After all, what does the country expect from the sugar-energy industry?
By Antonio de Padua Rodrigues

Since the introduction of flex-fuel vehicles by the Brazilian auto Industry in 2003, the sugar-energy industry has grown dramatically, in a manner previously seen only at the height of the "Proálcool" program during the 1980s. Until mid-2008, average annual growth stood at 10.4%, with more than 100 new mills coming on stream over five years period. Ethanol production increased by more than 12 billion liters annually, to meet the demand brought about by flex cars.

As of 2008, the global financial crisis led to a reduction in investments in new mills and eventually a drop in the rate of expansion in the industry, to little more than 3.5% per year. During the same period, vehicle sales remained high, with the flex-fuel fleet surpassing the 13 million mark. Thus, a gap between supply and demand began to take shape, a situation then aggravated by unprecedented climate-related problems affecting the last two harvests.

One of the more visible consequences of this scenario was the sharp variation in ethanol prices at the pump, with peaks reached especially during the inter-harvest period, or the off-season. Such high prices resulted in frequent discussions in search of culprits and explanations for such sudden ethanol price swings. However, it is essential to separate the questioning into two major topics: seasonal difficulties linked to prices and supply should not be confused with structural problems, that have to do with expansion of the industry falling short of demand.

The former, short-term in nature, are being broadly debated between the private sector and government and entail less complex solutions, including the adoption of mechanisms to increase ethanol inventories, incentives for pre-contracting anhydrous ethanol and increased interaction between private agents as well as between these agents and the government. This will broaden the degree of planning and increase predictability of inventories between harvests.

On the other hand, structural challenges related to the competitiveness of hydrated ethanol and, mainly, to the industry's ability to expand, require medium to long-term steps that are much broader and coordinated. These involve governments and the industry and demand far more in-depth discussions. The industry's reduced expansion rate notwithstanding, the outlook for Brazilian sugarcane remains positive in the long run given that it is the most efficient option available in the world today to capture the only existing and abundant form of energy that is free of charge – solar energy – and convert it to energy for vehicles, for people in the form of sugar, electricity, not to mention an ever broader range of clean and renewable cane-based products being developed. In the case of sugar, Brazil is one of only a handful of countries with the potential to expand production and supply a significant share of the world market, which continues to grow mainly in developing countries. In terms of abundant supply and low cost, Brazil is unrivaled: it currently accounts for 25% of all sugar production and 50% of world exports.

The international ethanol market, still in an early stage of development compared to sugar, is also showing significant growth rates of about 15% per year, with total

production surpassing 105 billion liters worldwide in 2010. In this scenario, Brazilian ethanol produced from sugarcane is gaining recognition in the United States, the biggest consumer market on the planet.

The U.S. biofuels program, known as the Renewable Fuel Standard, or RFS, foresees growing consumption of ethanol, reaching 136 billion liters per year in 2022. Of this total, 15 billion liters must consist of advanced ethanol, a classification already obtained by Brazilian sugarcane ethanol from the U.S. Environmental Protection Agency, the EPA. The agency recognized that cane ethanol from Brazil cuts greenhouse gas emissions by up to 91%, compared to gasoline.

In U.S. political circles, expectations are high that by the end of this year the American tariff on imported ethanol will be reduced and possibly even eliminated. However, regardless of any change to the tariff, Brazilian ethanol will conquer its space in that market, given that its positive impacts have already been incorporated in the U.S. pricing system for ethanol. As a result, ethanol from sugarcane has a distinct mandate and a distinct price compared to other biofuels, because it is more efficient from an environmental standpoint.

Apart from sugar and ethanol, a variety of new uses and technologies based on sugarcane are emerging and under development. These include bio-plastics, bio-hydrocarbons (diesel, jet fuel and gasoline produced from sugarcane) and renewable products that are key inputs for the petrochemical industry and in fine chemistry, among others.

So, production will certainly expand in order to meet the needs of so many different demand variations for sugarcane, provided the industry remains competitive in relative terms. Specifically, the situation that requires a bit more reflection involves fuel ethanol used in the domestic market, which currently consumes more than half of all sugarcane processed in Brazil. The fact is that ethanol has lost competitiveness in relation to gasoline, to a large extent because of a 40% increase in production costs over the past five years and gasoline prices which have been kept steady at the pump – the price to consumers has remained practically unchanged since 2005.

In this scenario, there are no economic incentives for the construction of new mills that are usually more dependent on ethanol production because of poorer logistics for bringing sugar to market from regions in which the industry can expand. Regaining the feasibility of ethanol compared to gasoline in the domestic market, in the short-term, is the main inducer of a much-needed, new cycle of expansion for the sugar-energy industry.

In this sense, it is essential to introduce clear and stable rules concerning the pricing of gasoline, at the same time that the industry pursues greater efficiency throughout the ethanol production chain, through cost reductions in both the agricultural and industrial phases. Investments in logistics, improvements in the efficiency of flex-fuel engines and a tax structure that acknowledges the product's benefits and positive externalities, in combination with environmental and public health aspects, are also essential measures if the industry is to resume growth.

It should be emphasized that the challenge of producing more sugarcane, to competitively and sustainably meet internal and external demand for traditional products – ethanol and sugar – as well as for all other products that already exist or may exist in the very near future, will depend on investment decisions that must be made now. So it is paramount that guidelines with clear objectives regarding the share of ethanol in the country's energy matrix be set as quickly as possible and in a balanced manner. In a free market economy, planning and public policies aligned with clearly defined objectives are essential to attract and direct investments.

Brazil possesses exceptional conditions that can keep the country in the forefront of clean and renewable fuel production, but maintaining a leadership position is not something that depends exclusively on the private sector. It also and mainly depends on concerted efforts, involving government initiatives that prioritize essential steps, to ensure that measures will have the desired impact in the future. A fundamental answer is also necessary to the following question: after all, what does the country expect from the Brazilian sugar-energy industry?

Article published originally in the July/September 2011 edition of Opiniões magazine.

Antonio de Padua Rodrigues is the UNICA´s Technical Director