

## MEASURING OUR PERFORMANCE

Environmental stewardship and sustainability are not new ideas for our industry, nor for the farmers who have long embraced the principles of BMPs in their operations. As we move forward on the path to sustainability, it is increasingly important to both demonstrate our success in a measurable way, and identify areas where we can improve our performance. To that end, we plan to track our progress by identifying and reporting on a variety of indicators of BMP adoption and effectiveness.

When measuring the impact of our products in the environment, we must take into account that fertilizer is only one source of nutrients in the environment. The fertilizer industry has little influence on other sources of nutrients, such as municipal waste or livestock manure. While we may not be able to control all sources of nutrients in the environment, the fertilizer industry and farmers are doing our part to protect the environment.

Ultimately, the best indicators of our performance are clean air and water; healthy, productive soils; and a safe, nutritious food supply. By helping farmers apply the **right products** at the **right rate, right time and right place**, we are taking a responsible approach, being guided by economic, social and environmental goals, as we provide product stewardship.



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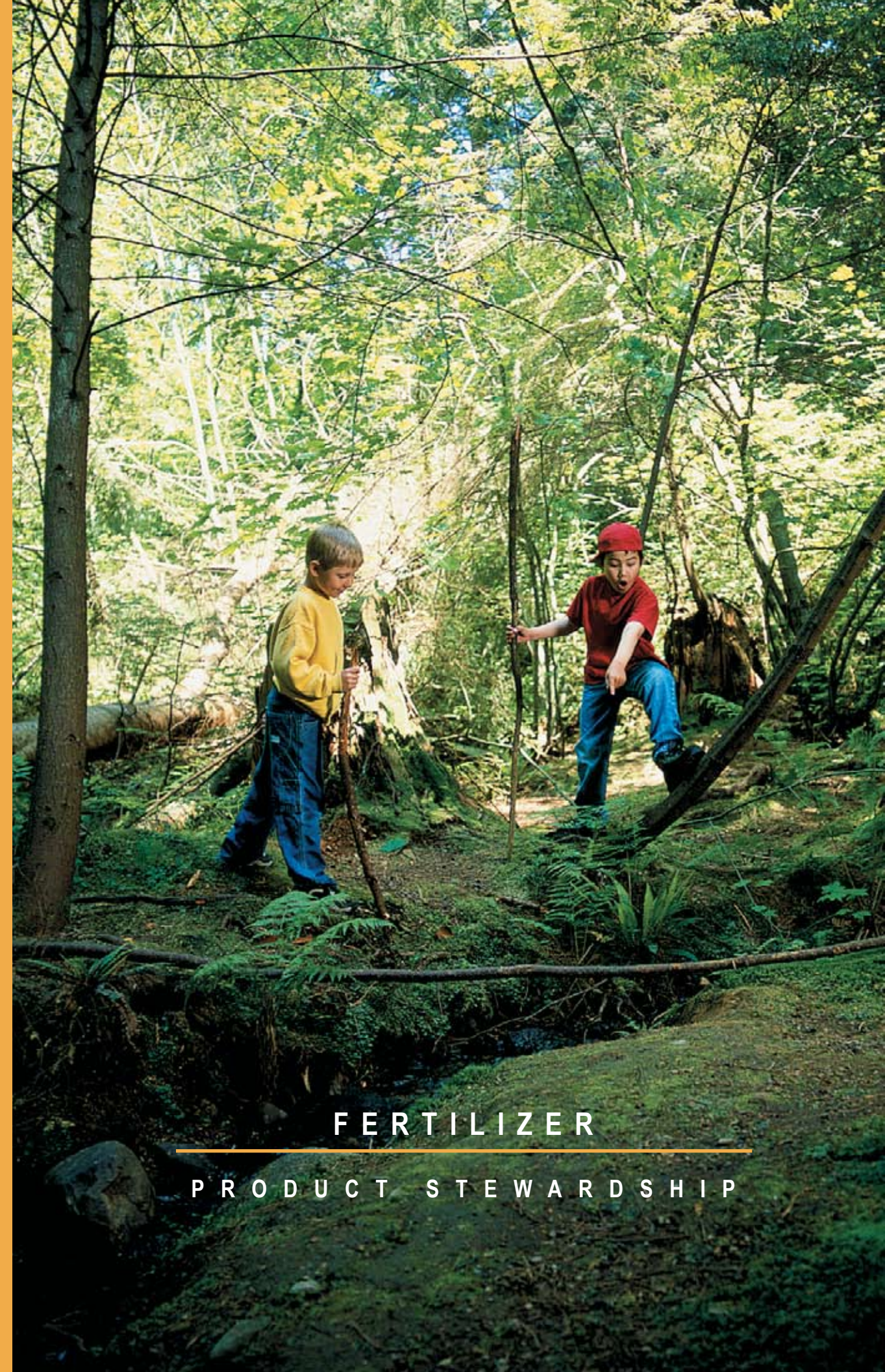
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THE FERTILIZER INSTITUTE/INTERNATIONAL PLANT NUTRITION INSTITUTE NUTRIENT USE TASK FORCE



FERTILIZER  
PRODUCT STEWARDSHIP

## THE PATH TO SUSTAINABILITY



Soil, water and air are essential for growing food - and so are nutrients provided by fertilizers. The United States fertilizer industry has a vested interest in managing our products to protect the environment and support the efficient production of nutritious, abundant and affordable food.

Our approach to nutrient management provides farmers with a variety of science-based best management practices (BMPs) promoting the use of the **right product**, applied at the **right rate, right time** and **right place**.

BMPs are designed to provide adequate nutrition for crops, while minimizing nutrient losses to the environment. The fertilizer industry partners with government, university and private sector researchers to develop BMPs.



## BEST MANAGEMENT PRACTICES (BMPs)

BMP Category	BMP Examples	
 <p><b>Right Product</b> <i>Match fertilizer type to crop needs</i></p>	<ul style="list-style-type: none"> <li>• Soil Testing</li> <li>• N, P, K, Secondary and Micronutrient</li> <li>• Enhanced Efficiency Fertilizers</li> </ul>	<ul style="list-style-type: none"> <li>• Nutrient Management Planning</li> <li>• Select appropriate fertilizer and on-farm nutrient sources for the cropping system.</li> </ul>
 <p><b>Right Time</b> <i>Make nutrients available when crops need them</i></p>	<ul style="list-style-type: none"> <li>• Application Timing</li> <li>• Controlled Release Technologies</li> </ul>	<ul style="list-style-type: none"> <li>• Inhibitors</li> <li>• Fertilizer Product Choice</li> </ul>
 <p><b>Right Place</b> <i>Keep nutrients where crops can use them</i></p>	<ul style="list-style-type: none"> <li>• Application Method</li> <li>• Incorporation of Fertilizer</li> <li>• Buffer Strips</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation Tillage</li> <li>• Cover Cropping</li> </ul>
 <p><b>Right Rate</b> <i>Match amount of fertilizer to crop needs</i></p>	<ul style="list-style-type: none"> <li>• Soil Testing</li> <li>• Yield Goal Analysis</li> <li>• Crop Removal Balance</li> <li>• Nutrient Management Planning</li> <li>• Plant Tissue Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Applicator Calibration</li> <li>• Crop Scouting</li> <li>• Record Keeping</li> <li>• Variable Rate Technology</li> <li>• Site-Specific Management</li> </ul>

## MAKING BMPs WORK

Every farm and field is different. Farmers need to be able to select the BMPs that are best suited to regional and farm-specific conditions. Factors that may influence BMP selection include soil conditions, climate, topography and crops grown. With the help of industry experts such as Certified Crop Advisers (CCAs), farmers can assess soil and environmental conditions on their individual farms and develop a customized nutrient management plan that incorporates the most appropriate BMPs. This flexibility is critical for farmers to maximize the economic and environmental benefits of adopting BMPs. Working in partnership with the farmers who manage the land is crucial to establish effective nutrient management practices.



## OUR PRODUCT STEWARDSHIP RESPONSIBILITY

Product stewardship relies on the balance of the economic, social and environmental goals of farm groups, researchers, conservationists, government officials, industry members and communities across the country.

Examples of product stewardship efforts:

- ✓ Product Testing Program - Comprehensive product toxicity testing research that demonstrates that products pose no harm to industry workers, the community or the environment.
- ✓ Risk Assessment Program - Establishes safe limits of non-nutritive elements in fertilizer.
- ✓ America's Security Begins with You - Campaign includes posters, brochures and window stickers to remind those who handle ammonium nitrate to be vigilant and keep the product out of harms way.



## STEWARDSHIP GOALS

### Environmental

- Sustain or improve soil quality
- Maintain nutrient levels within natural ecosystems
- Preserve wildlife habitat

### Economic

- Produce revenue to sustain farm operations
- Preserve quality of life
- Make the most of dollars spent on fertilizer

### Social

- Produce nutritious, abundant and affordable food
- Support programs for strong and caring communities
- Help meet global food, fiber and biofuel needs
- Provide ongoing employment opportunities in agriculture and related industries



## BACKED BY SCIENCE

Backed by sound scientific research, the fertilizer industry has long demonstrated a commitment to sustainable nutrient management practices. For example, the International Plant Nutrition Institute is an industry-supported agronomic research organization that was founded in 1935 and has contributed to the development of many of the BMPs currently in use. We share our research findings with farmers by supporting initiatives like the Certified Crop Adviser (CCA) program. The CCA program is a volunteer certification coordinated by the American Society of Agronomy. This North American program is unique in the world, and assures high standards of fertilizer and crop production knowledge for those who are certified to provides crop management information to farmers.

