



## **Local dairy economy versus global economy?**

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The world milk production, which covers some local realities extremely varied (types of animals, feeding, diversity of products derived from milk, farm organization, modernity and concentration of downstream industries), is about 770 million tons in 2013 (82% from cows). According to the statistical data of the Organization for Economic Cooperation and Development (OECD) and the United Nations Organization for Food and Agriculture (FAO), milk production has increased by a third since 2000 and is expected to grow 17% by 2022.

The growth rate of the dairy supply is heterogeneous between large geographical areas and many of them still remain, sometimes despite output growth, in deficit. If the self-sufficiency rate rises to 310% in Oceania and is close to 110% in the European Union (EU), consumption exceeds production in Central America (81%), Africa (86%) and Asia (93 %). Several factors interact on these situations: the dynamic of the domestic demand for dairy products; the land and water resources; the agronomic potential of soils (yield of forage crops and intensification levels); the development of animal genetics; the sector structuring (investments, density upstream-downstream linkages); and sometimes the public policy instruments used to support the milk sector (production quotas, environmental standards, tariffs, subsidies for domestic consumption or export, etc.).

The increase in milk production (all types of milk combined) was spectacular in Asian countries (114 million tons since 2000, i.e. +78 %) under the main influence of India (55 million of tons) and China (34 million tons). The offer of the European Union (EU-28), which represents 20% of world total, has changed little in comparison (5 million of tons) due to maturity of domestic demand, but also due to internal political choices (milk quotas, at least until 2015) and the increased competition in international markets. The United States (12% of world supply) increased their offer by 19% due to rising domestic consumption and exports. New Zealand is a developed country where production increased very quickly (8 millions of tons, i.e. +68%), due to obvious comparative advantages: a competitive cost of production of milk; a high concentration of industrial operators, strategically oriented toward export; geographical proximity to Asian buyers. Australia has experienced a decline in its production (-10%) due to climatic difficulties affecting forage production. Production increased by 45 % in

Latin America (12% of world supply) where the growth of the internal market captures some of the Brazilian growth (+10 million tons of production over the period). In Africa, milk production increased by 64 % since 2000 to reach 5% of the world production. However, these estimates are difficult to make because the dairy sector is complex in this part of the world (socio-cultural aspects) and milk is rarely intended for industrial processing.

This productive dynamic, which seeks to meet the growing demand, is clearly driven by several factors: the increase in global population (+230,000 persons each day) ; the trend towards a convergence of diets between countries (increasing the share of animal protein in the diet) ; the implementation by industry of new dairy products to broaden the spectrum of consumer choice; improving the purchasing power of households in many developing countries ; the development of logistics and technology (transport efficiency, respect of the cold chain) in a context of rapid urbanization of populations. Consumption of dairy products, which represent a global average of 109 kg per capita per year, still varies greatly from one country to another. Through different local traditions, consumption represents, for example, only 13 kg in Indonesia, against 37 kg in China, 106 kg in India, 175 kg in Brazil and nearly 350 kg in France.

International trade in dairy products (milk equivalent) currently represent between 50 and 60 million tons per year (excluding intra-EU trade), or 7% of global production. Compared to other agricultural products (soya, meats, tropical products, etc. ), this share is rather low, for two main reasons : the dairy markets are often structured around regional basins, including in the EU where intra-EU flows are important ; the international transport of certain dairy products remains difficult due to their perishable and bulky nature. Exports, which primarily relate to milk powders and cheese are largely dominated by New Zealand, the EU and the United States. The international prices of exported products, which have an important influence on domestic prices, are more and more volatile because of the difficulty of adjusting in real time supply (sensitive to climate and price expectations) to demand.