



# Global development

## THE WORLD WANTS MORE

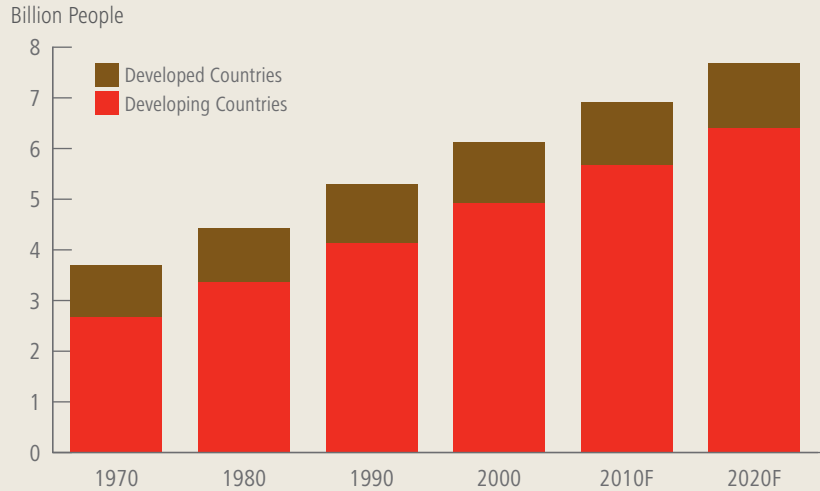
Rising population, changing diets, increasing food consumption and limited agricultural resources like land and water present significant long-term challenges. It's clear that more food for more people must come from less land per person, and fertilizer is an important means to achieve that. The world's soils need more of our life-giving nutrients, and we are preparing our forward-looking company to respond.

## Global development

### Population Rising in Developing Countries

Each year, the global population grows by about 75 million, with much of the increase occurring in developing countries that are key offshore potash markets, including China, India, Brazil, Indonesia and Malaysia. Today, four out of every 10 people live in these countries.

The constantly rising population is stretching the limits of the world's arable land, food and water.



Source: United Nations

## Global development

### Continued Growth Expected in Major Offshore Markets

The global financial crisis has affected all countries, but economic growth in developing nations is expected to far outpace growth in the developed world this year and for the immediate future. Because of their size and integration into the world economy, these countries are increasingly important on a global basis. The strength and resilience of their economies are evident, and we believe the continuing demand for better diets and modern products will help lead the world out of recession and provide the foundation for continued growth in our business.

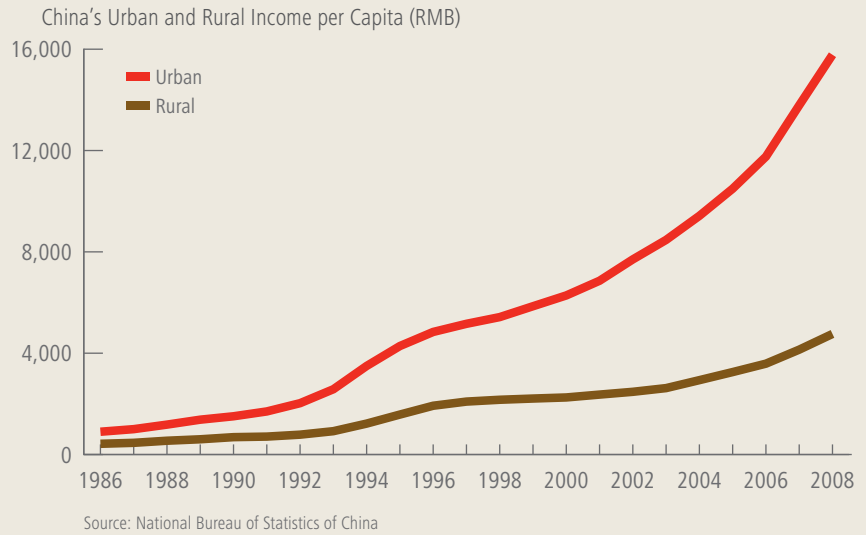


Source: IMF Economic Outlook July 2009

### China's Urban-Rural Income Gap

Growing economies around the world have benefited most consumers but often there is an urban-rural earnings gap. In China, this gap is most pronounced. While all incomes have increased tremendously there in the last decade, urban incomes are now almost triple those in the rural areas.

The central government has recognized the disparity and, particularly in the last three to five years, has implemented special rural-focused measures to reduce this gap. By 2020, it aims to double farmers' income from 2008 levels – which is expected to have a positive impact on both food production and demand.

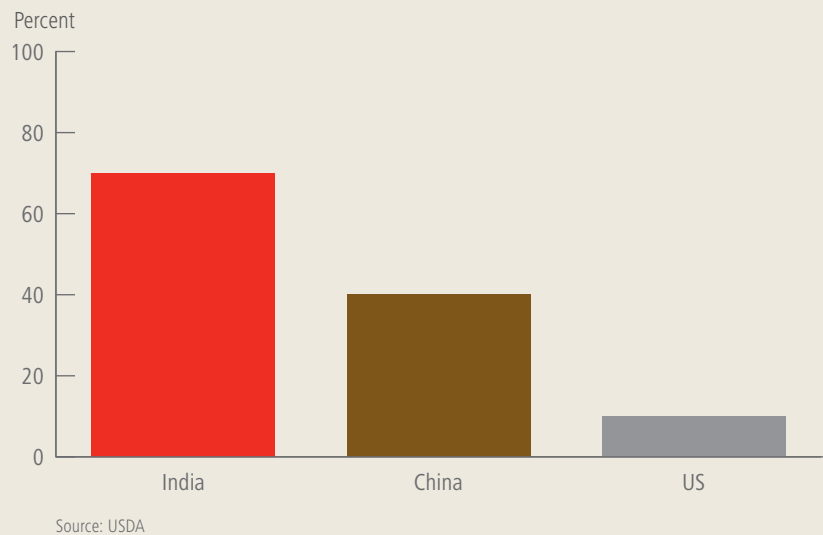


### > PERCENTAGE OF EVERY NEW DOLLAR EARNED SPENT ON FOOD

#### Higher Income Goes First to Improving Diet

The income effect on food consumption is not a middle-class phenomenon. It occurs throughout the income scale, but particularly affects the billions of people at the very lowest level in developing nations.

After water, food is the most important basic human need, and a large part of every new dollar earned helps buy a more nutritious diet with more protein from meat and increasing portions of fruits and vegetables. In India, an estimated 70 percent of every new dollar is spent on food, and in China, 40 percent.

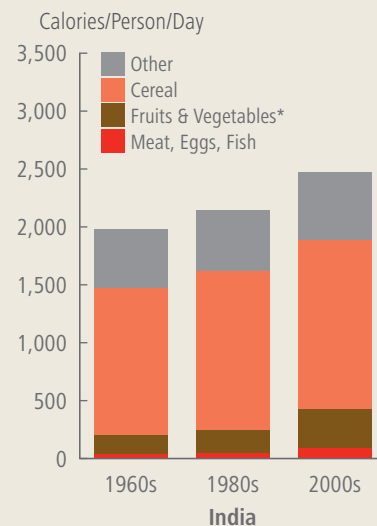
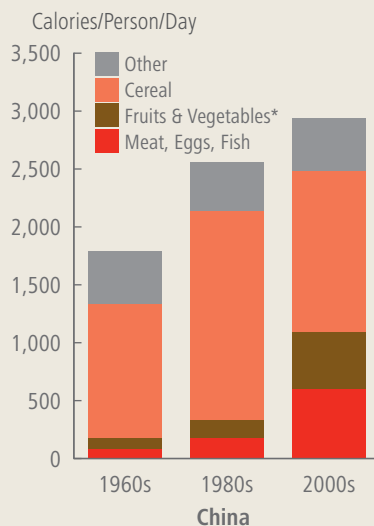


**Increased Food Consumption, More Balanced Diets (China, India)**

The shift towards more balanced diets is evident in many countries.

In China, a significant increase in the daily intake of fruits, vegetables and protein from meat, eggs and fish continues to displace starch-based diets. This improvement in the quality of life for hundreds of millions of people is a long-term trend that is not expected to reverse.

In India, the first wave of growth has just started. Fruits and vegetables are becoming a bigger component of the daily diet – and protein consumption has begun to rise.

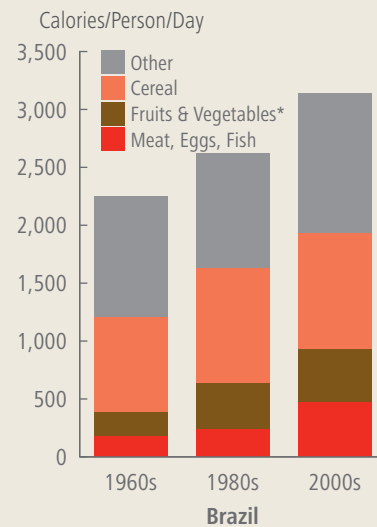
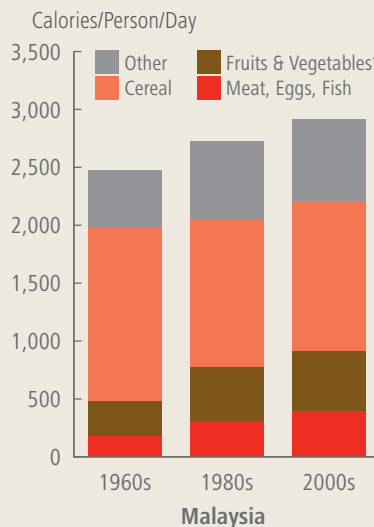


\* Includes vegetable oils  
Source: FAO

**Increased Food Consumption, More Balanced Diets (Malaysia, Brazil)**

This story may be thought relevant only in China and India, but the same long-term trends are strong in Southeast Asia and Latin America. People in Malaysia and Brazil are eating significantly more fruits and vegetables, and their consumption of protein from meat, eggs and fish has more than doubled since the 1960s.

Farmers are being challenged to keep pace with this growing demand for higher-quality food. These changes are good for human development and ultimately for our business as improved diets require more and better food, and its production increasingly requires fertilizer.



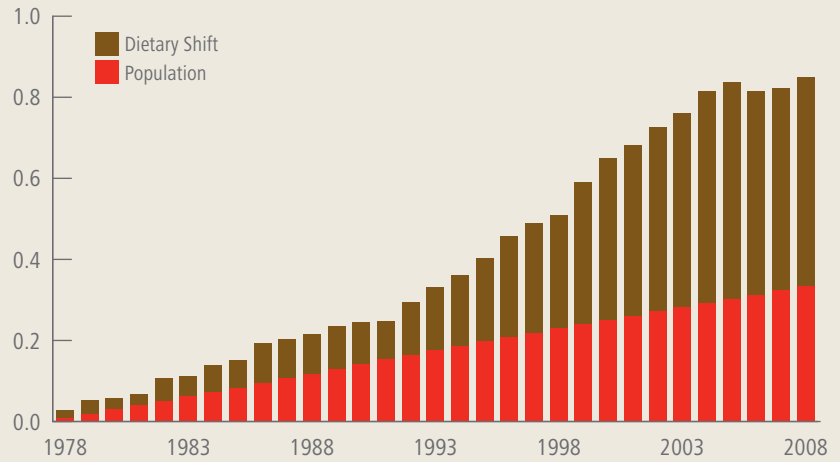
\* Includes vegetable oils  
Source: FAO

## > WORLD FRUIT AND VEGETABLE CONSUMPTION

### Rising Population, Better Diets Drive Food Consumption Growth

The combination of increasing population and improving diets has driven up the global demand for food. While world events can affect people's food choices, the additional mouths to feed every year puts added pressure on the food system. The constant population increase has contributed significantly to the growing world demand for fruits and vegetables, but more than 60 percent of that growth can be attributed to the shift to more balanced diets that has been made possible by higher personal incomes over recent decades.

Cumulative Growth – Billion Tonnes



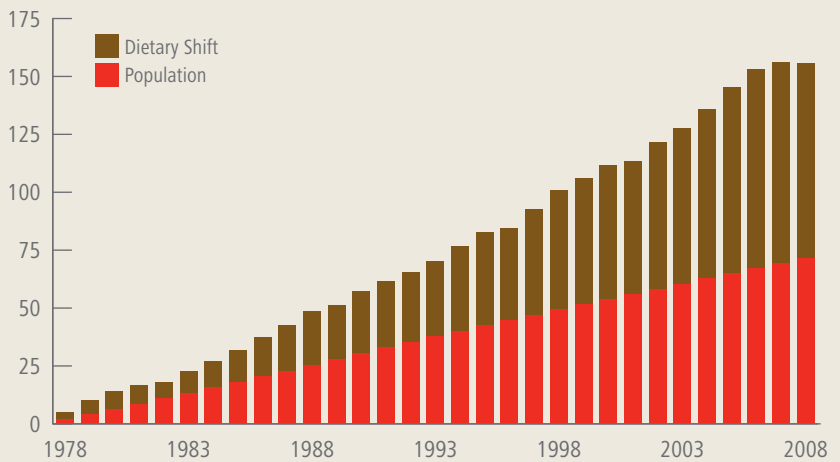
Source: FAO, US Census Bureau, PotashCorp

## > WORLD MEAT CONSUMPTION

### Same Trends Drive Growth in Meat Consumption

As the barrier of affordability slowly comes down, these dietary shifts are raising meat consumption as people around the world, especially in developing countries, shift to a diet based more on protein from poultry, pork and beef than on starch. Consumption of meat has risen by more than 150 million tonnes or almost triple what it was 30 years ago.

Cumulative Growth – Million Tonnes

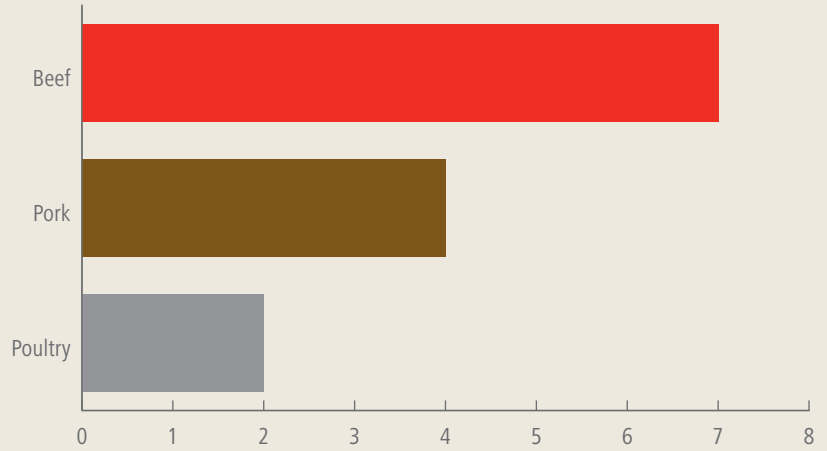


Source: FAO, US Census Bureau, PotashCorp

**More Meat Production Requires More Grain**

Rising meat consumption requires substantially more meat production, which in turn requires more animal feed. It takes approximately seven kilograms of feed grain to produce one kilogram of beef. Four kilograms of grain are needed to produce one kilogram of pork, and two kilograms of grain per kilogram of poultry.

Kilograms of Feed Grain to Produce 1 Kilogram of Meat

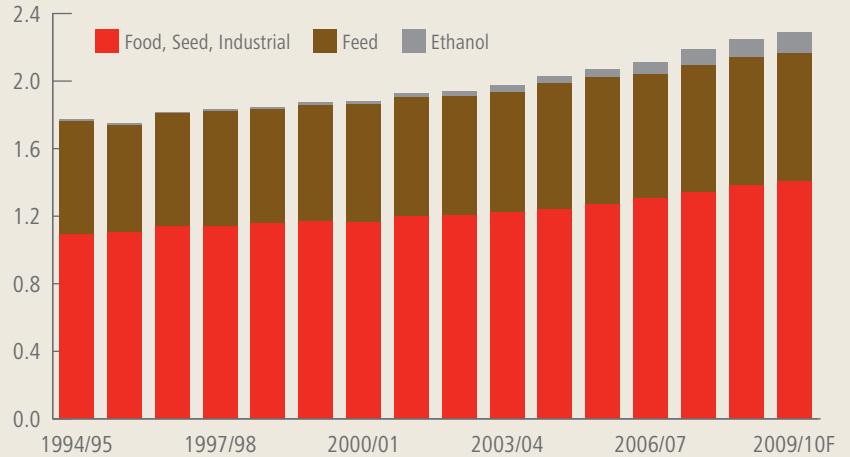


Source: Doane, PotashCorp

**Grain Primarily Consumed for Food Uses**

Paralleling the demand by more people for more and better food, global grain consumption has risen by approximately 25 percent in the last 15 years. Direct human consumption and animal feed are the primary drivers, accounting for almost 95 percent of the grain consumed on a global basis. In recent years, incremental global demand for grain has emerged from biofuels, as more grain is being used for ethanol, but that remains a small portion of total consumption.

Billion Tonnes



Source: USDA, PIRA, PotashCorp

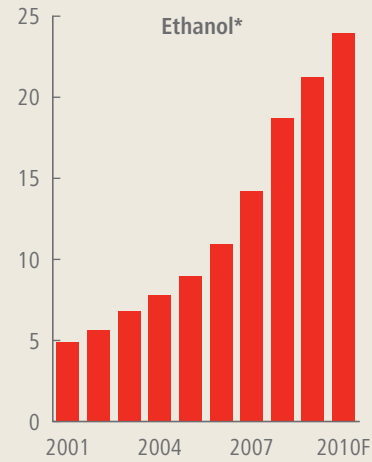
## > GLOBAL BIOFUELS PRODUCTION

### Biofuels Increase Grain and Oilseed Demand

Global biofuel production growth is supported by government mandates in several countries including the US, the world's largest ethanol producer. In Brazil, the second largest producer, the industry has benefited from decades of investment, a well-developed infrastructure and growth in sales of flexible-fuel cars.

A small portion of the world's production of crops such as corn, sugar cane, palm oil and soybean oil is being used as a feedstock for biofuel production. As long-term energy sources and reduced reliance on oil-exporting nations are sought, we expect biofuels made from renewable crops to be an important part of the energy solution.

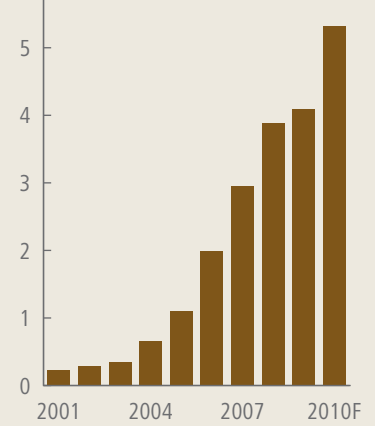
Billion Gallons



\* For transportation fuel use only

Source: PIRA

Billion Gallons

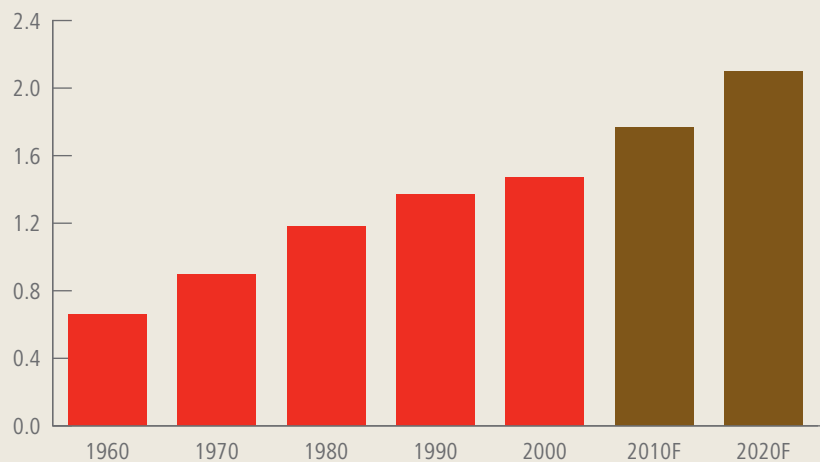


## > GLOBAL GRAIN\* DEMAND GROWTH

### Grain Demand Has Doubled in 40 Years

The growing demand for grain has not been caused by sudden shifts or changes but is the culmination of positive long-term global development trends. Even though demand has more than doubled over the last 40 years, we expect that much more grain will be needed in the years ahead. In 2020, world demand could be more than three times its 1960 level, raising the challenge of substantially increasing crop production on existing arable land. Meeting this challenge requires replenishing soil nutrients removed by crops and protecting soil fertility through proper fertilization.

Billion Tonnes



\* Includes wheat and coarse grains

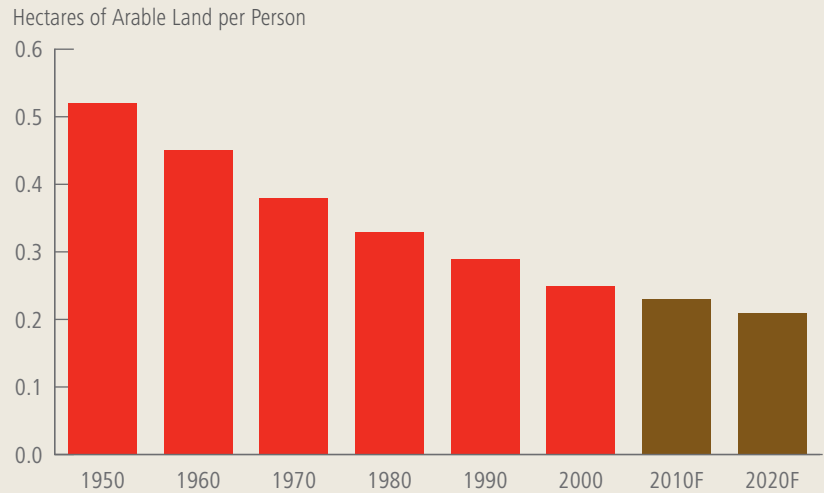
Source: USDA, Doane, PotashCorp

Global development

**The World Has Less Land to Grow Crops**

Global population growth, infrastructure and urban development mean there is less land per person available for agriculture.

A decade from now, in 2020, we expect there will be approximately 0.2 hectares per person for animal and crop production, less than half the level in 1950. This trend is not expected to improve, which will put continued pressure on farmers to grow more grain on fewer acres.

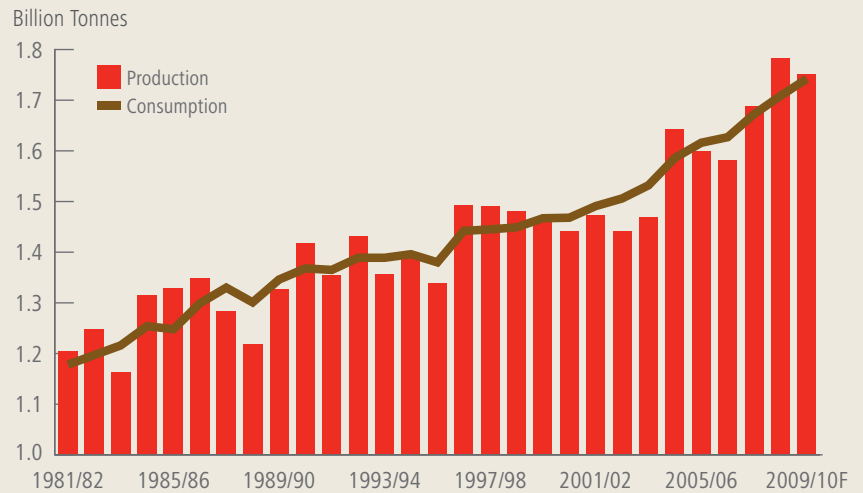


Source: FAO, PotashCorp

Global development

**Record Harvests Required to Meet Rising Demand**

Increasing grain consumption over the past decade has challenged the world's ability to keep pace through crop production. This has put stress on grain supplies, raising prices for crop commodities around the world to well above historical levels and motivating improved production. Farmers everywhere have responded and, with excellent weather in key growing areas, produced record harvests in the past two years. They will need to grow a crop large by historical standards every year, however, to keep pace with the long-term growth in consumption that is expected, and exceptional growing conditions may not always occur.



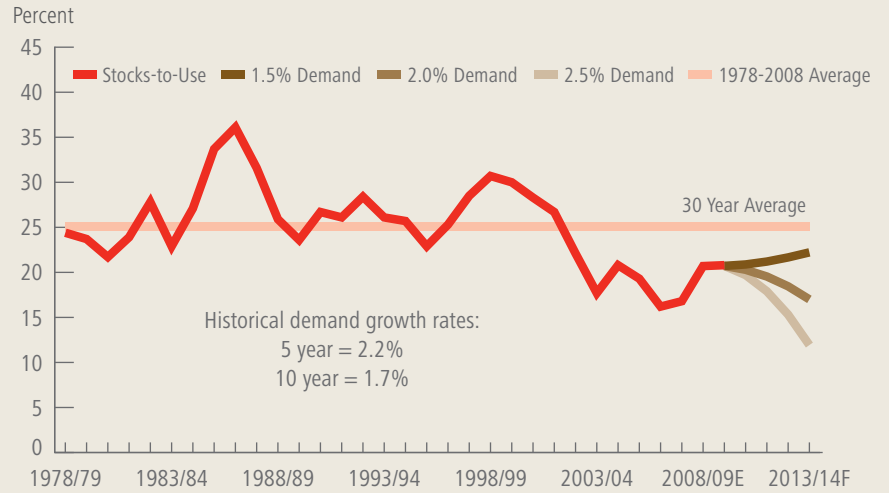
\* Includes wheat and coarse grains

Source: USDA August 2009

**Tight Grain Market Expected for Foreseeable Future**

Growth in global demand has kept the grain stocks-to-use ratio substantially below the 30-year average – despite consecutive years of record production.

The economic crisis created uncertainty for farmers around the world, resulting in lower planted acreage and reduced fertilizer applications in 2008/09, which could have significant short- and long-term impacts on global grain production.

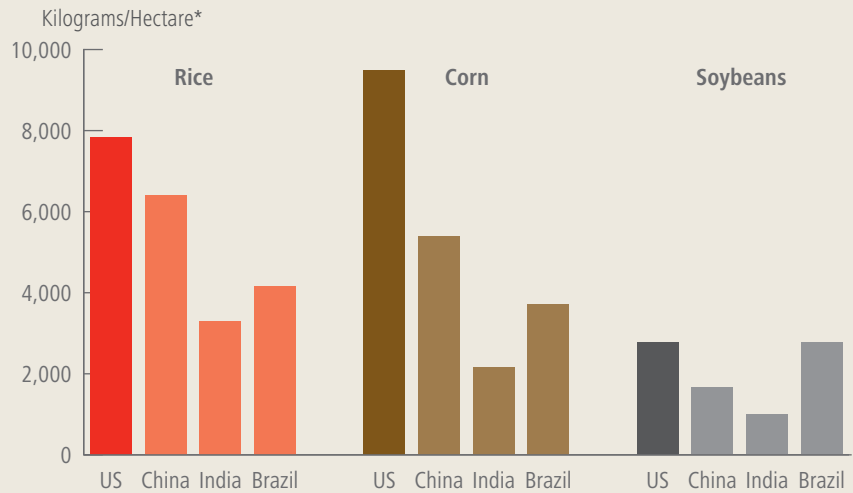


\* Includes wheat and coarse grains  
Grain production growth forecast of 1.6% per year based on 2009/10 acreage and trend yields  
Source: USDA August 2009, PotashCorp

**Opportunity to Improve Yields Through Fertilization and Farming Practices**

To meet rising grain demand, it is critical to compensate for the historical under-application of fertilizer that has limited production in developing countries. Rice is a staple crop in India, but yields are half of US levels. Corn productivity also lags.

Soybean production has suffered in China and India while Brazil – where more emphasis is placed on proper fertilization of this important crop – is achieving yields comparable to US producers. The significant gap between crop yields in the US and other parts of the world has made the benefits of better farming practices – particularly proper fertilization – abundantly clear.



\* 3-year average 2006-2008  
Source: USDA