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# 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, 2006**

**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

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### QUANEX CORPORATION 401(K) SAVINGS PLAN

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NOTE: All schedules required by Section 2520.103-10 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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#### 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, 2006 and 2005, 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 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, 2006 and 2005, 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) at December 31, 2006 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. The supplemental schedule is the responsibility of the Plan's management. Such supplemental schedule has been subjected to the auditing procedures applied in our audits of the basic 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.

As discussed in Note B to the financial statements, the Plan adopted FASB Staff Position 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*, for the years ended December 31, 2006 and 2005.

As discussed in Note B, the financial statements include investments valued at \$0 and \$4,060,408 as of December 31, 2006 and 2005, respectively, whose fair values have been calculated by management based on adjustment factors and other information provided by the fund managers or trustee.

/s/DELOITTE & TOUCHE LLP  
 DELOITTE & TOUCHE LLP  
 June 21, 2007

**QUANEX CORPORATION 401(K) SAVINGS PLAN**

**STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS  
 AS OF DECEMBER 31, 2006 AND 2005**

	2006	2005
<b>ASSETS:</b>		
Investments—at fair value:		
Participant-directed investments	\$	\$ 85,126,310
Receivables:		
Employer contribution		324,806
Participant contributions		317,688
Total receivables		642,494
Total assets		85,768,804
<b>LIABILITIES:</b>		
Benefits Payable		44,729
<b>NET ASSETS AVAILABLE FOR BENEFITS AT FAIR VALUE</b>		<b>85,724,075</b>
Adjustments from fair value to contract value for fully benefit-responsive investment contracts		46,096
	<b>\$</b>	<b>\$ 85,770,171</b>

See notes to financial statements.

**QUANEX CORPORATION 401(K) SAVINGS PLAN**

**STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
 FOR THE YEAR ENDED DECEMBER 31, 2006 AND 2005**

<b>ADDITIONS:</b>		
Contributions:		
Participant contributions	\$ 2,721,055	\$ 3,134,180
Employer contributions	2,818,375	3,329,358
<b>Total contributions</b>	<b>5,539,430</b>	<b>6,463,538</b>
Investment income:		
Net appreciation (depreciation) in fair value of investments	(630,891)	2,255,961
Interest and Dividends	8,261,815	3,533,872
Net investment income	7,630,924	5,789,833
Interest on Participant Loans	150,438	120,576
<b>Total Additions</b>	<b>13,320,792</b>	<b>12,373,947</b>
<b>DEDUCTIONS:</b>		
Benefits paid to participants	11,903,762	8,555,033
Administrative expenses	11,999	10,716
<b>Total deductions</b>	<b>11,915,761</b>	<b>8,565,749</b>
<b>TRANSFERS BETWEEN PLANS</b>	<b>(87,175,202)</b>	<b>3,179,647</b>
<b>INCREASE IN NET ASSETS</b>	<b>(85,770,171)</b>	<b>6,987,845</b>
<b>NET ASSETS AVAILABLE FOR BENEFITS:</b>		
Beginning of year	85,770,171	78,782,326
End of year	\$ <u>                    </u>	\$ <u>85,770,171</u>

See notes to financial statements.

## QUANEX CORPORATION 401(K) SAVINGS PLAN

### NOTES TO FINANCIAL STATEMENTS

#### AS OF DECEMBER 31, 2006 AND 2005, AND FOR THE YEAR ENDED DECEMBER 31, 2006

##### A. DESCRIPTION OF THE PLAN

The following brief description of the Quanex Corporation 401(k) Savings Plan (the "Plan") provides only general information. Participants should refer to the Plan agreement 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. The Plan is subject to 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 Plan was merged into the Quanex Corporation Employee Savings Plan on December 29, 2006.

- (2) **Contributions.** Participants may elect to contribute up to 50% of their compensation as defined by the Plan, subject to certain Internal Revenue Code ("IRC") limitations, on a pre-tax basis. The Company contributes 50% of the first 5% of compensation that a participant contributes to the Plan. Company supplemental 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) **Participants Account.** 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 33 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 voluntary contributions and the related earnings. Vesting in the employer's matching and supplemental contributions for employees is 20% for each year of credited service and fully vests after five years. In the event of termination, nonvested portions of employer's contributions are immediately forfeited by participants and utilized to reduce

future employer matching contributions. Amounts forfeited during 2006 and 2005 were \$195,613 and \$95,235, respectively. In 2006 and 2005, respectively, \$206,502 and \$104,883 of forfeited amounts were used to offset employer contributions. There were \$0 and \$12,530 available for future use in the forfeiture account at December 31, 2006 and 2005, respectively.

- (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, the participant may elect to receive a lump-sum amount equal to the amount of vested benefits in his or her account. Terminated employees with an account balance 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' mature within 1.5 to 7 years and bear interest at 5% to 9.25%. Interest on a participant's loan is allocated to the borrower's account. Loans outstanding at December 29, 2006, the date of the merger with the Quanex Employee Savings Plan, were transferred into that plan.

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## 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. Investments are reflected at fair value in the financial statements. The Plan recognizes net appreciation or depreciation in the fair value of its investments. Shares of mutual funds are valued at quoted market prices, which represent the net asset value of shares held by the Plan at year end. 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 common/commingled trust is stated at fair value as determined by the issuer of the common/collective trust fund based on the fair market value of the underlying investments. Common/collective trust funds with underlying investments in investment contracts are valued at fair market value of the underlying investments and then adjusted by the issuer to contract value. Participant loans are valued at the outstanding loan balances.

The Managed Income Portfolio is a stable value fund that is a commingled pool of the Fidelity Managed Income Portfolio Fund. The fund may invest in fixed interest insurance investment contracts, money market funds, corporate and government bonds, mortgage-backed securities, bond funds, and other fixed income securities. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. Contract value represents contributions made to the fund, plus earnings, less participant withdrawals.

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 from these estimates.
- (4) Adoption of new Accounting Guidance. The financial statements reflect the retroactive 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 presents 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. The statement of changes in net assets available for benefit is presented on a contract value basis and was not affected by the adoption of the FSP. The adoption of the FSP did not impact the amount of net assets available for benefits at December 31, 2005.
- (5) Administrative Expenses. The Company pays the administrative expenses, except for loan set up and carrying fees and redemption fees imposed on certain Fidelity funds.
- (6) Payment of Benefits. Benefit payments to participants are recorded when distributed.
- (7) 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 changes could materially affect the amounts reported in the financial statements.

C. INVESTMENTS

The Plan's investments that represented 5% or more of the Plan's net assets available for benefits as of December 31, 2006 and 2005 are as follows:

	Shares	Amount		Shares	Amount
Fidelity Magellan	—	\$ —	*	119,625	* \$ 12,732,856
Fidelity Contrafund	—	—	*	183,380	* 11,875,681
Fidelity Growth & Income	—	—	*	295,021	* 10,148,706
Fidelity Money Market	—	—	*	9,665,444	* 9,665,444
Fidelity Balanced	—	—	*	346,849	* 6,506,886
Quanex Low Priced Stock	—	—	*	148,828	* 6,078,143
Fidelity Blue Chip Growth	—	—	*	115,754	* 4,995,941
Fidelity Managed Income Portfolio	—	—	*	4,106,505	* 4,106,505
Quanex Unitized Stock	—	—	*	193,316	* 6,657,949

\* presented for comparative purposes only

During the year ended December 31, 2006, the Plan's investments (including gains and losses on investments bought and sold, as well as held during the year) appreciated (depreciated) in value as follows:

	2006	2005
Mutual Funds	\$ (1,018,515)	\$ 1,564,706
Quanex Unitized Stock	387,624	691,255
Net appreciation (depreciation) in fair value of investments	\$ (630,891)	\$ 2,255,961

D. EXEMPT PARTY-IN-INTEREST 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 exempt party-in-interest transactions. 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 exempt party-in-interest transactions. As of December 31, 2006 and 2005, the value of Quanex Corporation common stock held by the Plan was \$0 and \$6,657,949, 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 \$82,562,945 were transferred out of the Plan as a result of the merger into the Quanex Corporation Employees Savings Plan on December 29, 2006. The Company also sponsors various other 401(k) plans for varying groups of employees. Account balances of \$4,612,257 were transferred out of the Plan and into the Quanex Corporation 401(k) Savings Plan for Hourly Employees during plan year 2006. 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.

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 28, 2007

/s/ Thomas M. Walker  
 Thomas M. Walker, Benefits Committee

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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

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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, 2007, appearing in this Annual Report on Form 11-K of the Quanex Corporation 401 (k) Savings Plan for the year ended December 31, 2006.

/s/ DELOITTE & TOUCHE LLP  
DELOITTE & TOUCHE LLP

Houston, Texas  
June 21, 2007

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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, 2006 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 28, 2007

/s/ Raymond A. Jean

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

/s/ THOMAS M. WALKER

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

