

# ENHANCED-EFFICIENCY FERTILIZERS

**Second Edition**

A Multiclient  
Marketing Research Study

Offered by:



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# Contents

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**INTRODUCTION ..... 1**

**SCOPE AND OBJECTIVES ..... 2**

**RESEARCH APPROACH ..... 4**

**REPORT ..... 5**

**SCHEDULE ..... 8**

**CONTRACTUAL TERMS ..... 9**

**Subscription Cost ..... 9**

**Early Subscription Discounts ..... 9**

**Proprietary Handling..... 9**

**ABOUT AGINDUSTRIES ..... 10**

**For Additional Information ..... 10**

**ORDER FORM**



# Introduction

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Enhanced efficiency fertilizers (EEFs) are products that minimize the potential for nutrient losses to the environment. The two categories of EEF products are: (1) slow-release fertilizers (SRFs) and controlled-release fertilizers (CRFs)—with both generally referred to as CRFs, and (2) stabilized fertilizers—principally stabilized nitrogen (N) fertilizers (SNFs). CRFs release their plant nutrients (i.e., convert them to plant-available forms) at a slower rate than conventional soluble fertilizer products do. CRFs include synthetic organic N sources such as ureaform, methylene urea, and isobutylidene diurea; polymer- and/or sulfur-coated fertilizers; and processed natural organic materials such as sewage sludge and animal manures.

SNFs are N fertilizers to which an N stabilizer has been added. The N stabilizer (e.g., nitrification inhibitor, urease inhibitor) extends the time the fertilizer's N component remains in the soil in the urea or ammoniacal form, thereby minimizing the potential for N loss from volatility, denitrification, and leaching.

Historically, EEFs, especially CRFs, have predominantly been used for nonfarm markets such as golf courses, other professionally maintained turf, professional horticulture, and, to a lesser extent, certain high-value specialty agricultural crops (e.g., strawberries, citrus, vegetables). However, recent technology advances have resulted in new manufactured CRF and SNF products that are cost-effective and feasible for use on major agricultural crops such as corn, wheat, rice, cotton, and potatoes. EEFs' environmental benefits and application cost advantages are other key factors that are driving their increasing acceptance for use on agricultural crops.

Since AgIndustries Research & Consulting, Inc. (AgIndustries) conducted its first multiclient marketing research study on EEFs in 2006, many changes have occurred in the overall structure of the global EEFs industry. In addition to mergers and acquisitions among leading suppliers, several new manufacturers of CRF and stabilized fertilizer products have entered the market. And acceptance of EEFs for use on U.S. agricultural crops, particularly corn and other major field crops, has grown. Therefore, AgIndustries proposes a second EEFs marketing research study to update the information provided in our previous study report (published in February 2007). This prospectus provides details about the study's objectives, our research approach, the anticipated schedule, the cost to subscribe, and the study deliverables. An order form is included for convenience.

# Scope and Objectives

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AgIndustries' second *Enhanced-Efficiency Fertilizers* study will address the global supply, demand, and market trends for CRFs and SNFs. We will focus on three principal regional markets—North America (the United States and Canada), Western Europe, and Japan. However, we will also seek to develop overview information on the present and expected future supply and markets for CRF products in China, Southeast Asia, and Central and Eastern Europe. The study's objectives are to provide subscribing companies with:

- A review of manufactured CRF technologies and products, with emphasis on recent developments
- Identification of new technologies used or under development for the production of processed natural organic fertilizer products and the characteristics of the new organic fertilizer products
- A review of commercialized nitrification and urease inhibitor products and their applications in SNFs
- Profiles of the CRF businesses of approximately 30 leading CRF suppliers worldwide
- Identification of leading global suppliers of nitrification and urease inhibitor products
- A review of recent changes in the structure of the global CRFs industry, including:
  - Changes in company ownership
  - Acquisitions or divestitures of CRF products or product lines by existing suppliers
  - Market entry by new CRF suppliers
- Assessments and analyses of CRF supply and demand trends in the United States, Western Europe, and Japan. The final report will include the following information and data for each of the three key regional markets:
  - A list of CRF producers and primary marketers, their plant locations, and their CRF products
  - New CRF products or competitive technologies launched since 2006
  - Historical data for CRFs consumption in agricultural and nonagricultural markets
  - Historical data for CRFs consumption by product type

## Scope and Objectives (Continued)

- Discussions of the effects of SNF availability and other factors, as well as emerging trends, expected to affect future demand for CRFs in agricultural crop and noncrop markets
- Projections of CRF consumption in 2014 by end-use market and product type
- Assessments of SNF supply and demand trends in each of the three key world regions, including:
  - Identification of producers of nitrification and urease inhibitors, their products, and their plant locations
  - Present and potential markets for SNFs and estimated current consumption in each market
  - Projections of demand for SNFs in 2014 in agricultural crop and professional turf markets.

Because the United States is by far the largest regional market for EEFs, it will be assessed in the greatest depth. U.S. market coverage assessment will include the following agricultural crop and nonagricultural sectors:

PROPOSED U.S. MARKET COVERAGE		
Market	CRFs	SNFs
Agricultural Crops:		
Corn	X	X
Cotton		X
Wheat		X
Other Field Crops	X	X
Citrus	X	
Strawberries	X	
Other Fruits and Tree Nuts	X	
Vegetables and Melons	X	
Consumers	X	
Professional Markets		
Lawn Care and Landscape Maintenance	X	
Golf Courses	X	X
Other Professional Turf	X	X
Ornamental Horticulture	X	
Landscapers	X	

The base year for the U.S. market analyses will be 2009. The base year for the Western Europe and Japanese market assessments will be the latest year for which fertilizer market data are available. For all three regional markets, CRF demand will be projected to 2014.

# Research Approach

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Our research approach will include:

- A modified Delphi survey of appropriate representatives of leading global manufacturers and primary marketers of CRF products, nitrification inhibitors, and urease inhibitors for their perceptions of regional (U.S., Western European, Japanese, other) market growth trends over the last 5 years and their expectations for growth by market sector and product type through 2014
- Interviews of U.S. university agronomists, turfgrass specialists, horticulturists, and citrus and vegetable crop specialists working with CRF and SNF products
- Interviews of selected growers of agricultural crops and professional end users of CRFs and SNFs in nonagricultural markets
- Extensive interviews of appropriate representatives of CRF and nitrogen stabilizer product manufacturers and agricultural and specialty fertilizer blenders and distributors in North America, Western Europe, and Japan
- A comprehensive and ongoing literature review
- A review of worldwide patents for CRF and N stabilizer technologies that have been applied for or issued since January 2006.

# Report

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A summary of the proposed second edition of our *Enhanced Efficiency Fertilizers* report's structure and contents is provided below:

## REPORT CONTENTS SUMMARY

INTRODUCTION

EXECUTIVE SUMMARY

WORLD SUPPLIERS\*

U.S. MARKET TRENDS AND PROJECTIONS

Suppliers

Supply

Manufactured CRFs

Processed Natural Organics

N Stabilizers and SNFs

CRFs Consumption

Overview

Consumption by Market

Agricultural Crop Markets

Nonagricultural Markets

Consumption by Product Type

Urea Reaction Products

Coated Fertilizers

Other Slowly Soluble Products

Processed Natural Organics

Market Channels

N Stabilizer and SNFs Consumption

Price

Trade

WESTERN EUROPEAN MARKET TRENDS AND PROJECTIONS

Suppliers

Supply

Granular Mixed Fertilizers Based on Urea Reaction Products

Coated Fertilizers

Other CRF Products

Stabilized N Fertilizers

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\* This section will include profiles of the CRF, N Stabilizer, and SNF businesses of approximately 30 companies worldwide that are leading suppliers of these products in their respective regions and/or internationally.

# Report (Continued)

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## REPORT CONTENTS SUMMARY (Continued)

### WESTERN EUROPEAN MARKET TRENDS AND PROJECTIONS

(Continued)

- CRFs Consumption
  - Overview
  - Consumption by Market
    - Agricultural Crops
    - Nonagricultural Markets
  - Consumption by Product Type
    - Urea Reaction Products
    - Coated Fertilizers
    - Other Products
  - Consumption by Country
  - Market Channels
- N Stabilizer and SNFs Consumption
  - Price
  - Trade

### JAPANESE MARKET TRENDS AND PROJECTIONS

- Suppliers
- Supply
  - Manufactured CRF Products
  - Other SRFs
  - Stabilized N Fertilizers
- Consumption
  - Overview
  - Manufactured CRF Products
    - Urea-Aldehyde Reaction Products
    - Other Synthetic Organic Products
    - Coated Fertilizers
  - Other SRFs
    - Food Industry Waste
    - Processed Natural Organic Fertilizers
  - Stabilized N Fertilizers
  - Market Channels
- Price
- Trade

# Report (Continued)

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## REPORT CONTENTS SUMMARY (Concluded)

EEF SUPPLY AND MARKETS IN OTHER WORLD REGIONS

APPENDIX: TECHNOLOGIES AND PRODUCTS

Urea-Aldehyde Reaction Products

Other Synthetic Organic Products

Coated Fertilizers

Other Slowly Soluble Fertilizers

Processed Natural Organic Fertilizers

N Stabilizers

## **Schedule**

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We will begin the research for our second *Enhanced Efficiency Fertilizers* study about July 16, 2010, provided we have obtained a sufficient number of subscribers by that date. We will prepare a preliminary draft report and distribute it to subscribers and other key research contacts for review approximately 5 months after the project is initiated. During the following 4-6 weeks, we will contact each reviewer for his or her comments, corrections, and/or any pertinent new information. We will then revise the draft to reflect the corrected and new information that the reviewers provide. The final report will be distributed to subscribers approximately 7 months after project initiation.

# Contractual Terms

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## SUBSCRIPTION COST

The fee to subscribe to the *Enhanced Efficiency Fertilizers* study is US\$12,500 and includes delivery of one copy of the preliminary draft report and three copies of the final printed report. A PDF file of the final report can also be made available if requested. You will be invoiced the subscription amount (less the applicable discount) on project initiation. Alternatively, you can choose to be invoiced for 50% of the fee on project initiation, with the remaining 50% due on delivery of the final report.

## Early Subscription Discounts

The following discounts off the subscription fee are available to early subscribers:

Subscription Date	Discount	Discounted Fee
Through July 15, 2010	20%	US\$10,000
July 16 through August 31, 2010	15%	US\$10,625
September 1 through November 30, 2010	10%	US\$11,250
December 1, 2010 through January 31, 2011	5%	US\$11,875

## PROPRIETARY HANDLING

The study report is for the sole and confidential use of subscribing sponsors and their majority-owned subsidiaries. Therefore, each sponsor agrees to take reasonable precautions to protect the confidentiality of the report. Sponsors owned by other companies are not entitled to provide the reports to owners with less than a majority share, nor are joint venture companies or industry or trade associations entitled to subscribe on behalf of their individual owners or members.

# About AgIndustries

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AgIndustries, founded in 1998, is a California-based independent consulting firm specializing in market, competitive, and strategic analyses for the crop protection and specialty fertilizer industries. Its founder and Managing Director, Sarah P. Landels, was previously a Senior Consultant at SRI International and its subsidiary SRI Consulting (SRIC). During her more than 30 years as a consultant, she has undertaken a wide range of projects related to crop protection and specialty and CRF technologies and products, suppliers, markets, and the competitive environment for client companies worldwide. She has designed and led numerous multiclient studies covering U.S. specialty crop, professional turf, and ornamentals markets for pesticides and CRFs.

AgIndustries offers comprehensive and detailed market research studies and industry analyses on a shared-cost multiclient basis, as well as customized and proprietary consulting services for individual client firms. Before publishing the first edition of its multiclient *Enhanced-Efficiency Fertilizers* study report in February 2007, AgIndustries published two editions of *Controlled-Release Fertilizers*, a syndicated marketing research report. As required for the efficient conduct of both multiclient projects and single-client consulting assignments, AgIndustries draws on a nationwide and international network of experienced independent consultants who have specific technology, industry, and/or regional market knowledge and expertise.

## FOR ADDITIONAL INFORMATION

Please Contact:

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# Order Form

# Fax to (209) 722-7358

To subscribe to the 2010-2011 *Enhanced Efficiency Fertilizers* study, please fill out both sides of this form, sign the confidentiality agreement, and mail or fax the completed form to:

Sarah P. Landels  
Managing Director  
AgIndustries Research & Consulting, Inc.  
2193 Guinevere Court  
Merced, California 95340, USA  
Facsimile: (209) 722-7358

- We wish to subscribe to AgIndustries' *Enhanced Efficiency Fertilizers* study and agree to the contractual terms outlined in this prospectus.

We will need \_\_\_\_\_ (number) additional copies of the study report at US\$250 per copy.

- We qualify for the following *Early Subscriber's Discount*:

	Subscription Date	Discount	Discounted Fee
_____	Through July 15, 2010	20%	US\$10,000
_____	July 16 through Aug. 31, 2010	15%	US\$10,625
_____	Sept. 1 through Nov. 30, 2010	10%	US\$11,250
_____	Dec. 1, 2010 through Jan. 31, 2011	5%	US\$11,875

## Payment Options

- Please send me an invoice for the entire amount (US\$12,500, less applicable discount indicated above) on project initiation.
- Please send an invoice on project initiation for 50% of the subscription fee (US\$12,500, less applicable discount indicated above). We understand that the remaining 50% will be due on our receipt of the final study report.
- Please send details on how to pay by bank wire transfer.

# Order Form (Concluded)

The *Enhanced Efficiency Fertilizers* study report is for the sole and confidential use of subscribing companies and their majority-owned subsidiaries. As a subscriber, I agree to protect the confidential nature of the service. I also understand that subscribers owned by other companies are not entitled to provide the reports to owners with less than a majority share, nor are joint venture companies or industry or trade associations entitled to subscribe on behalf of their individual owners or members.

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