ROMANIA REMAINS AN ATTRACTIVE MARKET FOR THE MULTIPLICATION OF MAIZE SEEDS FOR SEEDING!

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Abstract: *The most significant change on the world planting seeds multiplication market is represented by seed multiplication at the nearest place possible from the outlet market, thus sacrificing the trade. This new approach made Romania a very attractive market for the multiplication of maize seeds to be sold on the EU markets as well as for Russia's and FSU market. In the last 5 years, the amounts of maize seeds for export steadily increased. In spite of this, the individual holdings from Romania still use non-certified seeds for the establishment of maize crops. In order to remain attractive for maize seed multiplication, Romania has to continuously adjust its legislation according to the EU requirements, with regard to the accepted limit of genetically modified organisms, so that to be able to export to any country its maize planting seeds, multiplied here.*

Key words*: maize seeds, market multiplication seeds, export, legislation adjustment, non-certificate seeds.*
JELClassification*: Q10, Q13, Q16, Q55, Y10*

INTRODUCTION

Maize is the most widely grown plant in the world. This international success comes from its importance as a reference feed for animals, and also from the outstanding properties of this extraordinary plant which has so many assets, e.g. nutrition, flavour, versatility, food safety and health standards, plus great potential for development. Maize farming has spread around the world and has given rise to a tough battle where the WTO has to arbitrate.

MATERIALS AND METHODS

The paper analyzes and evaluates the impact of the new regulations on the introduction of a limit to the incidence of GMO presence in the maize seeds for seeding. The current situation of the certified seed market in Romania is briefly presented, in the context of increased national and world demand with impact upon the maize seed multiplication at national level. The research for this study included a combination between documentation, field trips, data processing and their analysis.

RESULTS AND DISCUSSIONS

Maize it is now grown on all five continents, with thousands of varieties, thriving equally in Europe and in wet areas of South-East Asia. Everywhere around the world, livestock farmers prefer maize feed. Maize has also become increasing popularity for human consumption and in certain countries maize is part of the staple diet. Emerging countries too have seen maize farming expand.

Quite often, only a small proportion of the maize produced is exported as it is grown to meet substantial domestic demand. Four main "blocks" are engaged in tough competition on the maize export market: Europe, the Cairns group (Australia, New Zealand and Argentina), Third World countries and, of course, the leader, the United States of America.

Over a period of thirty years, maize production increased by 100%. The yield in France and the US is approximately 8 to 9 tones/hectare, while the world average is only 4

tone/ha. Around ten countries produce almost all the maize in the world, with the largest volumes in the USA and China (respectively 41% and 19% of world figures). France accounts for 3% of maize produced in the world.

Every year now, France exports half of the maize grown in the country, mainly to other EU-member States. It has even reached second position for world sales of seed maize, which is quite an achievement given that seed is the most crucial element. But with French regulations on GMOs, the country is now lagging behind.

Maize has great genetic potential which constantly offers new prospects, making it a crop of the future, for continuing or indeed accelerating development.

Today the USA alone produces 40% of the world's maize. Americans are huge maize consumers, with 80% of their crop going to the domestic market. After all, popcorn is a national icon! The USA is also the world's leading exporter and is a powerful, well-organized player, with most American producers being members of the National Corn Growers Association (NCGA). Any competition from players in other countries has been disorganized and often weak and ineffective. Other major exporting countries today, as China and Argentina, are isolated cases, while European exports are, for the moment, only conducted within the European Union.

Over recent years there have been ups and downs in maize production depending on the climate, ranging from 590 to 610 million tons and acreage has levelled off at approximately 140 million hectares. The reasons for the maize boom are improved productivity (accounting for 2/3 of the rise) and increased acreage (a further 1/3). Maize is farmed on all the continents, at different altitudes, although given the conditions required, it is not found in as large an area as wheat, and most maize farming is in the northern hemisphere.

The demand for maize is steadily increasing around the world. Maize is a raw material which is greatly valued as animal feed. 70% of maize consumed around the world (600-640 million tons) is for animal consumption (420-440 million tons). Maize is used in a large number of industrial applications; it is an ingredient in more than 400 products, mostly manufactured in starch plants, corn mills and distilleries. One-quarter of non-food products sold in supermarkets contain maize.

Not only has maize consumption been increasing, but over recent years demand has outstripped supply, which means that the main consumer countries have had to draw on their stocks. Since 2000, there has been a steady decrease in world stocks. These have now fallen below the critical level of 100 million tons. China holds 45% of world stocks and the USA has 32%.

The main maize-consuming countries are the USA (1/3 of world consumption, with more than 200 million tons) and China (20% of world consumption, c. 125 million tons), followed by Brazil (4%), Mexico (4%) and Japan (3%).

Exports: of the 75 million tons of maize traded in the world every year, 60% is from the US (46 million tons). Argentina comes next, exporting 11 million tons, then China (10 million tons) and Brazil (4 million tons).

Imports: the leading maize importer is Japan (22% of world imports, with 17 million tons), followed by South Korea (12%, 9 million tons) and Taiwan (6%, 5 million tons). Overall, Asia imports 35 million tons, the American continent 18 million tons, and Africa 11 million tons.

With a maize acreage measuring 2.5 million hectares, Romania is one of the largest maize-growing countries in the UE 27. Romania is also the third great producer of certified maize seed from Europe, after France and Hungary.

The benefits of using quality seeds for planting are: they are genetically pure (true to type); the good quality seed has high return per unit area as the genetic potentiality of the crop can be fully exploited; less infestation of land with weed seed/other crop seeds;

less disease and insect problem; minimization of seed/seedling rate i.e., fast and uniform emergence of seedling; they are vigorous, free from pests and disease; they can be adopted themselves for extreme climatic condition and cropping system of the location; the quality seed respond well to the applied fertilizers and nutrients; uniform in plant population and maturity; crop raised with quality seed are aesthetically pleasing; good seed prolongs life of a variety; yield prediction is very easy; handling in post-harvest operation will be easy; preparations of finished products are also better; high produce value and their marketability.

The production of grain seeds for planting in the period 2007-2012 largely fluctuated, mainly due to small grains. The production of hybrid maize seeds increased 5 times instead, to reach 100 thousand tons in 2012, while the area increased only three times, totaling 27738 hectares in 2012. A demand for the multiplication of maize seeds in Romania can be noticed, mainly from the part of great transnational companies. The areas where the maize seeds are multiplied are Braila area, where the hybridation lots can be irrigated, and Iasi area, where there is a favourable micro-climate for the maize seed crop.

Table 1

Production of seeds for planting (grains and maize seeds), 2007-2012

		Total grains	Maize seeds for planting
2007	Area – hectares	194117	11686
	Production -tons	598098	22880
2008	Area - hectares	212163	20682
	Production -tons	878523	61003
2009	Area - hectares	162964	23385
	Production -tons	571137	76247
2010	Area - hectares	119692	15489
	Production-tons	471715	61436
2011	Area - hectares	119590	22183
	Production - tons	535830	92499
2012	Area - hectares	127804	27738
	Production -tons	490861	100794

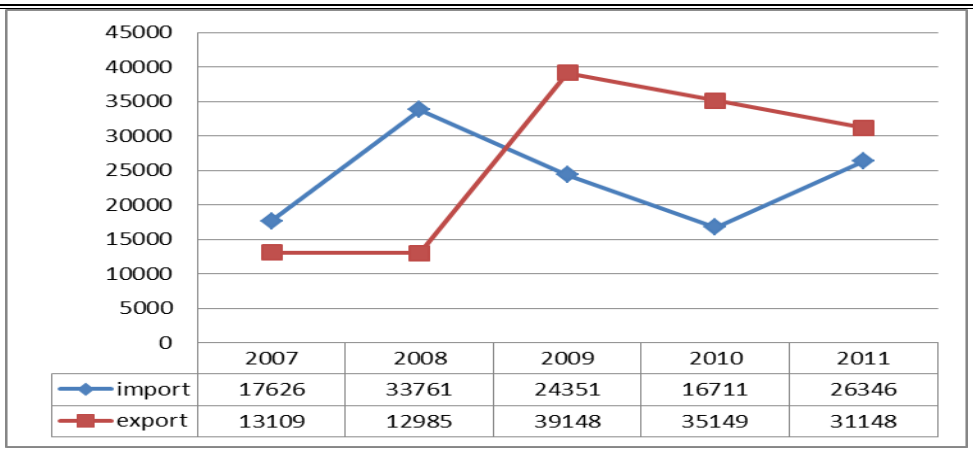
Source: Association of Breeders, Producers and Traders of Seeds and Planting Stock from Romania

Generally, Romania imports parental forms of maize hybrids that it multiplies. The average unit value of imports is net superior to exports.

In quantitative terms, the exported amounts are superior to the imports. The years 2007 and 2008 were an exception, when due to drought and hence to the low production of certified maize seeds for planting the imports were higher than the exports.

The 2009-2011 trends reveal a greater demand for using certified seed on the domestic market, with the increase of maize demand for pig raising (mainly from the part of Smithfield Timisoara).

The main export markets for maize seeds for seeding in 2011 were the following: Ukraine 34%, the Russian Federation 16% and Hungary 15%. The main suppliers of parental maize forms were France 36% and Hungary 31%.



Source : Eurostat

Figure 1 Romanian trade with maize seeds for planting,

CONCLUSIONS

Romania is on the first place as regards the land area cultivated with maize, but as for maize production, Romania is only on the 7th place in EU-27.

Romania is the third great producer of maize seeds for seeding after France and Hungary.

The harmonization of legislation on the incidence of GMO seeds in the seeds for seeding throughout Europe can contribute to Romania's continuing to be on a top position among maize seed producers in Europe.

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