

# **NATIONAL REPORT ON AGRO- FOOD SECTOR CROATIA**

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# MAIN GOAL



**Describe current situation in the agri-food sector in Croatia regarding main economic indicators and research policies**

# Metodology



- The report is based mainly on secondary quantitative data gathered from different sources, both from Croatian and European institutions.
- The report also includes a **SWOT analysis** of the sector.
- **Interviews** - experts from scientific community and managers who work in agro-food companies.
- Some data for the analysis were taken from previous research conducted by Faculty of Agriculture in Zagreb.

# Overview of developments

- Since the year 1994 Croatia has been a net importer of agricultural products.

## **As a result of liberalization:**

- value of Croatian exports of agricultural products is constantly rising
  - Republic of **Croatia has become one of the biggest importers of food** in Europe (300.3 euro per capita) and in the world.
- 2005 saw record imports** of agricultural and food products with imports of 1.30 billion euro and agri-food exports amounting to 743 million euro.

# National agricultural policy



The majority of the national agricultural policy is implemented through two Acts – *the Agriculture Act and the Act on the State Aid in Agriculture, Fisheries and Forestry*.

The Act on State Aid in Agriculture, Fisheries and Forestry provides for four different state aid schemes intended for different target groups or aid beneficiaries.

## **The schemes are:**

1. Production subsidy scheme (direct payments)
2. Capital investment scheme
3. Income support scheme
4. Rural development scheme

# Economic data of the agro - food sector

	Units	2000	2001	2002	2003	2004	2005	2006	2007
Population	'000	4,381	4,437	4,443	4,442	4,439	4,442	4,441	4,441
GDP (in current prices)	mill. €	19.976	22.628	24.758	27.107	29.075	33.047	34.220	37.527
Agriculture, hunting, forestry and fishery	mill. €	1.473	1.670	1.793	1.571	1.678	1.780		
Share In GDP	%	7,37	7.54	7.33	5.99	5.91	5.75		
GDP/capita	€	4.560	4.998	5.507	5.906	6.462	7.038	7.704	8.452
GDP (PPP)/capita	€								
Economic growth (change in GDP)	%	2,9	4,4	5,6	5,3	4,3	4,3	4,8	5,1
Unemployment rate	%	16,1	15,8	14,8	14,3	13,8	12,7	11,2	15,1
Inflation (yearly average)	%	4,6	3,8	1,7	1,8	2,1	3,3	3,2	2,9
Share of food, beverages and tobacco									
in total household's expenditures	%	36,0	37,7	36,1	36,8	35,5	37,2	36,3	-



- Since the year 2000, the national economic situation is characterized by significant economic **growth**
- 2000 – 2007 Agricultural production together with forestry and fishery sector **is increasing**
- 2000 – 2005 Share of stated sectors in total GDP **is decreasing**
- - whole economy is forwarding much faster than agriculture (Ipard, 2007).

# Exports and Imports



**Croatia has large deficits for almost all primary agricultural products, - except maize (+7.4 million euro), tangerines (+529 thousand)**

• **Exports increased for the following agricultural products:**

- tobacco,
- sugar,
- food complements,
- fermented milk products and processed meat.

• **The most important exporting destinations**

- the countries of the ex Yugoslavia, especially Bosnia and Herzegovina, EU Member States (Italy, Slovenia, Germany, Austria)

**The most important supplying countries (2007)**

- Italy, Germany, Brasil, and Hungary

• **The top five of the export are all processed agro-food products**

- 2007 - sugars & sugar confectionery (€157,727 mill.), miscellaneous edible preparations (€111,347 mio), Fish and crustaceans, Tobacco & tobacco products) and cereals

# Importance of agro-food trade in Croatia

	Units	2000	2001	2002	2003	2004	2005	2006	2007
<b>Agro-food trade</b>	mill. €	1.187	1.44,2	1.621,6	1.738,2	1.744,8	2.023,4	2.422,4	2.533,0
		441,0						949,15	
Agro-food exports	mill. €	5	495,8	559,7	624,0	560,4	716,1		960,4
		746,1						1.473,3	
Agro-food imports	mill. €	7	951,4	1.062,9	1.114,2	1.184,4	1.307,3		1.572,6
Agro-food trade balance	mill. €	-	- 457,7	- 503,1	- 490,2	- 623,9	- 591,1	-	- 612,2
		305,1						524,15	
<b>Share of agro-food trade in:</b>									
- Total exports	%	9,2	9,5	10,8	11,4	8,7	10,1	11,2	10,6
- Total imports	%	8,7	9,3	9,4	8,9	8,9	8,8	8,7	8,3

Source: CBS, DAES (Kumrić, Franić, 2007), CCE

# Main Economic sub sectors

- **Cereals**
- most significant sub – sector in 2007
- with share of **GAO** of approximately **23%**.
- 66% total arable surface in Croatia.
- most important commodities in this sector (Maize (1. 425 000,00 t produced in 2007) and wheat (812,000 t in 2007))



## Oil crops

- Areas covered with oil crops in the last five years have been approximately 80.000 ha for one year.
- In the production structure, the most abundant is **soybean, than sunflower and oilseed rape**



## Fruits

- production located on agricultural farms
- In 2007 the F&V sector represents 12 % of the GAO
- As for fruits, the most important are grapes followed by apples and plum
- home fruit production do not satisfy even 50% of domestic needs.

## Vegetables

- potatoes are the most important, followed by cabbages and tomatoes.

# Livestock production



Livestock contribution to the GAO was 47 % in 2007.

Small production units prevail, especially for cattle; swine production; sheep; goat and horse keeping

## Pork production

This production amounts to 12.18% in total agricultural production (small production units - over 85% farms are production units with up to 10 sows)

Self-sufficiency for pork in Croatia is around 80%

- **Cattle and beef production**
- production is organised in the family farms (83%)

Self-sufficiency for beef decreased from 83% in 2001 to around 75% in (2006.)

- **Poultry production** amounts to approx. 7% of GAO, i.e. 18% of livestock production, and is self-sufficient (rate is 101%)
- *big production units*
- *Chicken production represents the main production section (93%)*  
*goose account to only (3% )*
- *each duck and turkey productions represent (2%)*

# Dairy sector

- share of dairy production in the Croatian agricultural GDP is **only 7.3%**
- households with 3 cows per farm dominate
- *most Croatian milk is produced on family farms.*
- the production is expensive and insufficient to meet the needs of the dairy industry.
- **domestic production covers** about 80% of the annual needs for milk and dairy products
- In the last years, the share of imported milk has decreased, while the import of high-quality dairy products has increased.

# Research expenditures

Since 2000 - (GERD) is constantly growing, and despite some decline in 2004 (from 1.22% of GDP in 2004 to 0.93% of GDP in 2007.) (gross domestic exp.on r&d)

Table 3 Some indicators of Research and Development (R&D) in Croatia, 2004

Indicator	
Total public expenditure on education as a percentage of GDP	4.53*
Gross domestic expenditure on R&D (GERD), % of GDP	1.22
R&D expenditure by sector, % of GDP	
Business enterprise sector	0.51
Government sector	0.25
Higher education sector	0.45
Exports of high technology products as a share of total exports	11

\* year 2003

Source: EUROSTAT

- high rate of investment in research and development (R&D)
- *disproportion of investment between the public and the private sector*
- R&D expenditure by the private sector is relatively low, **0.51%** of GDP

# Research resources



Public research activities are dominantly financed by budget resources allocated by the [Ministry of Science, Education and Sports](#) (MSES)

through the two main channels:

- institutional funding
- research projects

Science policy in Croatia is based on a horizontal approach in which all research areas should be treated equally in order to attain an equal level of scientific excellence .



- **The budget of the Research Projects programme** in the total amount of HRK142.5 mill (€19.6m) in 2007 was distributed according to the six scientific fields as follows:
  - **Natural sciences - 25%**
  - **Technical sciences - 23%**
  - **Bio – medical sciences - 23%**
  - **Bio – technical sciences - 12 %**
  - **Social sciences - 9%**
  - **Humanities - 8%**

# Main research infrastructure



The Croatian research and higher education system consists of :

- 7 universities,
- 26 public research institutes,
- 11 research centres in the industry sector,
- 16 public colleges and polytechnics,
- 16 private colleges and polytechnics which are accredited by the MSES

in the field of agri - food and agriculture:

## **UNIVERSITY OF ZAGREB**

- Faculty of Agriculture
- Faculty of Food Technology and Biotechnology
- Faculty of Veterinary Medicine
- Faculty of Pharmacy and Biochemistry
- Faculty of Forestry



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## **UNIVERSITY OF OSIJEK**

- The Faculty of Agriculture
- The Faculty of Food Technology

## **UNIVERSITY OF SPLIT**

- Department of Mediterranean Agriculture and Landscape
- Faculty of Chemical Technology

### **OTHER RELEVANT INSTITUTIONS (college and institute):**

- The School of Professional Higher Education in Agriculture, Križevci
- Polytechnic College in Knin
- Institute for Adriatic Crops and Karst Reclamation in Split
- Institute for Agriculture and Tourism in Poreč

## **Public services in agriculture and food industry**

- Veterinary institutions
- Croatian Livestock Centre

## **Plant production institutions**

- Fruit Growing Institute
- Croatian Institute of Viticulture and Oenology
- Food safety institutions
- Croatian Agricultural Extension Institute (CAEI)
- Croatian Market Information System in Agriculture (TISUP)

# Main activities of FAZ



- The FAZ organisation is based on 28 departments.
- more than 200 researchers are involved in scientific and research work
- Most projects are funded by the MSES (2002 -2007 ) - **93** research project, MAFRD, Projects Contracted with National and Regional Administration, Companies and Entrepreneurs
- **Main activities**
- application of biotechnology in agriculture,
- application of geoinformatics science in agriculture,
- new technologies for sustainable and renewable(organic) agricultural production,
- new food production technologies,
- socio-economic and marketing analyses of Croatian agriculture, competitiveness of Croatian agriculture on the domestic and world markets.
- International projects (TEMPUS, FP6, 7, INTERREG, COST)

# R&D priorities



- increase investment in this area,
- increase the efficiency of research in agro-food sector
- strengthen the cooperation with other scientists and institutions
- include Croatian agro-food researchers in European and other international research projects.
  
- Also, one of the priorities is to **strengthen the research infrastructure and to invest in human potentials in this research area.**
  
- These priorities and **foresight** are driven by general national development policy and tries to be in-line with other priorities set by the state agencies and ministries.

# Agri food sector Research priorities



- ❑ competitiveness of agribusiness sector, namely family farms
- ❑ Rural development
- ❑ Environmental protection and
- ❑ climate change
- ❑ Modernization of agricultural production in order to achieve existing quality standard. Very often it is way to raise productivity (yields) from current (low level) to EU level.
- ❑ orientation toward organic agriculture
- ❑ Issues of food safety and quality assurances
  
- Role of social sciences are very important and therefore researches in the field of agricultural economics and rural sociology

# Funding Programs at National level



- Scientific research, technical and development projects are financed by several sources:
  1. Ministry of Science and Technology,
  2. Ministry of Agriculture, Fisheries and Rural Development (MAFRD) through **the Council for Research in Agriculture (ARC) – CAEI**
  3. Ministry of the Economy, Labour and Entrepreneurship. (“Croatian Innovation and Technology Development – HITRA” and “Development of Knowledge-based Enterprises”)

# ARC



- The ARC research is financed by the MAFRD through the Fund for Applied Research Development in Agriculture
- **Council for Research in Agriculture (ARC)** in its regular annual tender for applied research projects in agriculture put following priorities:
  - 1. Development and income and employment diversification on family farms in the function of rural development
  - 2. Increase family farms' competitive through innovation and new technologies
  - 3. Influence of agro-ecology, economy and social conditions on the expansion of agriculture
  - 4. Organic agriculture

# ARC PROJECTS



- In the period 1998-2004 ARC projects have encompassed following biotechnology fields:
- crop production (46 projects),
- horticulture (35 projects),
- family farms (45 projects)
- and organic production (27 projects).
  
- Other fields like livestock production, genetics, food technology, fishery and legislation had a less significant share in ARC's projects.
  
- In financial terms amount invested in the period 1998 to 2007 was **about 7 million Euro.**

# EU Funding Programs and Pre-accession programmes

- As a candidate country, Croatia has obtained access to pre-accession funds
- **PHARE**
- **ISPA and**
- **SAPARD**
- **CARDS**
- **Framework programmes (FP6, FP7)** - according to the European Commission data, Croatia had signed 60 contracts co-financed by the European Commission (€5.8 million) by February 1, 2006.



- From 2007 onwards “**IPA** - Instrument for pre-accession assistance for 2007-2013” was replaced PHARE, ISPA, Sapard, and CARDS.
- IPA was contain five components:
  - I) Transition Assistance and Institution Building,
  - II) Cross-border cooperation,
  - II) Regional Development,
  - IV) Human Resources Development,
  - V) Rural Development.
- In 2007 IPA replace Sapard and change name in IPARD (2007.).

# Bilateral funding programs



- GTZ – Office for Economic Co-operation of the Republic of Germany
- EVD – The Dutch Government Agency
- Italian Act Nr. 84:
- SIDA – Swedish International Development Agency
- World bank projects

# SWOT chart for Croatian agri-food sector

## Strengths (S)

### SCIENCE

- high number of education institutions and centers
- highly qualified staff (scientists)
- R&D programs and strategies
- Involvement in international projects
- Existing support centers for the development of the sector

### INDUSTRY

- favourable production conditions (climate)
- production technology in some areas
- modern small scale food industries
- highly developed tourist market

## Weaknesses (W)

### SCIENCE

- inadequate programs of agro-food education
- underdeveloped sector of adult education
- low investment in educational infrastructure
- low number of available experts
- low networking of institutions

### INDUSTRY

- low competitiveness of small scale producers
- low compliance with EU safety and quality standards
- insufficient organisation of production?
- negative trade balance in the sector
- undeveloped distribution channels



## Opportunities (O)

### **SCIENCE**

- improvement of agri-food education
- better cooperation of science and industry
- higher involvement in European research area

### **INDUSTRY**

- better organisation of producers
- modernisation of SMEs
- adopting EU food safety standards
- agro-tourism
- accession to EU – availability of EU funds
- establishment of private consultancy services
- improvement of networking between producers, industries, research centres

## Threats (T)

### **SCIENCE**

- low priority of the sector in scientific community
- limited financial resources for research
- slow process of changes in the scientific research

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### **INDUSTRY**

- increased competition resulting from EU accession
- low investments in modernisation and infrastructure
- limited sources of financing

THANK YOU  
ON YOUR  
ATTENTION

