REPORT:

COUNTRY

ROMANIA

International Soya Symposium 2012

Dragos Dima, Vienna, 5-6 September 2012
AGRICULTURE in ROMANIA

POPULATION

- Total population: 21,388,000
- Urban population: 12,535,000
- Rural population: 8,853,000
- Agricultural population: 1,618,000

(as of 2011)

Land

- Country area: 23,839,000 Ha
- Agricultural land: 13,523,000 Ha
- Arable land: 8,789,000 Ha
- Temporary crops: 7,058,000 Ha
- Permanent crops: 362,000 Ha
- Total area equipped for irrigation: 3,157,000 Ha
- Functional irrigation: 750,000 Ha
- Agricultural area irrigated: 296,000 Ha

(as of 2011)

CROPS

- Cereals: 5,016,851 Ha / 16,710,258 to
- Maize: 2,094,250 Ha / 9,042,030 to
- Sunflower: 786,058 Ha / 1,262,930 to
- Rapeseed: 527,175 Ha / 943,033 to
- Soybeans: 63,424 Ha / 149,940 to
- Potato: 243,000 Ha / 4,113,000 to
- Grapes: 176,000 Ha / 880,000 to

(as of 2010)

FARM STRUCTURE

- Family Holdings: 3,856,000
- Legal entities: 20,603
- Farm associations: 1,018
- Companies: 12,466
- Other legal structure: 7,119

(as of 2011)

Sources:
SOYBEANS CROPPING AREAS

Cost of production non-irrigated: 375 – 475 €/Ha
Cost of production irrigated: 550 – 650 €/Ha

Soybeans acreage in 2011: 69,755 Ha
Contracted for irrigation in 2011: 15,878 Ha
Acreage irrigated in 2011: 10,947 ha (15,70%)

Source: http://www.madr.ro
**Agricultural Practices**

**Stubble control:** 1-2 days after harvesting previous crop by disk plough, stubble mulch cultivator or other similar implements. The purpose is to save water due evaporation from compacted soil and to prevent clod forming during plowing. Water seeps easier to the cultivated soil, crop residues are incorporated in the soil and increased weeding effect of the tillage.

**Seedbed preparation:** Spike-toothed harrowing early spring is recommended for crust and weed control and land leveling. After 2-3 weeks disk harrowing or cultivator plus spike-tooth harrow for weed control is executed together with herbicide application against gramineae species. The combinator (not deeper than 5 cm) is used for seedbed preparation a day before sowing.

**Weed control:** during germination period crust formation and weeds are controlled using spike-tooth harrowing. When the soybean plants reach the stage of first leave spring-tine cultivator is used for weed control. 1-2 more spring-tine cultivator works are executed: one before the first hoeing, the second in the time interval between first and second hoeing. First hoeing is executed at 6-8 cm depth when plant rows are visible. 2-3 more hoeing are executed depending on weeding, the last hoeing is before flowering. A large spectrum of herbicides is used for weed control before and after emergence.

**Irrigation:** is applied in the period between flowering and grain filling. First irrigation is at flowering followed by 3-4 irrigations separated by 10-14 days. On soils with good or moderate permeability the application rate is 700-800 m³/ha; on soils with low or very high permeability: 400-500 m³/ha. In dry spring a first irrigation after sowing is recommended (200-300 m³/ha).

**Plowing:** is performed immediately after stubble plowed under. It improves soil structure, increases porosity, aeration and water holding capacity of the soil. Plowing depth is 25-28 cm. Depending on soil water content and the amount of previous crop residues. It is important to have a very uniform plowing. Harrowing several times until winter starts is important for weed control. In dry conditions a disk harrowing at 7-11 cm is applied after under-plowing stubbles. Than the plowing is executed after a rainfall wetting the soil to 20-25 cm depth.

**Sowing:** starts when soil temperature at sowing depth is 7-8°C (14-15°C air) and the weather trend is warming. Soybean sowing is in the same time with maize sowing. For rained fields recommended seeding rate is 45-50 germinable seeds/m² (for irrigated fields: 50-55 germinable seeds/m²). Seed quantity is 70-100 kg/ha. Sowing depth is 2.5 – 3.5 cm. For heavy soils and 2.5 - 4 cm for medium texture soils. The spacing between rows is 50 cm. An alternative is sowing in strips: 3 rows at 45 cm and 6 0-70 cm between strips.

**Fertilization:** Soybean plants need soil nitrogen in first 25-35 days from the start of vegetation until the symbiosis with Bradyrhizobium japonicum. After this moment up to 80% of the crop Nitrogen demand is supplied by fixing the atmospheric nitrogen. The critical phenological phase regarding the Nitrogen stress is 2 weeks before flowering. Therefore, 30-40 kg/ha nitrogen is applied before sowing. Then, depending on the number of Nitrogen-fixing knots 0-70 kg/ha, Nitrogen is applied at hoeing. Phosphorus fertilizer is applied before plowing. For a good Nitrogen fixing capacity the soybean seeds are treated with bio-products with Bradyrhizobium japonicum.

**Crop rotation:** Soybean is cultivated after winter wheat, winter barley. In wetter regions soybean is cultivated after sugar beet, too. Soybean is not cultivated after sunflower or rape.
### Soybeans Registered and Commercial Varieties

#### Varieties Marketed but Not Listed in the Romanian Official Catalogue 2012

<table>
<thead>
<tr>
<th>Variety</th>
<th>Maturity</th>
<th>Seed Company</th>
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#### Varieties Listed in the Romanian Official Catalogue 2012

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### Soybeans Research in Romania

1. **Institutul Național de Cercetare-Dezvoltare in Agricultura Fundulea**
   (National Agricultural Research & Development Institute Fundulea)
   located in South Romania, 35 Km East Bucharest

2. **Statuinea de Cercetare–Dezvoltare Agricola Turda**
   (Agricultural Research & Development Station Turda)
   located in Central Romania

Sources:
SOY PRODUCTS TRADE

• Annual soybean consumption: 600,000 tones

- Soybeans and soya meal imports in 2011: > 130 Mio €
  - 32,617 to of soybeans, value of 12,5 Mio €
  - 3,500 to of soybean oil, value of 2,5 Mio €
  - 357,656 to of soy cake/meal, value of 117,5 Mio €
- Exports: 36 Mio € (mainly soybean grains)
- Selling price: 400 – 450 €/to (as of 2012)
- Selling price organic: 700 - 800 €/to (as of 2012)

- Soybean meal is one of the top five imported commodities, Brazil (346,000 to) and Argentina (82,000 to) being the major suppliers
- In 2011, US has not been a soybean meal supplier for Romania
- The soybeans quantity exports almost doubled
- Soybean meal imports are projected to remain stable in 2012

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SOYBEANS TRADE STRUCTURE

Main traders (storage):
- CARGILL (500,000 to)
- ALFRED TOEPFER (300,000 to)
- AMEROPA (593,000 to)
- AGRICOVER (600,000 to)
- CEREALCOM DOLJ (100,000 to)
- NIDERIA (N/A)
- GLENCORE PROTEIN (N/A)
- BUNGE ROMANIA (N/A)

Main processors:
- EXPUR (380,000 to/year)
- BUNGE ROMANIA (N/A)
- PRIO EXTRACTIE (316,000 to/y)
- CARGILL OILS (N/A)
- ULVEX (54,000 to/y)
- ARGUS (N/A)
- UNILEVER SOUTH CENTRAL (N/A)
- ORKLA FOODS (N/A)
- ARDEALUL (N/A)
- PRUTUL (150,000 to/y)
- ULEROM (60,000 to/y)

Total cereals storage capacity: 20,000,000 to

Source: www.forbes.ro

Other legislation was passed prior to accession in accordance with the country’s EU accession commitments, specifically related to traceability and labeling of food products derived from GMO, which are Government Decision 173/2006 transposing Regulation EC No 1830/2003, replaced in March 2012 by Order 61/2012, and Government Decision 256/2006 transposing Regulation EC No. 1829/2003.

Order no. 55 regarding the national registry for records on genetic modifications issued in 2007 by the Ministry of Environment and Forestry (MEF) is still valid.


Order 237/2006 concerning the authorization of the biotech crops cultivators was recently replaced by Order 61/2012. The new order approved by the Ministry of Agriculture provides rules for the authorization and control of the biotech crop farmers as well as measures for ensuring the co-existence of biotech plants with conventional and organic. The public register concerning the commercial biotech fields, available on the website of Ministry of Agriculture and Rural Development, is updated every year with the following data about the farmers and the biotech seeds.

**Regulatory Authorities**

- **Ministry of Environment and Forestry (MEF)** - coordinates and ensures the application of precautionary principle to avoid potential adverse effects of GMOs on human health and environment as a result of obtaining, using and commercializing these organisms
- **National Agency for Environment Protection (NAEP)** is the Competent Authority (CA)
- **National Environmental Guard (NEG)** is the control authority ensuring the right enforcement of the provisions of Directive 2001/18
- **Ministry of Agriculture and Rural Development (MARD)**, the **Sanitary-Veterinary and Food Safety National Authority (ANSVSA)**, and the **Ministry of Public Health (MPH)** are also involved in implementing the Directive 2001/18

**Biosafety Commission**

Since 2002 the Biosafety Commission has existed in Romania as a scientific body with consultative role in assisting the authorities in the decision-making process regarding the issuance of authorizations.

In 2008, the Ministry of Environment issued Order 98, setting the main responsibilities of the Biosafety Commission, including the list of members.
Traceability

According to Order 61/2012 all operators along the commercial chain must transmit and retain information about products that contain or are produced from GMOs at each stage of placing them on the market. The regulation covers all products, including food and feed, containing or being derived from authorized GMOs.

Farmers planting biotech crops can only use certified seed - label or document stating “genetically modified seeds” as well as the biotech product unique identifier code.

Seeds suppliers prepare yearly an annual register for biotech seeds containing information regarding the names and coordinates of the farmers, the amount of seeds and crop location.

Upon sowing completion, within 7 working days, the farmers must report to the county office of MARD facts on planted area, seeds source and the varieties/hybrids used. Upon harvesting completion, within 7 working days of each month, farmers must submit to the county office of MARD data on production obtained and its purpose.

When delivering the GM products further on the commercial chain, farmers have to clearly specify on the accompanying documents and labels, the GM product unique identifier and the statement “this product contains genetically modified organisms.”

Labeling

National legislation concerning GM labeling was brought in line with the EU requirements (Regulation (EC) No 1830/2003) through GOR Decision No. 173/2006, which was repealed in 2012 through Order 61 issued by the Ministry of Agriculture. Romania adopted measures on thresholds for labeling, set at 0.9% for an adventitious presence of an authorized GM in food or feed. Animal feed produced from GM crops is required to be labeled, according to GOR Decision 256/2006. Meat, milk or eggs obtained from animals fed with GM feed or treated with GM medicinal products do not require GM labeling.

Enforcement

Ministry of Environment and Forests (MEF) – through the National Environmental Guard (NEG), as NEG is in charge with enforcing the whole package of environmental protection legislation via inspection and control.

Ministry of Agriculture and Rural Development (MARD) has official inspection and control capacity have responsibilities related to GMOs, such as the Division for Agricultural Policies Implementation - with roles in authorizing local GMO plantings and in gathering information about biotech farmers and the National Inspection for Seed Quality and the State Institute for Variety Trials and Registration (ISTIS) that investigates from the technical point of view the varieties for which requests have been made to be registered in the Variety Register and the Official Variety Catalogue.

Veterinary and Food Safety National Authority (ANSVSA) is involved in endorsing approvals for GM products from the perspective of assessing potential risks to human and animal health and exerting control regarding the enforcement of food and feed traceability requirements.

National Authority for Consumer Protection (NACP) verifies the enforcement of food product labeling requirements in order to ensure that correct, complete, and accurate information is provided to consumers, including products containing or consisting of GMOs.

Several laboratories are operational and able to perform tests for GMOs detection. The National Reference Laboratory for GM food and feed is the Institute for Diagnosis and Animal Health (IDAH) with the Molecular Biology and GMO Unit. The Institute of Food Bioresources (IBA) is responsible for official control analysis of GMOs in seeds. The National Research and Development Institute for Biotechnologies is in charge with official control analysis of GMOs in feed.
For additional information, please contact me:

Mobile: (004) 0744 355 787
E-mail: ddima@msat.ro