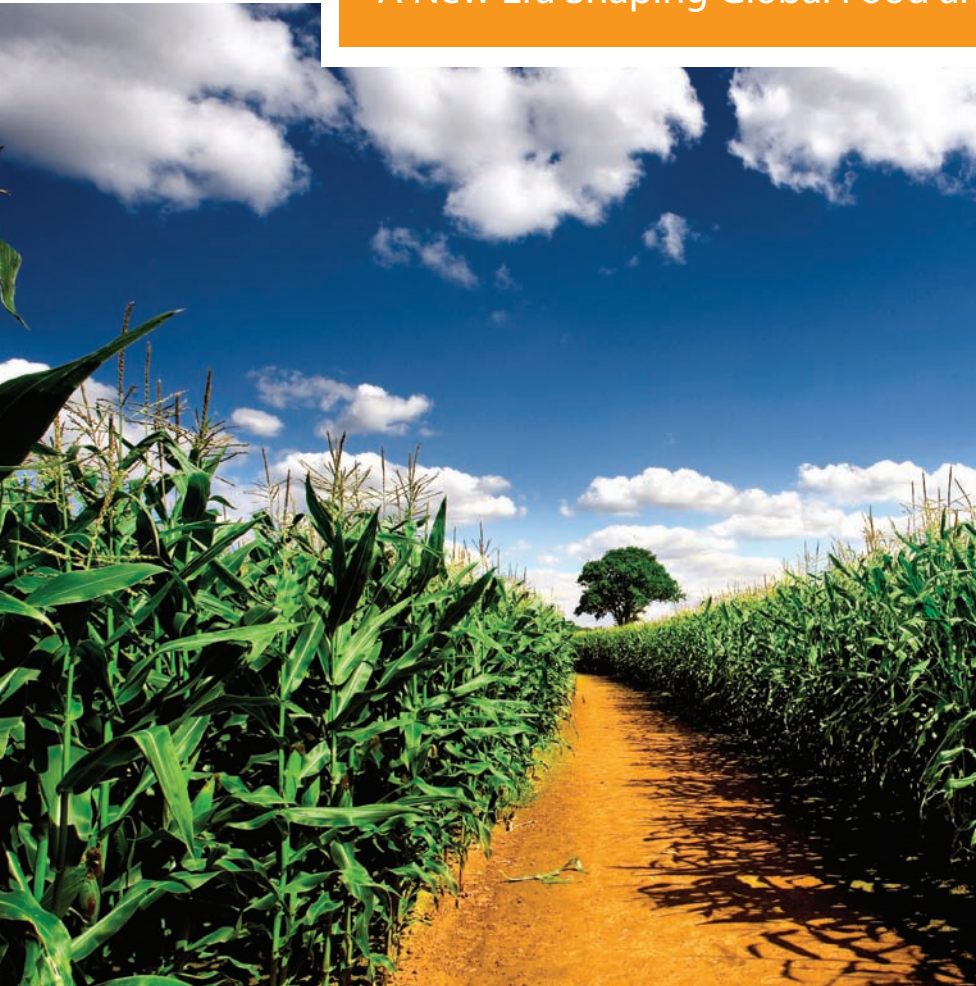




Rabobank

The Boom Beyond Commodities

A New Era Shaping Global Food and Agribusiness, 2008



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**Rabobank International
Food & Agribusiness
Research and Advisory**

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1 Executive Summary

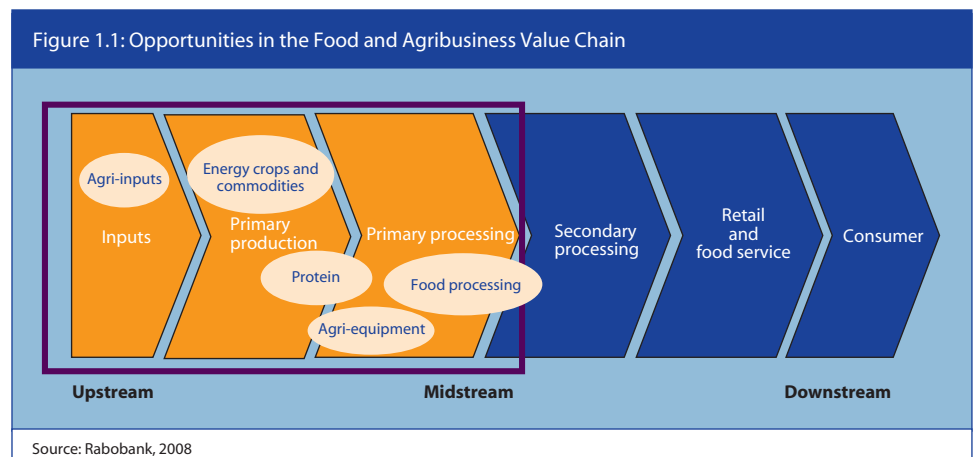
The global food and agribusiness industry is set to undergo significant changes in the coming years. Increased demand for food and animal feed, as well as the growing use of crops for biofuels require greater deployment of scarce agricultural resources, and have shifted the industry's value proposition upstream. As a result of these dynamics, new opportunities are being created in both developed as well as emerging economies, leading to tremendous growth potential that extends beyond the boom in the commodities market.

While much interest in agriculture has emerged from financial and strategic investors alike in recent years, significant attention has been placed on the downstream segment of the food and agribusiness value chain, where business models are more easily understood by investors. Indeed opportunities continue

to exist in the downstream. However, Rabobank believes that the fundamentals driving the current boom in agricultural commodities have moved some of the best investment opportunities to the up- and mid-stream segment of the value chain (see Figure 1.1). Thus, instead of focusing on the commodities themselves, the aim is to highlight opportunities emerging for food and agribusiness players who are best positioned to benefit from changing dynamics in the world market, especially agricultural producers, input and equipment players who support producers, as well as food industry players whose products are aligned with lifestyle changes which are taking place most rapidly in emerging markets, particularly in Asia.

As is characteristic of commodities, particularly in agriculture, cycles bring peaks and troughs and, as history demonstrates,

Figure 1.1: Opportunities in the Food and Agribusiness Value Chain



Source: Rabobank, 2008

the drivers tell the story. In comparison to commodity booms of the past, one unique and substantial driver of the current commodity cycle has been the emergence of biofuel initiatives around the world which have added an “f” to the factors of demand, namely food, feed, fibre and now fuel. Thus, while commodity highs are followed by lows, we believe the current “f” factors of demand will remain strong over the coming years and support a base shift in commodity prices which will promote a greater deployment of scarce agricultural resources and a further appreciation of real farm assets.

Specifically, Rabobank believes that opportunities in agriculture are most pronounced in the following sectors: animal protein and dairy, food processing, energy crops and commodities, agri-inputs and agri-equipment (see Box 1). This report discusses the factors driving growth in these sectors and focuses on the outlook for opportunities Rabobank believes are taking shape as a result of a surge in global food demand and commodity prices.

“F” Factors Driving Demand and Prices

The world of agriculture is rapidly changing. Increasing demand for conventional crops from the “f” factors are pushing global commodity prices across the board to all time highs (see Figure 1.2). With this change has come increased investor interest in commodities citing in large part diversification, hedging against inflation and a falling US dollar as the impetus to escape market turbulence, high volatility and uncertainty in global stock markets. Interest from institutional investors has since spread to the retail level where the attractive

“commodity story” as an investment and diversification vehicle has begun filtering through to investor portfolios. Furthermore, greater reliance on the trade for agricultural raw materials and products in order to meet fresh demand highs has increased the correlation between local and import prices and contributed to a truly “global” commodity boom. Strategic investors looking to secure resources upstream amid supply/demand imbalances have influenced consolidation and a revaluation of agricultural assets. The result has seen commodity prices reach record highs over the past few years that are expected to remain above long-term averages for the foreseeable future.

Weather-related effects have also supported the bullish run in commodities, as smaller harvests are partly responsible for record-low stocks-to-use ratios for many crops, contributing to increased volatility and, together with the “f” factors, supporting global inflationary fears. As a result of these higher commodity price levels, food prices are under pressure to respond. In May 2008, the FAO Food Price Index averaged 217.5, over 50 percent above 2007 levels and slightly off its March peak. The FAO Cereal Index averaged 273, up 84 percent above last year while the Oils/Fats Index averaged 269, nearly 100 percent above the same period in 2007. The major contributor to the Food Price Index in May was meat which, estimated at 145, is the highest value since March 2005. Dairy prices on the FAO Dairy Index also recorded strong growth, averaging 265 in May 2008. Projected record world sugar production in 2007/08 led to the softening of the FAO Sugar Index which stood at 163 in May 2008, up 24 percent from the year before. These remarkable gains in prices have prompted many governments around the world,

Box 1: Definition of Select Agricultural Sectors and Opportunities

Animal Protein and Dairy

Protein-based goods and products such as meat, dairy and seafood, which have a positive consumption correlation with income growth.

Food Processing

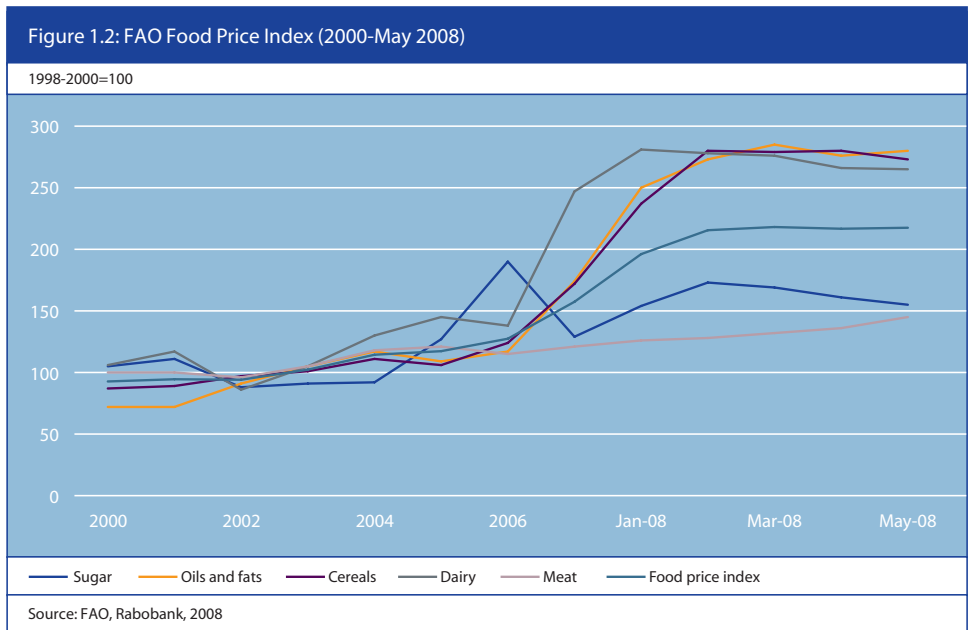
Food ingredients and prepared products which benefit from “new age” consumer preferences and increased food demand.

Energy Crops and Commodities

Starch sugar and oil-based crops which have food, feed and fibre or fuel (ethanol or biodiesel) applications.

Agri-inputs and Agri-equipment

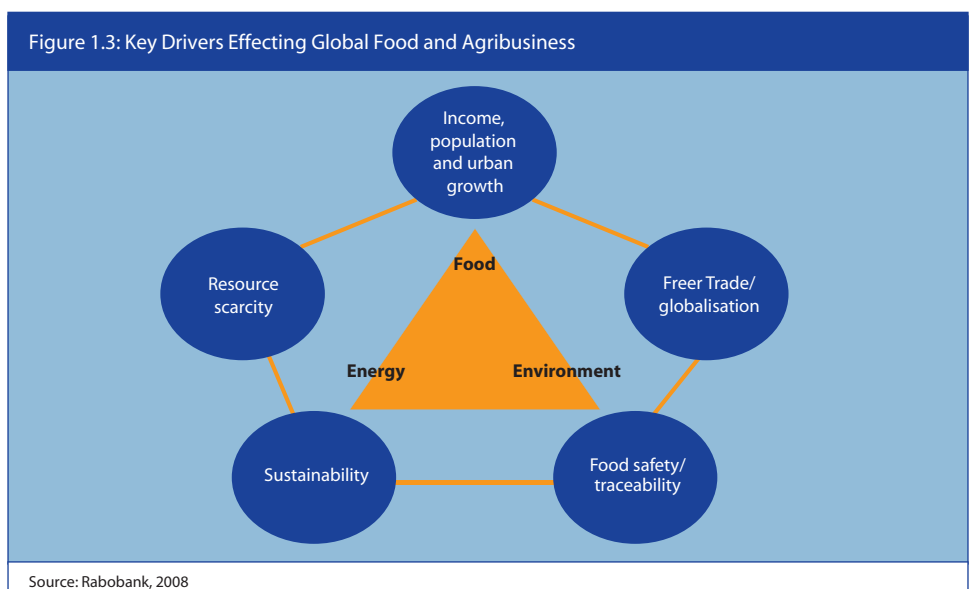
Inputs for agricultural production including fertilizers, crop protection chemicals (CPCs), seeds and water for which higher quality combined with application management results in greater productivity, and small- and large-scale equipment used in upstream agricultural production for cultivating, planting, fertilizer and CPC applications, harvesting as well as the transporting of grains, oilseeds and livestock.

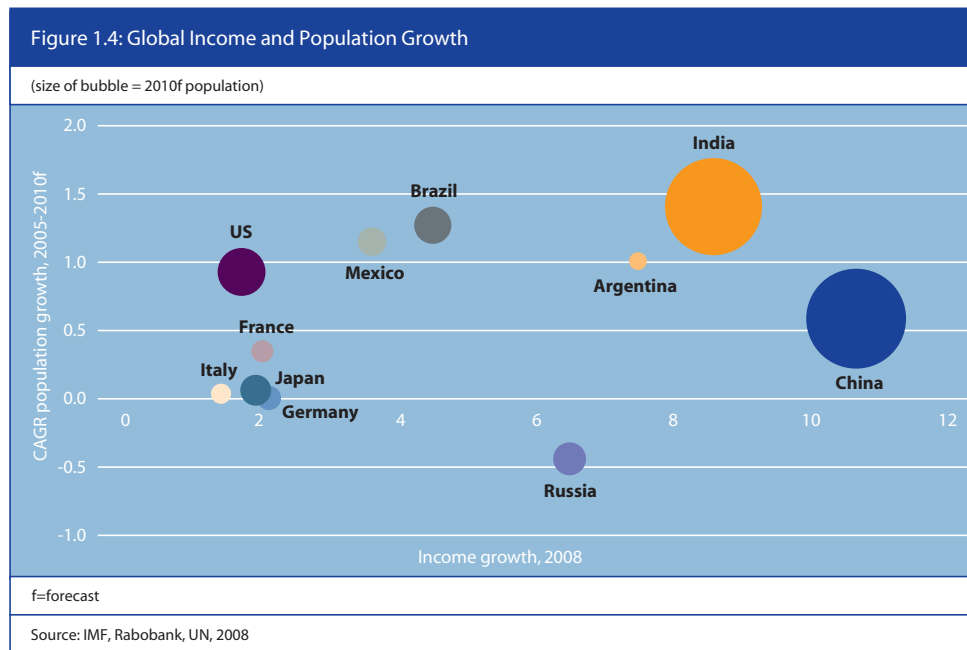


especially in developing countries where food is a major share of the overall consumer price index (CPI), to take steps to fight the so-called “ag-fla-tion” by encouraging imports through reduced tariffs and/or imposing export restrictions on key agricultural commodities. The result of such intervention, however, has caused uncertainty to food security and disruptions to market fundamentals which help to restore the supply/demand equilibrium and ease prices.

Underlying these dynamics are several key pillars which are shaping the food and agribusiness industry and driving a paradigm shift in global agriculture. These include income, population and urbanisation growth; resource scarcity (land and water); freer trade/globalisation; food safety/traceability, and finally, sustainability (see Figure 1.3).

Increasing demand from the “f” factors caused by global income, population and urbanisation growth have added increased pressure to agricultural resources (see Figure 1.4). As a result of this increased demand, combined with limited arable land availability per capita and increased conversion pressure from expanding cities, infrastructure and industrial centres in countries which have the least land to spare, the agricultural industry faces the challenge of producing more with less. Satisfying this new level of demand can only be achieved through increased investments in agriculture, particularly wider mechanisation in the developing world and greater use of existing and new technologies to increase production and more efficiently utilise scarce resources





including land, water and fertilizers. With improvements in transportation infrastructure globally, greater access to previously inaccessible resource-rich countries will result in increased agricultural investments in these areas and appreciation of production assets, primarily in South America, eastern Europe and Southeast Asia. Freer trade will also support more international investments in agriculture in these regions which offer comparative cost advantages. Over time this will continue to result in a broader distribution of wealth and thus increasing consumer demand in these markets, particularly for higher protein foods — adding further support for the boom in commodities and expansion of the food processing industry. This increased flow of imports and exports has stimulated consumers' safety awareness about the standards used to produce these products, particularly when food is concerned, and more recently the environment. Food safety, traceability and sustainability have thus become and will likely remain sensitive agricultural issues.

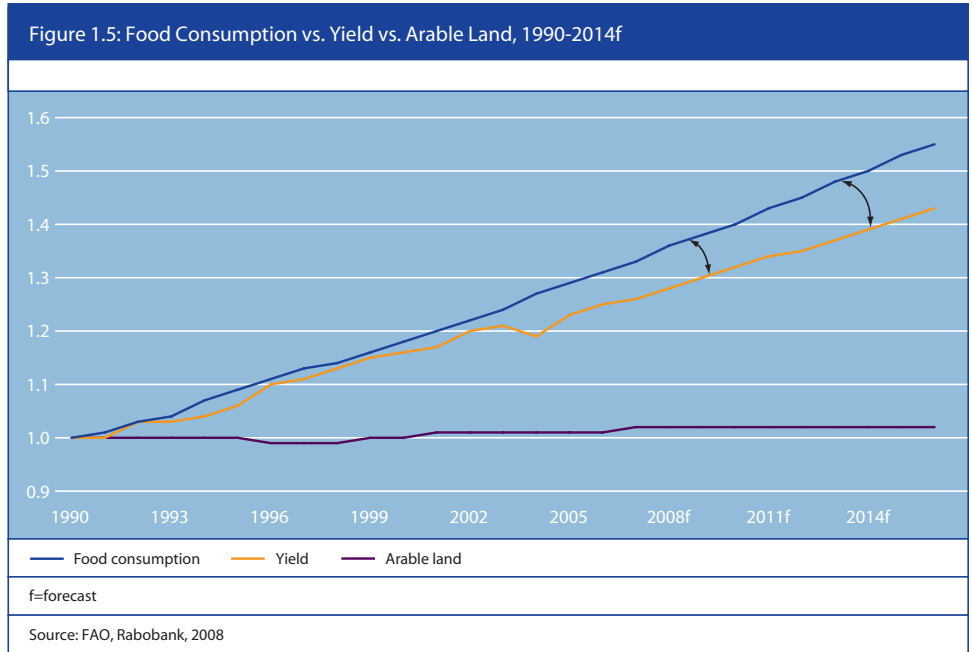
Outlook and Opportunities

The new demands that agriculture will be expected to meet over the coming years are creating opportunities for increased investment in this industry. As the fundamental demand drivers of increased consumption become stronger and more widespread, the food industry will no doubt need to expand. In China and India alone, nearly 50,000 people per day over the next decade are expected to be added to cities

where consumers demand substantially more energy over their rural counterparts. As income growth drives demand for protein foods, a multiplier effect for commodity inputs supports prices. Expanding urban populations which prefer convenience and variety will bring growth to food processing and food retail — which will again boost demand for commodities and inputs. Biofuel industries will also require increasing volumes of food commodities which also drive demand for inputs. Together, these factors will create significant growth opportunities which Rabobank believes are set to benefit players in several agricultural sectors including animal protein and dairy, food processing, energy crops and commodities, and agri-inputs and agri-equipment.

Looking deeper at the demand challenge, steady food consumption growth is expected to increase at a faster pace than crop yields while the availability of arable land per capita will be limited, declining in some of the highest demand growth countries such as China over the coming years (see Figure 1.5). Thus, productivity gains both in China and the rest of the world will be an important factor to satisfy increased demand from the world's up-and-coming urban, middle-class consumers.

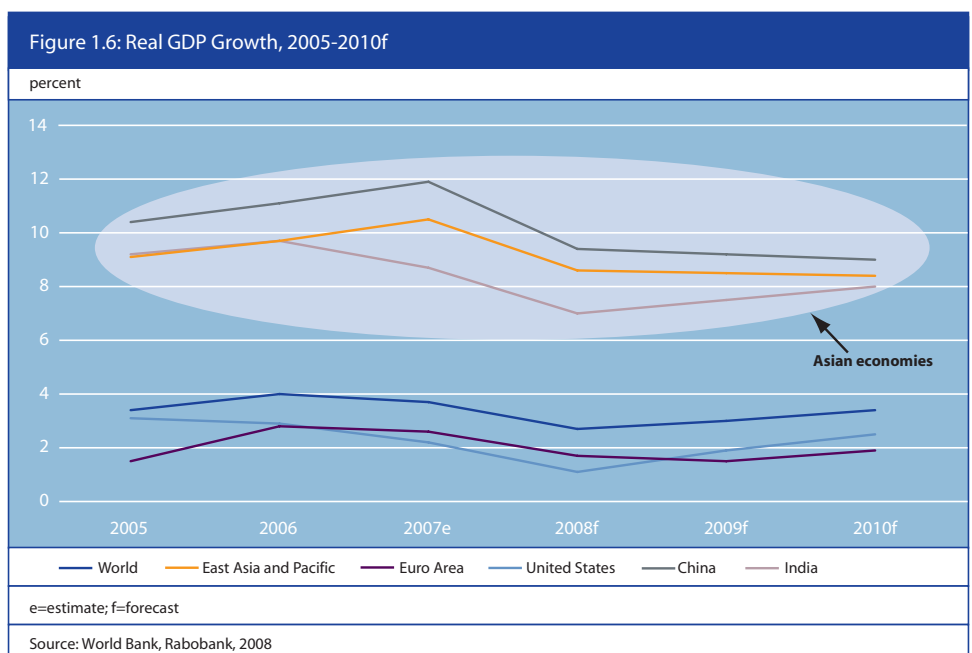
While the story in the developed world can be characterised by size and relative stability, developing markets are set to continue on a strong growth path going forward, particularly in Asia, which Rabobank believes has some of the best potential for



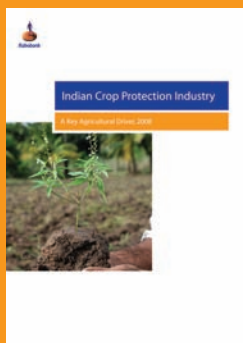
continued expansion in the years to come despite recent shocks to the global economy from the credit crunch and soaring food and energy prices (see Figure 1.6).

The China growth story in particular is well known, and although not an average case, provides a good reference to pinpoint some of the significant drivers behind the rising food consumption curve. With over one-fifth of today's consumers, China is truly shaping the world of agriculture. Over the next two decades, food will continue to account for the largest share of consumer spending in China. With future food production expected to increase by only 1 percent annually as a

result of increased productivity, the future demands on agriculture as well as land and water resources will be profound. Another Green Revolution in agriculture, which previously resulted in grain production more than doubling in developing nations from 1961 to 1985, making broader and more efficient use of crop technologies and investments, will be key to sustaining the growth in demand anticipated in the years ahead.



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