting Basis. The financial statements of the Plan are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.
- (2) Investment Valuation. The Plan recognizes net appreciation or depreciation in the fair value of its investments. Investments are reflected at fair value in the financial statements. Fair value of mutual fund assets is determined using a quoted net asset value. Fair value for Quanex Corporation common stock, which is listed on the New York Stock Exchange, is determined using the last recorded sales price. The recorded value of the common/commingled trust is at net asset value which is composed of the fair values of the underlying assets held by the trust.

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

Management fees and operating expenses charged to the Plan for investments in the mutual funds are deducted from income earned on a daily basis and are not separately reflected. Consequently, management fees and operating expenses are reflected as a reduction of investment return for such investments.

- (3) 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 assets and liabilities and changes therein and disclosure of contingent assets and liabilities. Actual results could differ.
- (4) Administrative Expenses. The Company pays the administrative expenses of the Plan, except for loan set up and carrying fees, and redemption fees imposed on certain Fidelity funds.
- (5) Payment of Benefits. Benefit payments are recorded when paid.
- (6) Risks and Uncertainties. The Plan utilizes various investment instruments, including mutual funds and common stock. 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 change could materially affect the amounts reported in the financial statements.

C. INVESTMENTS

The following are investments that represent 5 percent or more of the Plan's investments.

	December 31, 2005		December 31, 2004	
	Shares	Amount	Shares	Amount
Fidelity Magellan Fund	119,625	\$ 12,732,856	131,609	\$ 13,659,659
Fidelity Growth and Income Fund	295,021	10,148,706	283,387	10,828,207
Fidelity Government Money Market Fund	9,664,444	9,665,444	10,003,809	10,003,809
Fidelity Contrafund	183,380	11,875,681	158,102	8,970,723
Fidelity Low-Priced Stock Fund	148,828	6,078,143	150,943	6,075,441
Fidelity Balanced Fund	346,849	6,506,886	300,410	5,353,315
Quanex Unitized Common Stock	133,239	6,657,949	168,432	5,320,763
Fidelity Managed Income Portfolio	* 4,106,505	*4,106,505	4,555,599	4,555,599
Fidelity Blue Chip Fund	115,764	4,995,941	98,800	4,120,938

* presented for comparative purposes only

During the years ended December 31, 2005 and 2004, the Plan's investments (including gains and losses on investments bought and sold, as well as held during the year) appreciated in value as follows:

	2005	2004
Mutual funds	\$ 1,564,706	\$ 4,634,731
Quanex unitized common stock	691,255	1,914,965
	<u>\$ 2,255,961</u>	<u>\$ 6,549,696</u>

D. RELATED PARTY TRANSACTIONS

Certain Plan investments are shares of mutual funds managed by Fidelity. Fidelity is the trustee as defined by the Plan and, therefore, these transactions qualify as party-in-interest transactions. Fees paid by the Plan for the investment management services amounted to \$10,716 and \$14,338 for the years ended December 31, 2005 and 2004, respectively. In addition, the Plan invests in shares of Quanex Corporation unitized common stock. Quanex Corporation is the Plan sponsor as defined by the Plan and, therefore, these transactions also qualify as party-in-interest transactions. As of December 31, 2005 and 2004, the value of Quanex Corporation unitized common stock held by the Plan was \$6,657,949 and \$5,320,763, respectively.

E. PLAN TERMINATION

Although it has not expressed any intention to do so, the Company has the right under the Plan to terminate the Plan at any time subject to the provisions set forth in ERISA. In the event of Plan termination, the assets held by the Trustee under the Plan will be valued and fully vested, and each participant will be entitled to distributions respecting his or her account.

F. FEDERAL INCOME TAX STATUS

The Plan is subject to specific rules and regulations related to employee benefit plans under the Department of Labor and the Internal Revenue Service. The Plan has received a favorable letter of tax determination dated June 19, 2003. As such, the Plan is a qualified trust under Sections 401(a) and 401(k) of the Internal Revenue Code (the "Code") and, as a result, is exempt from federal income tax under Section 501(a) of the Code. Although the Plan has been amended since receiving the determination letter, the Company believes the Plan is currently designed and being operated in compliance with the applicable requirements of the Code. The Company believes the Plan was qualified and the related trust was tax-exempt as of the financial statement dates.

G. TRANSFER OF ASSETS

Account balances of \$3,179,469 were transferred into the Plan as a result of the merger of the Piper Impact 401(k) Plan on December 14, 2005. Account balances of \$44,292 were transferred between the Plan and the Quanex Corporation 401(k) Savings Plan for Hourly Employees in plan year 2004.

SIGNATURES

The Plan. Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

Quanex Corporation 401 (k) Savings Plan

Date: June 27, 2006

/s/ Thomas M. Walker

Thomas M. Walker, Benefits Committee

INDEX TO EXHIBITS

23.1	Consent of Independent Registered Public Accounting Firm
99.1	Certification by chief executive officer and chief financial officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 33-54081 of Quanex Corporation on Form S-8 of our report dated June 21, 2006, appearing in this Annual Report on Form 11-K of the Quanex Corporation 401 (k) Savings Plan for the year ended December 31, 2005.

/s/ DELOITTE & TOUCHE LLP
DELOITTE & TOUCHE LLP

Houston, Texas
June 21, 2006

CERTIFICATION PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

We hereby certify that the accompanying Report of Quanex Corporation 401(k) Savings Plan (the "Plan") on Form 11-K for the year ended December 31, 2005 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Report fairly presents, in all material respects, the financial condition and results of operations of the Plan.

June 27, 2006

/s/ RAYMOND A. JEAN

Raymond A. Jean
*Chairman of the Board, President and
Chief Executive Officer*

/s/ THOMAS M. WALKER

Thomas M. Walker
*Senior Vice President—Finance and
Chief Financial Officer*
