ANALYSIS OF THE AGRICULTURAL MACHINERY MARKET IN THE EUROPEAN UNION

Dr. Luis Márquez
&
Mr. Ignacio Ruiz

Data source: Agrievolution 2008 & Eurostat
SUMMARY OF CEMA REPORT

EU 27

AGRICULTURE MACHINERY

MARKET TRENDS

¿WHAT’S NEXT?

LEGISLATIVE FRAMEWORK RESEARCH INNOVATION

Mandatory requirements Technical progress
AGRICULTURE

VALUE OF AGRICULTURAL PRODUCTION

LIVESTOCK + FRUITS + VEGETABLES

EXTENSIVE INTEGRATION WITH FOOD INDUSTRY
## AGRICULTURE

<table>
<thead>
<tr>
<th>Population (2006)</th>
<th>494,800,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural land use (2005)</td>
<td>172,000,000 hectares (40 %)</td>
</tr>
<tr>
<td>Average farm size (2005)</td>
<td>12,1 hectares</td>
</tr>
<tr>
<td>Agricultural share in GDP (2004)</td>
<td>2,2 %</td>
</tr>
</tbody>
</table>

### Agricultural Holdings

<table>
<thead>
<tr>
<th></th>
<th>2003*</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EU-25</td>
<td>EU-27</td>
</tr>
<tr>
<td>Total number (1000)</td>
<td>6,559.4</td>
<td>7,928.5</td>
</tr>
<tr>
<td>By legal personality of the holder (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sole holder</td>
<td>96.1</td>
<td>96.5</td>
</tr>
<tr>
<td>legal person</td>
<td>2.9</td>
<td>2.6</td>
</tr>
<tr>
<td>group holders</td>
<td>1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>By utilised agricultural area (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5 ha</td>
<td>45.4</td>
<td>51.6</td>
</tr>
<tr>
<td>5 - &lt; 20 ha</td>
<td>32.2</td>
<td>29.5</td>
</tr>
<tr>
<td>20 - &lt; 50 ha</td>
<td>12.4</td>
<td>10.4</td>
</tr>
<tr>
<td>50 - &lt; 100 ha</td>
<td>6.0</td>
<td>5.0</td>
</tr>
<tr>
<td>100 =&lt; ha</td>
<td>4.1</td>
<td>3.6</td>
</tr>
<tr>
<td>By machinery (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>using a tractor</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>with their own tractor</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>using a combined harvester</td>
<td>:</td>
<td>:</td>
</tr>
</tbody>
</table>
AGRICULTURE

AGE OF AGRICULTURAL HOLDERS

LOW BIRTH RATE + AGEING + ABANDONMENT

AGRICULTURAL CONTRACTORS = KEY PLAYERS
Agricultural holdings by main type of farming, EU-27, 2005

- Other farm types: 54%
- Field crops – grazing livestock combined: 7%
- Specialist olives: 8%
- General field cropping: 9%
- Specialist cereals, oil seed and protein crops: 11%
- Mixed cropping: 11%
Utilised Agricultural Area by Type of Tenure, EU-27, 2005.
Greece (27%), Spain (18%), Italy (18%) and Portugal (17%)
ARABLE LAND

AREA BY MEMBER STATE, 2005

PERMANENT CROPS

ES 40%
FR 11%
IT 21%
other MS 18%
EL 10%

other MS 48%
PL 10%
FR 18%
ES 12%
DE 12%

AGRICULTURE
AGRICULTURE

PRODUCTION OF CEREALS AND SUGAR BEET, UE-27

- Cereals
- Sugar beet

Million tonnes

2001 2002 2003 2004 2005 2006 2007

2001 2002 2003 2004 2005 2006 2007
AGRICULTURE

PRODUCTION OF PEAS, RAPE AND SUNFLOWER, UE-27

- Field peas
- Rape
- Sunflower

Million tonnes

Year:
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
SHARE OF MAIN CROPS, UE-27, 2007

- **Cereals**
  - DE: 0%
  - FR: 0%
  - IT: 0%
  - PL: 0%
  - Others: 100%

- **Field peas**
  - DE: 0%
  - FR: 0%
  - IT: 0%
  - PL: 0%
  - Others: 100%

- **Sugar beet**
  - DE: 0%
  - FR: 0%
  - IT: 0%
  - PL: 0%
  - Others: 100%

- **Rape**
  - DE: 0%
  - FR: 0%
  - IT: 0%
  - PL: 0%
  - Others: 100%

- **Sunflower**
  - DE: 0%
  - FR: 0%
  - IT: 0%
  - PL: 0%
  - Others: 100%
AGRICULTURE

PRODUCTION OF MAIN VEGETABLE CROPS, UE-27

- Tomatoes
- Carrots
- Onions

Million tonnes

0 3 6 9 12 15 18

2001 2002 2003 2004 2005 2006 2007
AGRICULTURE

PRODUCTION OF CERTAIN FRUITS, UE-27

![Chart showing production of certain fruits in the UE-27 over the years 2001 to 2007. The chart compares the production of apples, pears, and oranges. The production of apples is shown in green, pears in red, and oranges in yellow. The production of apples shows a moderate increase from 2001 to 2004, followed by a slight decrease in 2005 and 2006, before a more pronounced decrease in 2007. The production of pears remains relatively stable throughout the years, with minor fluctuations. The production of oranges shows a steady increase from 2001 to 2007.]
AGRICULTURE

CEREAL MARKET TREND, UE-27, 2007-2014
## MECHANIZATION INDUSTRY

### Values in Million Euro, including tractors

<table>
<thead>
<tr>
<th>Agricultural Machinery - EU-27</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>% 2006/2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU-15*</td>
<td>18091,4</td>
<td>18774,4</td>
<td>19764,1</td>
<td>5%</td>
</tr>
<tr>
<td>EU-12*</td>
<td>1155,4</td>
<td>1331,9</td>
<td>1568,5</td>
<td>18%</td>
</tr>
<tr>
<td>EU-27*</td>
<td>19246,8</td>
<td>20106,2</td>
<td>21332,6</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Exports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU-15*</td>
<td>4637,5</td>
<td>5115</td>
<td>5797,2</td>
<td>13%</td>
</tr>
<tr>
<td>EU-12*</td>
<td>727,6</td>
<td>887,1</td>
<td>1089,1</td>
<td>23%</td>
</tr>
<tr>
<td>EU-27*</td>
<td>3793,4</td>
<td>4027,9</td>
<td>4491,6</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Imports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU-15*</td>
<td>2130,5</td>
<td>2413,5</td>
<td>2565,7</td>
<td>6%</td>
</tr>
<tr>
<td>EU-12*</td>
<td>1261,9</td>
<td>1624,1</td>
<td>2004,9</td>
<td>23%</td>
</tr>
<tr>
<td>EU-27*</td>
<td>1720,1</td>
<td>2038</td>
<td>2119,9</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU-15*</td>
<td>15364,5</td>
<td>15699,8</td>
<td>16601,9</td>
<td>6%</td>
</tr>
<tr>
<td>EU-12*</td>
<td>1728,3</td>
<td>2124,4</td>
<td>2536,2</td>
<td>19%</td>
</tr>
<tr>
<td>EU-27*</td>
<td>17092,7</td>
<td>17824,2</td>
<td>19138,0</td>
<td>7%</td>
</tr>
</tbody>
</table>

* Excluding intra-trade
EU-12 Entry 2004 and 2007
Sources: Eurostat, VDMA, CEMA
## MACHINERY

## TRACTOR REGISTRATIONS IN 2007 AND 2006

<table>
<thead>
<tr>
<th>Country</th>
<th>2007</th>
<th>2006</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>7558</td>
<td>7926</td>
<td>-4.64%</td>
</tr>
<tr>
<td>Belgium</td>
<td>3472</td>
<td>3738</td>
<td>-7.12%</td>
</tr>
<tr>
<td>Denmark</td>
<td>3961</td>
<td>3447</td>
<td>14.91%</td>
</tr>
<tr>
<td>Finland</td>
<td>4245</td>
<td>4171</td>
<td>1.77%</td>
</tr>
<tr>
<td>France</td>
<td>37778</td>
<td>36024</td>
<td>4.87%</td>
</tr>
<tr>
<td>Germany</td>
<td>28470</td>
<td>29011</td>
<td>-1.86%</td>
</tr>
<tr>
<td>Greece</td>
<td>2999</td>
<td>2757</td>
<td>8.78%</td>
</tr>
<tr>
<td>Iceland</td>
<td>368</td>
<td>361</td>
<td>1.94%</td>
</tr>
<tr>
<td>Ireland</td>
<td>5029</td>
<td>4221</td>
<td>19.14%</td>
</tr>
<tr>
<td>Italy</td>
<td>26836</td>
<td>29665</td>
<td>-9.54%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>224</td>
<td>180</td>
<td>24.44%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4678</td>
<td>4119</td>
<td>13.57%</td>
</tr>
<tr>
<td>Norway</td>
<td>4187</td>
<td>4371</td>
<td>-4.21%</td>
</tr>
<tr>
<td>Portugal</td>
<td>4199</td>
<td>3885</td>
<td>8.08%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>2084</td>
<td>2100</td>
<td>-0.76%</td>
</tr>
<tr>
<td>Spain</td>
<td>17261</td>
<td>16668</td>
<td>3.56%</td>
</tr>
<tr>
<td>Sweden</td>
<td>4634</td>
<td>4408</td>
<td>5.13%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1974</td>
<td>2362</td>
<td>-16.43%</td>
</tr>
<tr>
<td>UK</td>
<td>17089</td>
<td>14941</td>
<td>14.38%</td>
</tr>
</tbody>
</table>
MACHINERY

TIV EVOLUTION PER HP SEGMENT

- <45 HP
- 45-99 HP
- 100-129 HP
- 130-189 HP
- >189 HP

2000: 3%, 16%, 23%, 54%, 4%
2001: 3%, 18%, 24%, 53%, 3%
2002: 4%, 20%, 25%, 49%, 3%
2003: 5%, 19%, 25%, 49%, 2%
2004: 5%, 20%, 27%, 45%, 3%
2005: 6%, 21%, 25%, 44%, 3%
2006: 7%, 22%, 27%, 42%, 3%
2007: 9%, 23%, 26%, 39%, 3%
2008: 10%, 24%, 26%, 36%, 4%
2009: 11%, 26%, 28%, 33%, 3%
2010: 11%, 26%, 29%, 31%, 3%
MACHINERY

COMBINE EVOLUTION AND MEDIUM TERM PROJECTION

Year:
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013

Values:
- EU-27
- EU-25
- EU-15

- 8150
- 7270
- 9600
- 9150
- 7700
- 8700
- 8720
- 8880
- 10500
- 10400
- 9900
- 9700
- 9550
- 9500
LEGISLATIVE FRAMEWORK

COMMON AGRICULTURE POLICY OBJECTIVES

- Multifunctionality of agriculture
- Rural development
- Reduction in the financial resources destined for the CAP through 2013.

The single farm payment independent of production level (decoupling):

The main instrument to make farmers more competitive and market-oriented
LEGISLATIVE FRAMEWORK

CAP SUPPORT PAYMENTS

- The respect of environmental and food safety,
- Animal and plant health and animal welfare standards,
- The requirement to maintain farmland in good agricultural and environmental condition.

NEW ADJUSTMENTS PROPOSED IN 2008

- Abolishing set-aside rules
- Simplifying the link between subsidies and environmental, animal welfare and food quality standards
- More flexible support for sectors with special problems
- Moving some direct aid into rural development
- Ending market intervention in certain areas
- To exempt some categories of specialized tractors from the application of the next Tier levels;
- To have adequate flexibility levels to ease the production launch process at the new emission stage introduction.
LEGISLATIVE FRAMEWORK

OPERATOR SAFETY

- A stringent demand coming from all the involved bodies;
- Frame Directive about tractors;

ROAD TRAFFIC

- Higher road speed;
- New braking requirements.
RESEARCH AND INNOVATION

INNOVATION

- Specialized high technology equipment
- Specific usages and cultivations optimization
- Greater dimensions and more power
- New machines for niche production and multifunctional activities

RESEARCH

- High level of safety
- High level of efficiency
- High level of comfort
- High level of versatility
RESEARCH AND INNOVATION

COMFORT

Even lower noise levels
Vibrations level reduction
Auto-guidance systems (GPS)
More servo-assisted controls
Continuously variable transmissions (CVT)
Standard ISOBUS for tractor-implement communication

EFFICIENCY

Precision farming
Wireless vehicle-to-vehicle communication
Field and road functions programming
Fuel consumption reduction
FARMER: a man over 35 years old as a sole owner
HOLDING: surface < 20 ha and mainly < 5 ha
TYPE OF FARMING: not defined
LAND TENURE: Owner rather than tenant
AGRICULTURAL AREA: Arable land + Mediterranean crops
   ARABLE: Cereals
   PERMANENT CROPS: Vineyard + Olive trees+ Fruit trees
MEMBER STATES: Two areas broadly known so far
   Southern Europe – Mediterranean areas
   Rest of Europe
PRODUCTIONS: Crops for food stable, certain crops for energy increasing
TRADE OF AGRICULTURAL PRODUCTS: Importer and exporter
AGRICULTURE SUMMARY

TREND

FARMER AGEING AND LAND ABANDONMENT

INCREASE OF ARABLE LAND DUE TO NEW MS AND DECREASE OF SET ASIDE

HOLDING SIZE INCREASING WHILE NUMBER DECREASING

AGRICULTURAL INCOME INCREASING IN NEW MS

CEREALS: INCREASING PRODUCTION BUT YIELD SLOW DOWN

EVEN IMPORTS AND INCREASED EXPORTS

FOOD INDUSTRY

OUTSTANDING LIVESTOCK AND PERMANENT CROPS

ENVIRONMENTAL ISSUES AFFECTING AGRICULTURAL HOLDINGS

RURAL DEVELOPMENT
AGRICULTURE SUMMARY

MAIN UNCERTAINTIES

POTENTIAL IMPLICATIONS OF A MULTILATERAL TRADE AGREEMENT

FUTURE DEVELOPMENT OF WORLD MARKETS

ECONOMIC AND POLICY ENVIRONMENT

CLIMATE CHANGE, TECHNOLOGICAL DEVELOPMENTS, BIOFUELS, SANITARY CONDITIONS
MACHINERY SUMMARY

ADAPTATION TO AGRICULTURAL TRENDS

AGEING OF MACHINERY IN USE

STATE OF THE ART SPECIALIZED EQUIPMENT

INCREASING HORSE-POWER

HIGHER VERSATILITY

REGIONAL DIFFERENCES

INTRODUCING EVEN BETTER ENVIRONMENTAL SOLUTIONS

TECHNICAL PROGRESS AND PERFORMANCE DEMAND
LEGISLATIVE FRAMEWORK SUMMARY

MANDATORY REGULATIONS APPLIED TO MACHINERY

SAFETY REGULATIONS

LABOUR SAFETY
- MACHINES
- EXCLUSION OF TRACTORS
- SELF CERTIFICATION

ROAD TRAFFIC
- VEHICLES
- EXCLUSION OF SUSPENDED

DRAFTED REGULATIONS AIMED TO CUSTOMER SAFETY

TO BE IMPLEMENTED BY ALL COMPANIES
LEGISLATIVE FRAMEWORK SUMMARY

MAIN PARTIES INVOLVED IN REGULATIONS

MANUFACTURERS AND LEGAL REPRESENTATIVES

EUROPEAN COMMISSION

NATIONAL AUTHORITIES

STANDARDIZATION BODIES

TEST STATIONS

INDUSTRY ASSOCIATIONS

OTHER PARTIES
LEGISLATIVE FRAMEWORK SUMMARY

REGULATIONS IMPLEMENTED

MANDATORY REQUIREMENTS

DIRECTIVES

COMPREHENSIVE PROCESS CONTINUOUSLY UPDATED

VOLUNTARY REQUIREMENTS

STANDARDS

GUIDES TO THE IMPLEMENTATION OF REGULATIONS
## Legislative Framework Summary

### Difficulties

<table>
<thead>
<tr>
<th>Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non agreed specifications</td>
</tr>
<tr>
<td>Increasing production costs</td>
</tr>
<tr>
<td>Technical progress affected by regulations</td>
</tr>
<tr>
<td>No consultation among customers</td>
</tr>
<tr>
<td>Individual decision makers</td>
</tr>
<tr>
<td>Different regional requirements</td>
</tr>
</tbody>
</table>
LEGISLATIVE FRAMEWORK SUMMARY

ACTUAL PROBLEMS

- SMALL MANUFACTURERS FORCED TO STOP PRODUCTION
- NO CONTROL OF EQUIPMENT IN USE
- NO INSPECTION OF IMPORTED EQUIPMENT
- FORESEEABLE USE NOT CONSIDERED
- DELAY IN PUBLISHING STANDARDS AND REGULATIONS
- DIFFICULT TO REACH CONSENSUS
## CONCLUSIONS

<table>
<thead>
<tr>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACHINERY SHOULD CHANGE ACCORDING TO AGRICULTURE BUT NO TO REGULATIONS</td>
</tr>
<tr>
<td>SAFETY ISSUES SHOULD BE AGREED UNDER COMMON SENSE</td>
</tr>
<tr>
<td>AGRICULTURAL MACHINERY SHOULD BE CONSIDERED SPECIAL</td>
</tr>
<tr>
<td>SPECIAL FARMING REQUIRES SPECIAL MACHINERY</td>
</tr>
<tr>
<td>SAME REQUIREMENTS SHOULD NOT BE APPLIED</td>
</tr>
<tr>
<td>LABOUR SAFETY SHOULD NOT BE MODIFIED DUE TO NON PROFESSIONAL UNPROPER USE</td>
</tr>
<tr>
<td>THE EUROPEAN UNION SHOULD PROTECT THE EUROPEAN INDUSTRY TOO</td>
</tr>
</tbody>
</table>