Illinois Fertilizer & Chemical Association
Supply • Service • Stewardship

FERTILIZER'S ROLE in AGRICULTURE

The Fertilizer Institute
Nourish, Replenish, Grow

Fertilizer is critical *for the production of* food, feed, fuel & fiber.

Fertilizer major crop nutrients are nitrogen, phosphorus and potash – all naturally occurring elements in the environment – which are "fed" to plants and crops for healthy and abundant food production. Crops need nutrients to grow and be productive – just like humans.

The world's population is 6.5 billion and growing. Using fertilizers in an agronomically and environmentally sensitive way is critical for our planet's increasing need for food, feed, fuel and fiber.

More than 34 million acres have been taken out of production in the United States due to the Conservation Reserve Program and more U.S. farmland continues to be lost every day to urban sprawl and development. Once this land is developed, it is unlikely it will ever be "green space" again. Commercial fertilizers are a key tool in assisting U.S. farmers to be more economically and environmentally efficient and more productive.

NITROGEN (N)

is a primary building block for all organisms. It is essential to making proteins, helps keep plants green and is a critical component of soil structure.

COMES FROM THE AIR

PHOSPHORUS (P)

is found in every living cell. Phosphorus is a component of DNA and it also plays vital roles in capturing light during photosynthesis, helping with seed germination, and helping plants use water efficiently. Plants also use phosphorus to help fight external stress and prevent disease.

COMES FROM ANCIENT SEA LIFE

POTASSIUM (K)

is essential to the workings of every living cell. It plays an important role in plant's water utilization and also helps regulate the rate of photosynthesis. Other aspects of plant health influenced by potassium include the growth of strong stalks, protection from extreme temperatures, and the ability to fight stress and pests such as weeds and insects.

COMES FROM EVAPORATED OCEANS

OUR FARM POLICY

TFI AND IFCA SUPPORT USING THE RIGHT FERTILIZER PRODUCT AND APPLYING IT AT THE RIGHT RATE, RIGHT TIME AND RIGHT PLACE.

TFI AND IFCA SUPPORT EXPANDING THE FARM BILL'S ENERGY TITLE AND INCREASING THE PRODUCTION AND USE OF BIOFUELS. TFI AND IFCA ALSO SUPPORT INCREASING RENEWABLE ENERGY RESEARCH PROGRAMS.

TFI AND IFCA SUPPORTS MAINTAINING THE FEDERAL FARM PROGRAM BUDGET AND POLICIES THAT PROMOTE A HEALTHY AND VIBRANT RURAL ECONOMY.

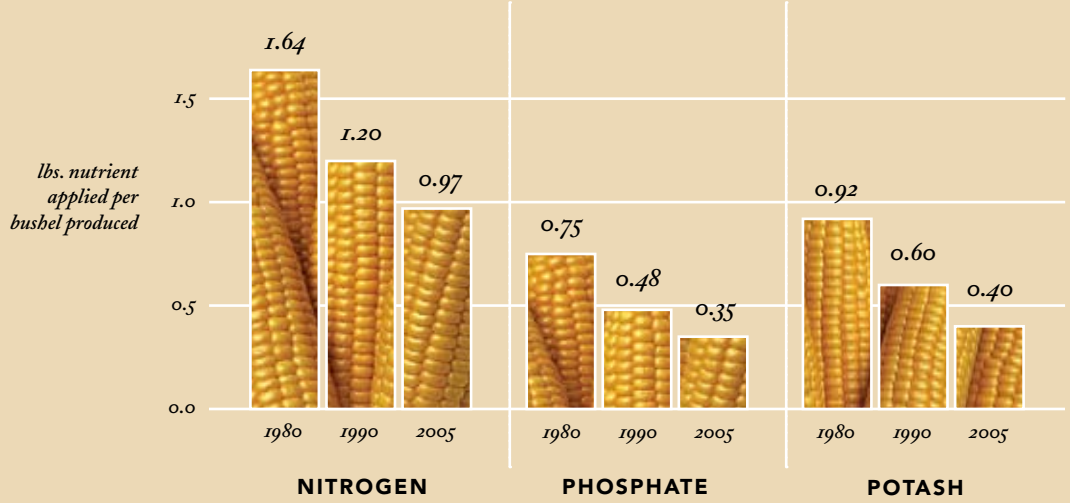
Every farm and field is different.

THAT IS WHY TFI AND IFCA SUPPORT THE USE OF SITE SPECIFIC BEST MANAGEMENT PRACTICES REGARDING FERTILIZER APPLICATION.

TFI and IFCA strongly support using the right product and applying it at the right rate, right time and right place. In addition, TFI and IFCA support efforts to use advanced fertilizer technologies, including enhanced efficiency fertilizers such as slow release and controlled release fertilizers and urease inhibitors.

U.S. Department of Agriculture data shows that U.S. farmers are using fertilizer nutrients with the greatest efficiency in history. Between 1980 and 2005, U.S. corn production increased by a whopping 74 percent. Meanwhile, farmers' use of nitrogen on corn over this period increased only 3 percent, while use of phosphate and potash fell 20 and 24 percent, respectively. Nutrients removed by crops need to be replaced to maintain soil fertility. The North American fertilizer industry has a long history of partnering with its farmer customers and the more than 13,000 Certified Crop Advisers (CCAs) to ensure maximum crop productivity, while protecting water quality, soil quality and the environment.

We are growing more with less.



SOURCE: COMPUTED BY THE FERTILIZER INSTITUTE FROM DATA REPORTED BY USDA

TFI AND IFCA SUPPORT EXPANDING THE FARM BILL'S ENERGY TITLE SUPPORTING

biofuels & renewable energy research & incentive programs.

According to USDA congressional testimony, USDA forecasts the total use of corn in 2007 will require the production of 85.6 million acres. There are only a limited number of acres available to transfer to corn acres. The additional corn acres will have to come from already-planted wheat, soybean or cotton acres or land that has been set aside for the Conservation Reserve Program (CRP). Using recent USDA fertilizer application rate data, each additional million acres of planted of corn would require 66-thousand nutrient tons of nitrogen, 23-thousand nutrient tons of phosphate and 27-thousand nutrient tons of potash.

With the new demand for crops such as corn, it is even more important for U.S. farmers to maximize production on an ever-decreasing land base. Fertilizers applied in an agronomically sound way are critical in achieving maximum crop production, while at the same time reducing nutrient runoff potential and improving water quality.

The corn crop nourished by fertilizer ends up not only in the food on our plates but — after processing into other products — also in the fuel tanks of our vehicles, in soft drinks and even in windshield wiper fluid.

"The increase in corn production used for ethanol has set in motion an expectation of a substantial adjustment in U.S. field crop production for 2007. As more corn moves to more ethanol plants, corn prices have risen signaling the market's need for more corn acreage and production."

DR. KEITH COLLINS | USDA CHIEF ECONOMIST

BEST MANAGEMENT PRACTICES (BMPs)

RIGHT PRODUCT
MATCH FERTILIZER TYPE TO CROP NEEDS

- *Select appropriate fertilizer and on-farm nutrient sources for the cropping system.*
- *Soil testing*
- *N, P, K secondary and micronutrient*
- *Enhanced efficiency fertilizers*
- *Nutrient management planning*

RIGHT TIME
MATCH NUTRIENTS AVAILABLE WHEN CROPS NEED THEM

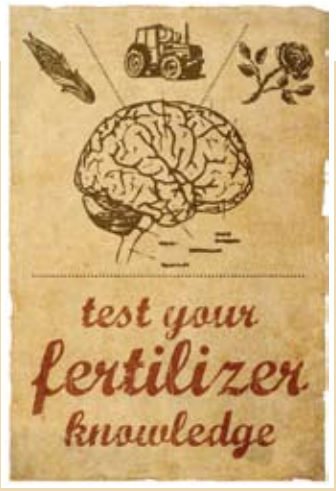
- *Application timing*
- *Controlled release technologies*
- *Inhibitors*
- *Fertilizer product choice*

RIGHT PLACE
KEEP NUTRIENTS WHERE CROPS CAN USE THEM

- *Application method*
- *Incorporation of fertilizer*
- *Buffer strips*
- *Conservation tillage*
- *Cover cropping*

RIGHT RATE
MATCH AMOUNT OF FERTILIZER TO CROP NEEDS

- *Soil testing*
- *Yield goal analysis*
- *Crop removal balance*
- *Nutrient management planning*
- *Plant tissue analysis*
- *Record keeping*
- *Variable rate technology*
- *Site-specific management*



1 WHAT ARE THE TOP THREE FERTILIZER-UTILIZING U.S. CROPS?

Corn, wheat and soybeans.

2 HOW MUCH FERTILIZER DOES IT TAKE TO PRODUCE A BUSHEL OF CORN?

Depending on the type of cropping system used, typically 1.5 to 2 pounds of fertilizer nutrients.

3 HOW MUCH FERTILIZER DOES IT TAKE TO PRODUCE A BUSHEL OF WHEAT?

Depending on the type of cropping system used, typically 2.5 to 3.5 pounds of fertilizer nutrients.

4 HOW MUCH FERTILIZER DOES IT TAKE TO PRODUCE A BUSHEL OF SOYBEANS?

Depending on the type of cropping system used, typically 1.0 to 1.5 pounds of fertilizer nutrients.

5 WHY IS FERTILIZER IMPORTANT TO AGRICULTURE PRODUCTION?

Humans, animals and plants rely on a safe, healthy supply of food and nutrients like nitrogen (N), phosphorus (P) and potassium (K) for proper growth and development. Fertilizer is the 'food' that plants – from corn and wheat to pumpkins and apples – need to produce a healthy and bountiful crop. All crops require nutrients in one form or another.

6 WHY HAVE CORN ACRES PLANTED INCREASED SO DRAMATICALLY?

In 2006, 78.3 million acres of corn were planted in the United States. In 2007, corn acres planted rose to 92.9 million acres. The U.S. Department of Agriculture (USDA) predicts that 25 percent of that corn crop will be converted into ethanol in 2007. For the first time, corn used in ethanol is estimated to exceed the amount of corn the United States exports. At the same time, the U.S. livestock industry is concerned about rising feed prices and reduced profitability, which are resulting from a limited corn crop. Increased acreages of corn will have to be planted in the United States in upcoming years in order to meet the demands of the rapidly expanding renewable fuels industry.

7 WHAT ARE THE TOP THREE FERTILIZER-CONSUMING COUNTRIES IN THE WORLD?

China, India and the United States.

8 WHAT IS THE WORLD DEMAND FOR FERTILIZER?

As a world market commodity, supply and demand factors around the world impact the price U.S. farmers pay for fertilizer. World fertilizer demand increased by 13 percent or nearly 18 million nutrient tons from fiscal year 2001 (July 2000-June 2001) to fiscal year 2005. This increase in demand is close to total nutrient use in the United States, which stood at 22.1 million nutrient tons during fiscal year 2005. Over this four year period, world nitrogen demand grew by 10 percent, phosphate demand grew by 13 percent and potash demand grew by nearly 18 percent.

Illinois Fertilizer & Chemical Association
Supply • Service • Stewardship

1201 East Bell Street | P.O. Box 1326 | Bloomington, IL 61701 | TEL (309) 827-2774 | FAX (309) 827-2779 | www.ifca.org
THE ILLINOIS FERTILIZER & CHEMICAL ASSOCIATION REPRESENTS THE CROP PROTECTION, INPUT AND SUPPLY INDUSTRY.

The Fertilizer Institute
Nourish, Replenish, Grow

820 First Street, N.E., Suite 430 | Washington, D.C. 20002 | TEL (202) 962-0490 | FAX (202) 962-0577 | www.tfi.org
TFI SERVES TO PROMOTE AND PROTECT THE FERTILIZER INDUSTRY, REPRESENTING THE PUBLIC POLICY, COMMUNICATION AND STATISTICAL NEEDS OF PRODUCERS, IMPORTERS, WHOLESALERS AND RETAILERS OF FERTILIZER, AS WELL AS THOSE COMPANIES THAT PROVIDE VITAL SERVICES TO THE FERTILIZER INDUSTRY.