Aromatic rice, trade-off between exports and domestic markets, and a global overview

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Materials and methods

Global milled rice production was estimated at 435 million tons for the 2009 harvest, whereas rice trade during that year was approximately 31 million tons. This represents only 7% of overall rice production. Within this global context, aromatic rice (basmati and jasmine) accounts for 12% of global rice production but 16% of rice trade. Although aromatic rice cropping is done primarily in three countries (India, Pakistan, and Thailand), specific data related to aromatic rice production and exports are scarce. Basmati trade increased from 5.2% to 8.3% of all world rice trade from 2003 to 2008, with a record of 2.45 million tons on a milled basis. Jasmine rice export value increased by 30 times during the last 18 years. The recent volatility of prices affects the rice trade market, while aromatic rice prices are still the highest on the world rice market. The recent drop observed for the price of coarse rice was not seen for this premium segment.

Basmati and jasmine are premium long-grain rice. Their high value comes from their characteristic fragrance in both the raw and cooked state. Fragrant rice is generally identified by three main factors: appearance, aroma, and taste. It is characterized by superfine grain, pleasant and subtle aroma, soft texture, and extreme grain elongation with the least breadth-wise swelling on cooking. Aromatic rice grows better and produces the best quality grains under warm, humid, valley-like conditions.

This paper depicts the recent situation of the aromatic rice market and its business prospects as a tradable versus domestic commodity by analyzing recent marketing data and secondary data as well. Databases from USDA, FAO, and the EU are used in order to compare their data with data provided by the ministries of trade from the three countries from where aromatic rice mainly comes. The paper focuses especially on the reliability and accuracy of data available on aromatic rice. Because of the great variety of rice formats, the comparison of price/weight ratio is meaningless when data on paddy, brown, husked, milled, parboiled, and broken rice are available.

When looking for specialty rice, trade data are easily available on the Internet, whereas crop data are less salient, by far. Data on fragrant rice are mainly provided by trade sources, while agricultural ministries were supposed to have such databases. Large variability in rice varieties is not helpful in getting an accurate monitoring of fragrant rice production. The question is, How far can a hybrid be crossbred to still be qualified as belonging to the genuine family due to several crossbreedings? No scientific evidence is published on this, whereas some trade stakeholders are likely to be prone to label as basmati or jasmine any kind of hybrid with at least one remote lineage with a parental line.

Results

Aromatic rice production

Jasmine rice, coming from northeastern Thailand, was developed during the 1980s through a governmental program for export purposes, as the main staple for local inhabitants of the Isaan region was glutinous rice and not jasmine rice. Most districts of ancient Punjab are reported to be in the basmati belt. All these regions are located in the Himalayan foothills with peculiar pedo-climatic conditions and specific knowledge on traditional cropping of basmati rice. Old Punjab includes present western Punjab in Pakistan and eastern Punjab and Haryana in India. In western Punjab, which represents 91.2% of all of Pakistan's basmati crops, basmati area increased by 39.7% in 10 years, and yield increased by 32.8%. Basmati represented 61.6% of rice area and 50.3% of production in Pakistan in 2007. Basmati area is unknown for India. Basmati yield was still low at 1.7 t/ha in 2006 in western Punjab, compared with 2.1 t/ha for all rice produced in Pakistan, and 3.8 t/ha in eastern Punjab in India. Jasmine rice cropping increased by 74% from 1990 to 1998, reaching 28.3% of overall rice area in Thailand, despite low yield varying from 1.9 to 2.3 t/ha.

As cropping area becomes stabilized in the countries studied, an increase in fragrant rice production depends on yield improvement, a substitution of fragrant rice for coarse rice crops, and improvement in the milling process to a minor extent. Basmati rice area in Pakistan is not responsive to price shocks but is more sensitive to variation in irrigated area. On the other hand, jasmine rice area seems more sensitive to export perspectives.

Aromatic rice trade

Rice is recognized as a sensitive and special product by some countries. This means that governments are able to control, and sometimes stop, rice trade through specific taxes, governmental distribution agencies, and price regulation. This process does not directly affect the aromatic rice market. However, the authorities from India and Pakistan pay attention to rice availability for their own inhabitants. In 2008, India applied a minimum export price (MEP) of US$1,200 per ton, plus a tax of $180 on basmati rice exports. Pakistan applied an MEP of $1,300 per ton for basmati rice, and $1,500 for super basmati, from January to August 2008. At the same time, jasmine rice remained export-oriented. In 2008, India exported 1.18 million tons of basmati, Pakistan 1.08 million tons of basmati, and Thailand 2.51 million tons of jasmine rice. The trade in fragrant rice is rather concentrated. In 2008, the first five clients of India had a share of 84.9%, those of Pakistan 68.5%, and those of Thailand 51.7% of basmati and jasmine exports, respectively.

Basmati rice attains a higher price than coarse rice in both wholesale and retail markets. Basmati particularly attracts the highest price on the world export market. The factors acting on the basmati price seem to be related to a stable increase in demand from major importers and harvest variation, rather than price volatility on a rising market. Challenging the basmati price, the jasmine rice price seems more sensitive to variation as it is clearly an export-oriented crop. More generally, it was demonstrated that Thailand is a price maker on the rice market as it accounts for a third of the rice trade. The price premium of fragrant rice attracts a lot of players and increases competition between domestic and trade markets. Hence, frequent market shortages probably also foster fraudulent blending. The authentication of aromatic rice is an important topic since it attracts the highest price on the trade market.

Discussion and conclusions

Market pressure and expected earnings from stakeholders as well led to improved yields of the most expensive rice. Genetic selection, so far, led to several hybrids that now represent a small percentage of aromatic traditional lines. On a market where demand exceeds supply by far, stakeholders are sometimes tempted to act in an irrational manner. Fragrant rice is a trade-oriented commodity that attracts a number of stakeholders because of its price premium, even when they are located far from the regions of origin of these varieties. Hence, a clarification of the location of crop areas, seeds, lines, and varieties might enhance the authenticity of fragrant rice and would allow improving the reliability of rice supply chain actors as well. This would act in favor of a more sustainable market for aromatic rice.

The move to register basmati as a geographical indication (GI) trademark in Pakistan and India might lead to improved traceability. Thailand also moved toward a registration procedure for GI in order to protect indigenous know-how on jasmine rice cropping. According to the trade orientation of aromatic rice, a GI scheme might be a goof fit with the actual supply chain organization prevailing in the rice industry. Based on the old reputation of a product's high quality and strong independent controls of compliance with a code of practices, the GI scheme is compatible with the scale of production and broad marketing. Still under a free-market regime, aromatic rice trade may benefit from the protection of rice origin in order to better anchor value in the region of origin and to avoid misleading end consumers. Consequently, a noticeable split between fragrant rice and coarse rice markets might occur.