

# From Tradition to Innovation. Skill Needs in the Agri-Food Sector

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# Purpose

- To review future skill needs in the agri-food sector in/for EU member states

# Design/methodology/approach

- Secondary analysis of European labour market data
- Literature analysis on developments in the agri-food
- Consultation of ten international key experts
- Review of drivers for change
- Formulation of consequences for skill needs
- Interactive expert workshop
- Report

# Experts from

- EU level employers' organisations
- EU level employee organisations
- DG Agriculture and Rural Development of the European Commission
- Industry
- Agricultural and food education



# Expertise in

- European agriculture
- Rural development
- Food manufacturing
- Fisheries
- Organic production
- Consumer studies
- Food risk
- Management and economics



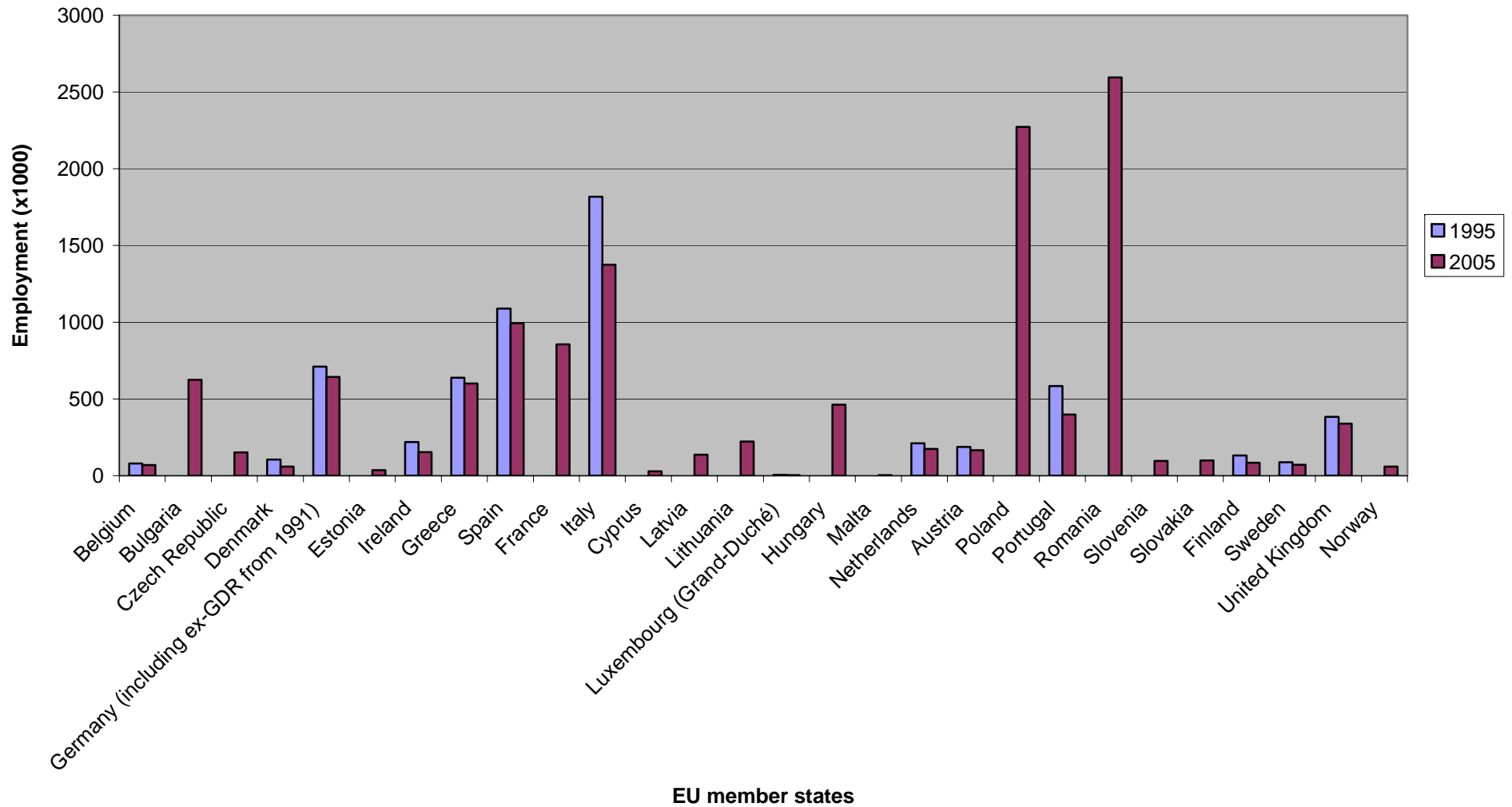
# Skills observatories consulted

- Austria - Qualification barometer
- Finland - 'Anticipating the Quantitative Educational Needs in Vocational Education and Training' - National Board of Education
- Ireland - Expert Group on Future Skills Needs
- The Netherlands - sectoral knowledge centers
- The UK - sector skills councils
- Czech Republic - The National Observatory of Employment and Training
- Germany - The FreQueNz Network on 'Early identification of skills needs'
- France - The Observatoires prospectifs des métiers et des qualifications
- Norway – Fafo + project Qualification, competence, and continuing - and vocational education

# Agri-food sector: diversity

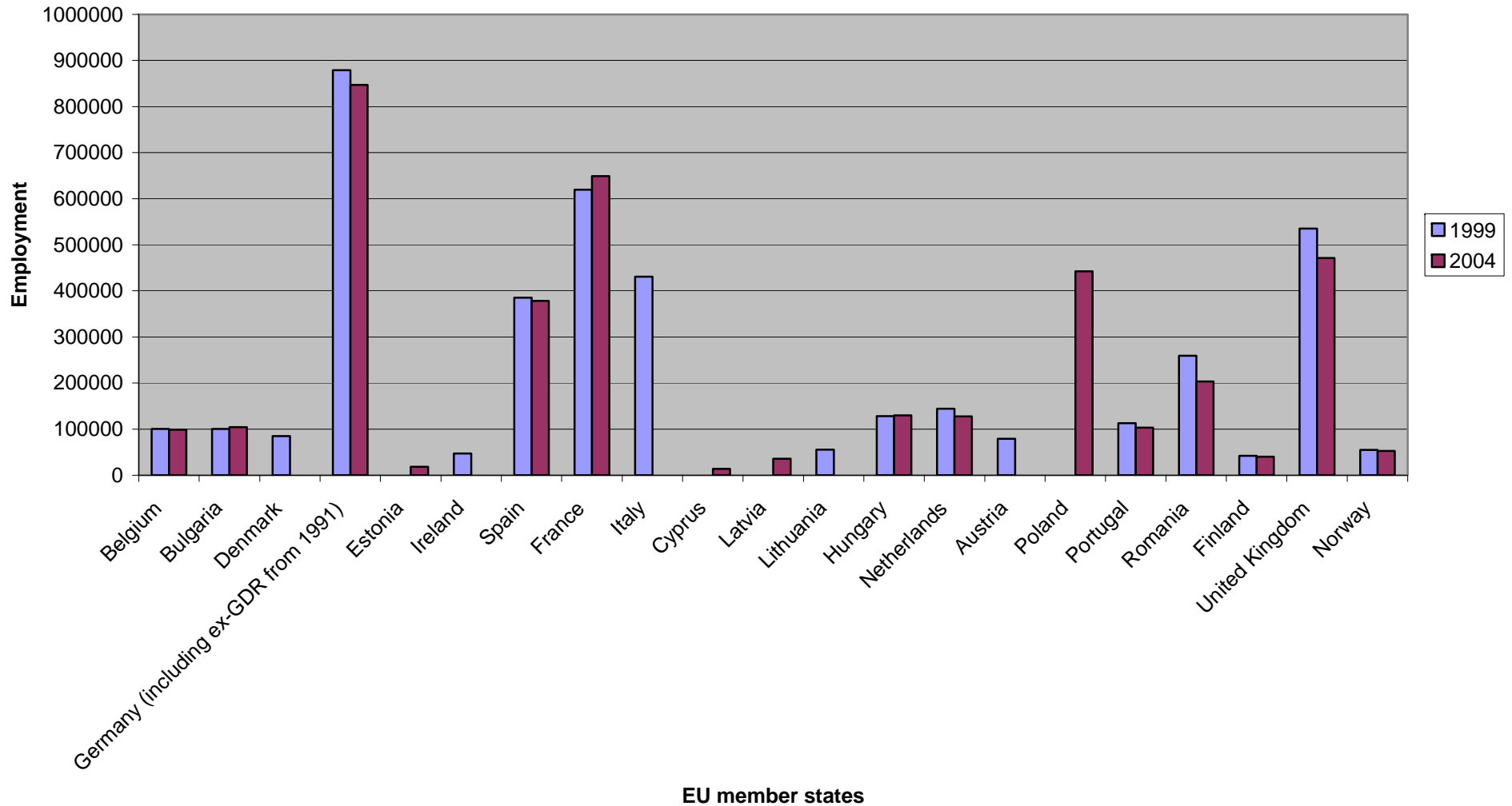
- The agri-food complex comprises primary sector, trade, industry and services, including government
- Subsectors within agriculture and food manufacturing: NACE
- Occupations: ISCO-08
- Variation across EU member states
- Training levels

## Employment in agriculture in EU15 (1995) and EU27 (2005)

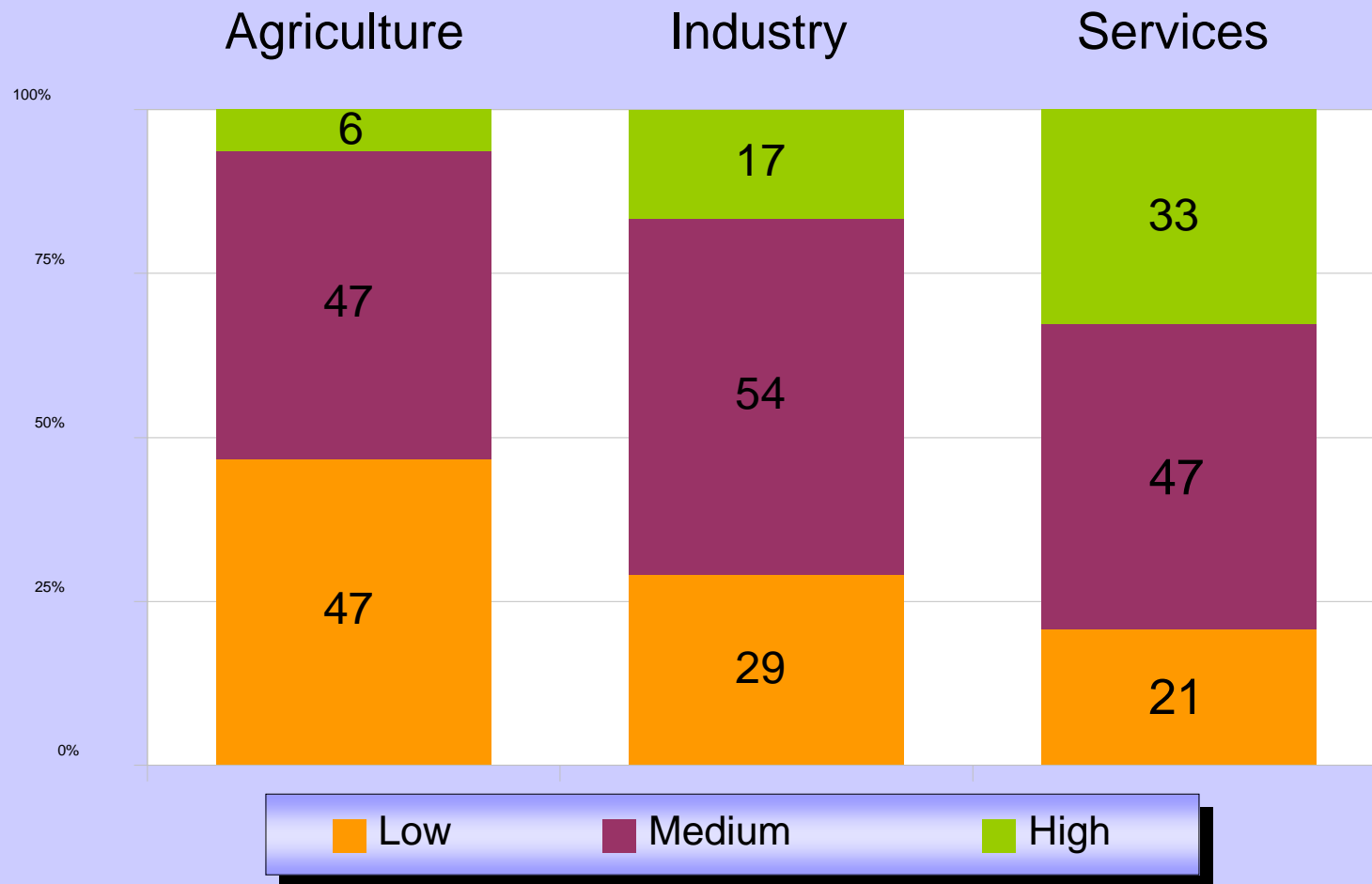




## Employment in the food industry EU27 in 1999 and 2004



# Sectoral qualification structures 2005, EU 27

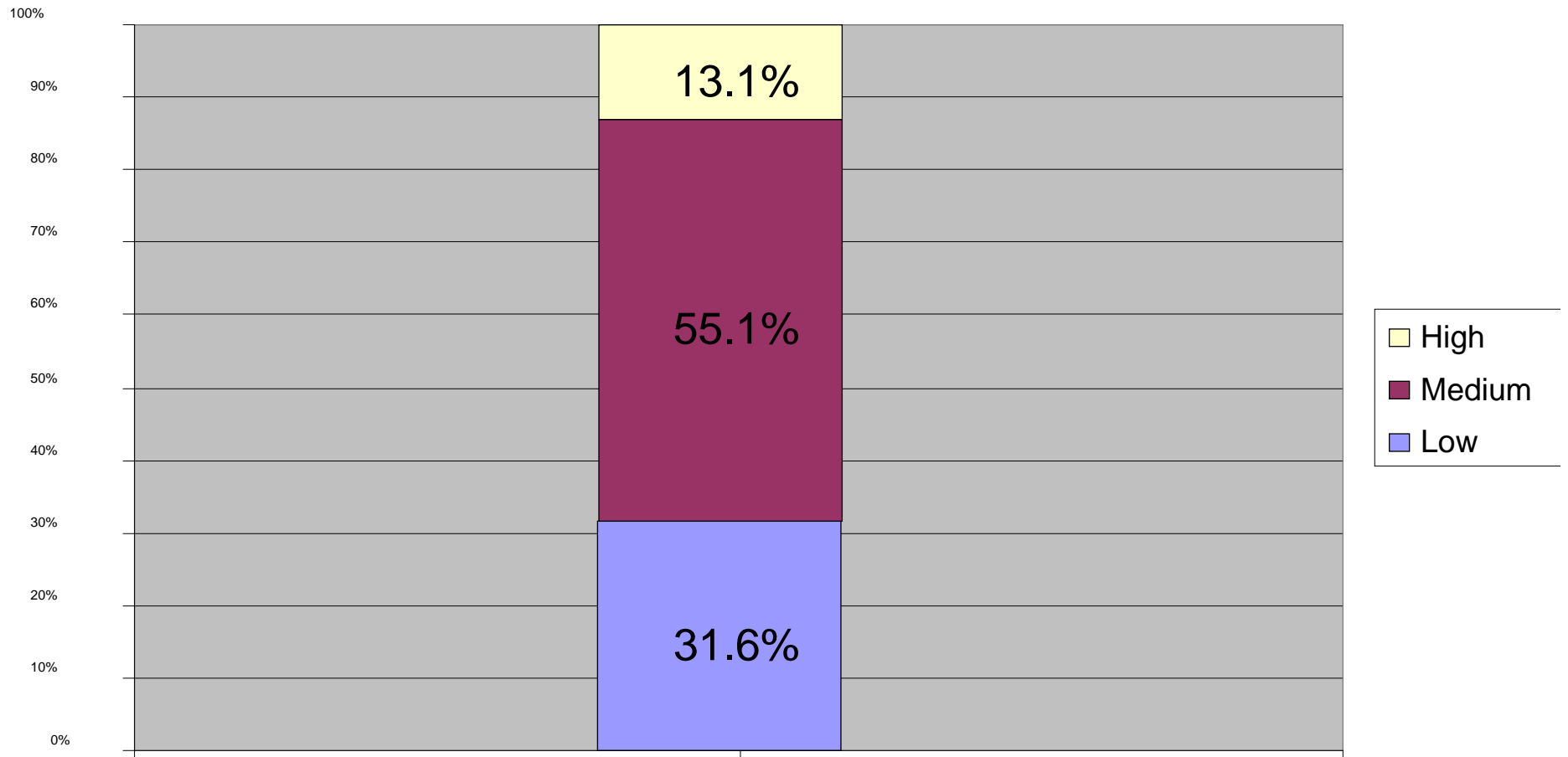


Employed persons aged 25-64 years; without 'no answer'.

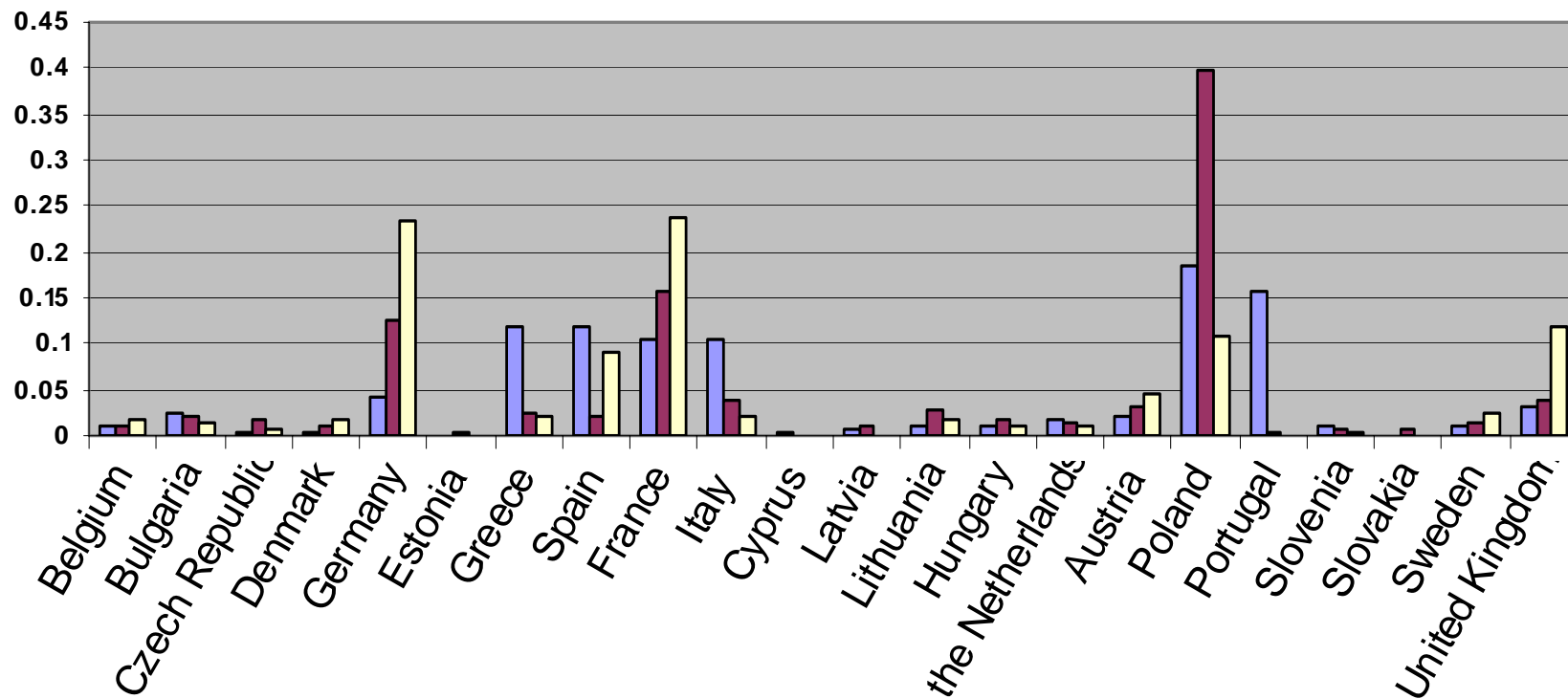
Source: Eurostat (LFS data)

) Employed persons aged 25-64 years; (b) without 'no answer'.

## Skill level in the Manufacture of food products and beverages sector NACE 15, EU27, 2005



## Skilled agricultural and fishery workers by level of education (2006)



# Major developments – future forces

- Stronger regulation
- Sustainability
- Globalisation
- Competition
- Climate change
- Dealing with the public
- Chains and networks
- Technological innovation
- Ageing workforce



# Generic and transversal skill needs - 1

Implementing new business models; entrepreneurship; trustful co-operation in competitive areas; administration resulting from new regulations; implementing sustainable forms of energy use; realising provisions for rural leisure facilities; preserving the cultural countryside heritage and (eco-) tourism; country-side living; creating and maintaining health care services in refurbished farms; producing regional food specialties; realising nature conservation; using persuasive communication; creating rural hospitality services; realising product innovation; creating service businesses in rural areas; dealing with internal organisation and human resources management; dealing with international marketing; getting to know new and current ways of financing the enterprise; working with advanced systems of logistics; implementing strategic systems of finance and control; getting to know and handle asset management, including skills with dealing with the construction and property consultancy sector

## Generic and transversal skill needs - 2

Acquiring knowledge about international law and regulations, such as trade tariffs and barriers, trade regulations regarding quantities and quality control; dealing with importing and exporting organisations; creating foreign establishments; communicating with foreign authorities and market organisations, such as export associations; intercultural communication with local managers and employees; effectively working on national, regional and local labour relations; dealing with the issues regarding backward supply-chain integration; creating and implementing process innovation; in-cluster co-operation and knowledge sharing; interdisciplinary understanding; searching for collective cost reduction and quality improvement in alliances and innovation projects, political sensitivity; corporate social responsibility and integrity; Hazard Analysis and Critical Control Points; implementation, operating and maintenance of new production and harvesting devices; knowledge-sharing and together with that, knowledge-protection against hostile competition; and ensuring intellectual property

# Findings - 1

- The labour market in the agri-food market is decreasing, but the complexity of the work is increasing.
- Transversal developments in the sectors are related to stronger regulation, sustainability, globalisation, competition, climate change, dealing with various publics, working in chains and networks, technological innovation and the ageing workforce.



# Findings - 2

- Examples of skills found are:
  - the ability to learn from conflict, to realise innovation in networks, to think out-of-the-box, to creatively find and use opportunities, having international market knowledge, the ability to deal with national and international trading systems, logistics, and intercultural communication, and many others.
- The skills needs described vary significantly by business model.

# Furthermore: skill needs in ...

- Entrepreneurship
  - (Lans, Biemans, Verstegen & Mulder, 2007; Mulder, Lans, Verstegen, Biemans & Meijer, 2007),
- Agricultural consultancy
  - (Shim, 2006)
- Open innovation teams
  - (Du Chatenier, Biemans, Verstegen & Mulder, 2007)
- Dealing with various expectations of the public
  - (Mulder & Ernstman, op cit).

# Practical implications

- Educational institutions, but also organisations in the agri-food sector themselves, can use the overview of new skill needs to create new training and development programs.

# Further research

- Further empirical research is needed by using primary data collection regarding the skill needs by using a stratified sampling technique.
- This will yield more specific information from certain sectors
  - in certain local, regional, national or supra-national circumstances,
  - for more specific job categories and
  - educational fields and education levels.
- Such research requires a long-term perspective to be able to assess gradual and revolutionary changes in skill needs.

# Towards new agronomic trainings in Europe (FANCAM project) [www.beleuropea.be/fancam.html](http://www.beleuropea.be/fancam.html)

- Controller\_food\_safety.pdf
- controller\_of\_food\_quality.pdf
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- fishfarmer.pdf
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Equfas - <http://www.equfas.com/index.html#>

## Experiences with the EQF in the Agricultural



a **LEONARDO da VINCI** Transfer of Innovation