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Cluster report

Trade & agriculture

Third Reporting Period – D21b

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Introduction

1.1 Introduction of the EurOccupations project

How do occupations compare across countries? How can problems of incomparability of occupations be tackled? To answer these questions, 10 European universities and research institutes have joined their efforts to develop a European occupations database.

The EU funded project 'EurOccupations' aims to build a publicly available occupations database with approximately 1,600 most frequent occupations in 8 large EU member states (the United Kingdom, Germany, France, Spain, Poland, Belgium, the Netherlands and Italy). The occupations cover the whole range of industries: varying from care & welfare to technology & manufacturing, from service occupations to agriculture & fishing, etc.

For all 1,600 occupations, the EurOccupations database includes occupational titles, ISCO-codes and educational levels. In addition, the database contains information about distribution of gender, education and age groups in each country for aggregate groups of occupations.

Expert research

For a selection of 150 key occupations¹, the EurOccupations database additionally includes information on skill levels, occupational content, occupational requirements and relevant social stratification measures. The information for these occupational dimensions was gathered through an expert enquiry, in which occupational experts were asked to judge occupations within their sphere of expertise on these dimensions by means of an Internet questionnaire.

Expert definition:

Experts are expected to have knowledge about occupations or groups of occupations within the countries involved in EurOccupations.

Experts are: representatives of employers' or employees' organisations, professional organisations, interest groups, vocational training bodies or knowledge centres, supervisors, researchers in the field of occupations (either from universities or from statistical offices), informants from a wide variety of branches of industry, vocational advisors, HRD professionals etc.

In addition: occupational workers enquiry

¹ Information was gathered for 10 additional key occupations as well. However, the EurOccupations team actively recruited experts for 150 'core' key occupations (not for the 10 additional occupations). As a consequence, information about these 10 additional occupations may be lacking.

Additionally, occupational workers were also asked to complete an Internet enquiry for these 150 key occupations. This so called 'occupational worker enquiry' included questions that can be answered by practitioners and focused on the actual education levels of occupational workers (and how these relate to occupational requirements).

Clusters of occupations

In order to structure and streamline the development of the EurOccupations database, the occupation database is organised along the lines of eight clusters of occupations. The clusters of occupations are divided as follows:

Table 1 Overview of the division of 8 clusters of occupations

Cluster title
1. Care & welfare
2. Construction & cars
3. Education, research & personnel
4. Information, communication, finance & legal
5. Manufacturing: food, metal, oil, gas & mining
6. Clerks, staff, management & army/police
7. Trade & agriculture
8. Transport, logistics, travel & cleaning/garbage

1.2 Introduction to the cluster Trade & agriculture

The cluster 'Trade & agriculture' is divided into two areas of work which are 'Agriculture, nature, animals, environment' and 'Commercial, shop, buy and sale'. The groups are quite separate even though some occupations have similar characteristics. The key occupations within the areas of work are as follows.

Agriculture, nature, animals, environment

- Agricultural advisor
- Field crop or vegetable grower
- First line supervisor landscaping, lawn service or groundskeeping workers
- Florist
- Food science technician
- Gardener
- Horse riding instructor
- Inland waters fisherman
- Livestock farm helper
- Mixed crop farm manager

- Non-farm animal caretaker
- Vermin control worker
- Veterinarian

Commercial, shop, buy and sale

- Beautician
- Butcher or fishmonger in retail
- Department store manager
- Display decorator
- Hairdresser
- Sales clerk
- Sales representative
- Shoemaker, leather repairer
- Shop sales assistant
- Surgical footwear maker

The occupations in the agriculture and related group are varied: there is one managerial occupation, two professional (Veterinarian, Agricultural advisor), two associate professional (Food science technician, Riding instructor) and a number of skilled trades occupations. Farm helper represents the manual level, and Animal caretaker can be considered as a personal service occupation.

In the commercial group there are some traditional retail and sales occupations: Store manager, Sales representative, Sales assistant and Display decorator. Quite a few of the other occupations can be associated with small businesses and self-employment: Beautician, Butcher, Hairdresser, Shoemaker and Surgical footwear maker. Finally, Sales clerk is a clerical occupation.

1. Data collection

2.1 The EurOccupations data collection

As was mentioned earlier, an expert enquiry was conducted in order to gather the relevant occupational information for our 150 key occupations². In this enquiry, experts were asked to judge these key occupations against the relevant dimensions by means of an Internet questionnaire.

Expert Internet enquiry

Experts were asked to complete two types of Internet enquiries:

- **The occupation expert enquiry for 150 key occupations**

In this enquiry, questions were asked about skill levels, occupational content and relevant social stratification measures. The occupation questionnaire is included in Appendix B.

For each key occupation, unique task descriptions (10-12 tasks) were included in the questionnaire. These task descriptions have been developed by means of international desk research, following standardised EurOccupations procedures (see procedures expert data collection available on: <http://www.euroccupations.org/main/researchlab/deliverablesyr1>). Experts were asked to judge these tasks on frequency and importance. We aimed to have at least 2 completed expert questionnaires for each key occupation in each country. For some key occupations, only one or even no expert questionnaires were completed. For these key occupations, information was collected using different sources (see occupational worker enquiry and partner questionnaire, described below).

- **The education expert enquiry for 1,432 occupations³**

In this enquiry, experts were asked to provide the required educational level for a number of occupations in the area(s) of work of their expertise (random selection of occupations from the area of work). The education expert questionnaire is included in Appendix C.

² Information was gathered for 10 additional key occupations as well. However, the EurOccupations team actively recruited experts for 150 'core' key occupations (not for the 10 additional occupations). As a consequence, information about these 10 additional occupations may be lacking.

³ The education expert enquiry was based on the draft version of the extended list of occupations (containing 1,432 occupations). The final extended list of occupations contains 1,600 occupations.

2.1.1 Expert recruitment activities

In each of the countries, EurOccupations partners recruited experts by undertaking various actions (following the EurOccupations procedures for expert recruitment). The main expert recruitment activities included:

- Asking (inter)national **expert organisations** (e.g., employer organisations, knowledge centres, education institutes) to assist in recruiting experts in their networks, e.g. by contacting relevant experts, placing banners on their website, publishing articles in their journals (e.g., using the text from the EurOccupations flyer). Additionally, representatives of expert organisations were also asked to complete the web enquiry themselves.
- Asking **individual experts** to join the EurOccupations expert network and complete the questionnaires (in person, by phone, e-mail, mailings, etc.).
- Sending **letters to relevant (expert) organisations** to ask for their cooperation.
- Subscribing experts to the **EurOccupations newsletter**.
- Publishing **articles** in relevant journals (e.g., using the text from the EurOccupations flyer).
- Attending conferences, workshops, seminars etc. to distribute information about EurOccupations (presentations, distributing flyers etc.).
- Publishing **banners** on relevant websites.

The most efficient way to approach experts and expert organisations differs between the participating countries. Therefore, the focus of expert recruitment activities differed between the countries.

Expert recruitment in France (Céreq)

Céreq (the French centre on Education, training and employment) is placed under the aegis of both the French ministry of education and the French ministry of employment. This allowed it to organise institutional partnership in order to involve experts:

- In the Ministry of Education, during some sectoral meetings called "Commissions professionnelles consultatives", associating social partners and experts in vocational fields of all economical sectors,
- In the Ministry of Employment, also during some sectoral meetings associating social partners and experts, and when associating the specialists having taken part to the last French dictionary of occupations, called the ROME (Répertoire Opérationnel des emplois et des métiers).

Then, it has associated both representatives from its statistical databases system (INSEE, Institut national de la statistique et des études économiques) and from its labor market analysis (DARES, Délégation générale à l'emploi et à la formation professionnelle), in the EurOccupations Steering Committee. Thus, many colleagues have accepted direct or phone interviews (for researchers located all around France) that were later keyboarded or captured in the computer.

Céreq also possesses interesting databases, such as a unique dictionary of industry representatives associated to the French MEDEF (Mouvement des entreprises de France), the biggest employer organisation. It has used all its details for all economic sectors, from A to Z (aeronautics to

civil engineering). They were usually reached first by telephone, then by e-mail, and it was all the more successful because many professional contacts were already well known from Céreq, and they had already heard about the Céreq role in France.

Céreq has also organised direct communication during some meetings (at the Ministry of Education and during internal meetings of its own experts), as well as two institutional communication through its publications such as the monthly "Céreq Bref", issued in 6.000 copies, and then published online⁴. It has also associated all its sectoral experts employed as "Chargés d'études" (researchers), coming from sociological or economical backgrounds but specialised in the various economical sectors and French occupations. Then, some more experts could be found during the EurOccupations international meeting organised in Marseilles, at Céreq's city location, that represented a great opportunity and was very well organised by the Dutch coordinator (especially the Erasmus University of Rotterdam and AO Consult).

The answering rate of experts is a witness of the success of the operation: 345, properly balanced between the 164 benchmarked occupations.

Expert recruitment in the United Kingdom (IER, University of Warwick)

Intensive efforts in the early stage of recruitment to attract experts in relevant organisations directly by email (sent from Professor Peter Elias' email address) proved largely ineffective, probably because of the high volume of email traffic that such recipients receive and the tendency of busy individuals to delete without reading any emails from individuals that they do not recognise. The decision was therefore made to adopt a more personal approach:

- in line with previous practice, relevant websites were explored in order to identify, where possible, appropriate individuals to contact;
- a telephone call to the identified experts was then made to seek their cooperation;
- a follow-up email was sent giving standard information, appropriately amended for individual circumstances and containing direct links to the online questionnaire for specific occupations.

This strategy was more effective, although response rates remained variable.

Organisations targeted

- A key focus for recruitment was the Sector Skills Council (SSC) relevant to each of the occupations. In some cases IER colleagues were able to recommend individuals in those Councils. Some SSCs responded directly, or recommended other useful contacts able to respond for a particular occupation in the sector.
- For health-related occupations approaches were made to relevant sections within the UK National Health Service.

⁴ - Translation of the EurOccupations flyer and dissemination with the project coasters.
- 2 Céreq Bref articles (mentioned in the previous dissemination reports);
- 1 Céreq electronic letter, September 2009: some issues about the EurOccupations meeting that hold in Marseilles in April 2009.

- Where appropriate, contact was with professional or trade associations.
- Professional contacts of the staff of the Institute for Employment Research were exploited, along with partner organisations in other projects conducted by the IER.
- The University of Warwick proved a useful source of experts across a range of the benchmarked occupations. Departments approached included: the Finance Office, Personnel Office and other central administrative functions; Sports Centre; Department of Psychology; Warwick Conferences; Estates Office.
- Contact was made with some lecturing staff in Colleges of Further Education involved in sectoral training programmes.

Other recruitment measures

- Dissemination of information about the project, via distribution of flyers, the EurOccupations banner and some text on the IER website, and a workshop organised in IER, were all aimed at promoting participation in the expert enquiry.
- Where continued difficulty was encountered in achieving expert recruitment via organisations as described in the previous sections, personal contacts with individuals working in an occupation were used in a few instances.
- For around 15 occupations where potential respondents were unable or reluctant to complete the questionnaire online, pre-completed questionnaires were sent to them for comment and amendment, and were then submitted from IER.
- Paper copies of the questionnaire were offered in one or two cases, but this approach did not work.
- Finally, the IER EurOccupations team completed partner questionnaires based on desk research and validated, where possible, by occupational experts.

Expert recruitment in Germany (AWWW GmbH)

The main expert recruitment activities in Germany included:

- Setting up particular EurOccupations **web-sites** both in German and in English on the two main web-sites of the AWWW GmbH (awww.de / awww.eu).
- Placing information on EurOccupations and links to the online questionnaire on six thematic web-sites maintained by the AWWW GmbH.
- Asking **German expert organisations** (e.g., trade unions, employer organisations, chambers of commerce, ministries, research institutes, knowledge centres, education institutes) to assist in recruiting experts in their networks, e.g. by contacting relevant experts, placing banners on their website. Additionally, representatives of expert organisations were also asked to complete the web enquiry themselves.
- Asking **individual experts** to join the EurOccupations expert network and complete the questionnaires (in person, by phone, e-mail, mailings, etc.).
- Sending **letters to relevant (expert) organisations** to ask for their cooperation.

- Sending **e-mails to relevant (expert) organisations** to ask for their cooperation. The e-mails included the relevant direct links to the according occupations covered by the organisation, links to the AWWW GmbH web-sites, and the EurOccupations flyer as PDF attachment.
- Attending conferences, workshops, seminars etc. to distribute information about EurOccupations (presentations, distributing flyers etc.).

Expert recruitment in the Netherlands (AO Consult)

In order to recruit sufficient experts to complete our expert web survey, we undertook different types of actions:

- We approached expert organisations (e.g., knowledge centres, branch organisations, large companies, vocational advise agencies). We found these organisations within our network of organisations or through the Internet. We contacted these organisations by telephone and organised a personal meeting with a representative to discuss how they could assist us in recruiting experts in their networks. Usually, these organisations asked employees, members or external contacts to complete EurOccupations questionnaires (occupation questionnaire and education questionnaire). In addition, some organisations placed a banner on their website including a link to our questionnaire (depending on the type of website visitors) and/or published articles in their newsletter or journal. In some cases, organisations also placed banners on their website linking to the occupational worker survey. If the response stayed behind, we contacted organisations again to ask whether they could undertake additional action in order to obtain a sufficient number of completed questionnaires. In total, we organised personal meetings with 47 representatives of expert organisations and additionally had telephone contact with 66 representatives.
- We asked individual experts to complete the questionnaires by telephone, e-mail or in person. For instance, we asked network contacts, colleagues, acquaintances, friends or family who are experts on specific occupations to complete questionnaires. All employees of Arbeid Opleidingen Consult mobilised their network in order to recruit as many experts as possible.
- We sent a large mailing to 430 expert organisations in November 2007, including a letter asking them to participate in our data collection and a number of flyers and business cards.
- We sent a large mailing to 68 occupation advisors in February 2008, including a letter asking them to participate in our data collection and a number of flyers and business cards.
- We presented the EurOccupations project at 9 conferences and (expert) meetings, asking participants to complete questionnaires about the occupations of their expertise.
- We sent a press release to 71 specialist journals.
- We placed EurOccupations-banners on our website (www.aiconsult.nl).
- Paper copies of the questionnaire were offered to experts upon request.
- Finally, partner questionnaires were completed based on desk research and validated, where possible, by occupational experts.

Expert recruitment in Spain (CIREM)

- Introduction of information and invitation to participate (with a banner in order to facilitate it) in the web of CIREM Foundation. And also in the review "Herramientas", of the Foundation.
- Two great mailings (of about 500 e-mails in April and 200 in October 2008, and others little).
- Relations with the National Institute of Qualifications, in order to invite its expert teams to participate. The contacts included several meetings and the delivery of reports and flyers.
- Contacts and invitations with occasion of a National Conference on the occupations of the cluster on Education (in Madrid, April 2008), and the Marseille Conference (May 2008).
- Information and invitation to about 120 experts: directly, by telephone and by e-mail. Since November 2008 we have even helped about 15 experts in wide occupations fields to record the answers.

Expert recruitment in Belgium (HIVA, Katholieke Universiteit Leuven)

For Belgium, complementary to the general recruitment strategy, following recruitment actions were taken.

- Professional organizations were contacted, and asked if they had some sort of communication to their members. Were they had one, we tried to have information on Eurooccupations included. E.g.: the Association of engineers publish a magazine, and included a small article and a call for experts. The meteorologists put information and a call for experts on their website.
- Intermediate organizations on the labor market were contacted, mainly employment agencies. For example, the Flemish government employment agency (VDAB) have a special research cell on occupational and competency profiles (VDAB – COBRA). This team agreed to input their knowledge in our project, and also helped us finding other people at VDAB with a broad knowledge on certain occupations.
- As a part of the Flemish social and economic council (SERV), the Flanders Technology Foundation (STV) has a team of people working around occupational and competency profiles. SERV agreed to input their knowledge into our project as well, by filling out questionnaires on over 40 occupations.
- Contact was established with the National Statistics office, who were in a review phase of the NOC. A mutual trade of knowledge and ideas has been established since then.
- We presented the project to the point of support concerning Work and Social economy, who supply end-users with information on labor market topics (in a broad sense) and have done important work on the harmonization of socio-economic administrative data, including occupation.
- Trade union involvement came about through the reactions of numerous trade unionists who reacted to the first calls for experts in the project, and direct contact with the information departments of the major trade unions.

- We attended to job-information fairs on a regular basis, to get in contact with people promoting or informing about certain occupations.
- We screened which international professional organizations were based in Brussels, and visited some of them who reacted to our mails on the project. This resulted, a.o. in the cooperation of the European Accountants Federation.
- We had topics on occupational harmonization put on the topic list for the master dissertations at the University⁵.

Expert recruitment in Poland (Poznan University of Economics)

The main expert recruitment activities in Poland included:

- preparing the contact list included 717 organisations,
- sending e-mails to the expert organisations from the mailing list (January 2008), asking them to participate in data collection,
- phones and e-mails to the employees of Labour Ministry and National Statistic Office, who were involved in preparation of actual Polish occupational classification,
- phones, e-mails and meetings with members of Polish Human Resources Association (PSZK) to promote the idea of EurOccupation project among employees of HR departments and consulting company owners,
- contacts with employer organisations (Business Centre Club – BCC) and trade unions representatives (NSZZ Solidarnosc), asking them to participate in the project,
- inviting University employees, through the mailing list, to get interested in the project,
- asking individual experts (using network of personal contacts) to complete the questionnaires (by telephone, in person or e-mailing them direct link to specific expert questionnaire),
- EurOccupation presentations during Polish Human Resources Association (PSZK) meetings and seminars at the Poznan University of Economics,
- flyers dissemination at the trade union meetings and at the different conferences,
- banners and links at the web pages of expert organisations and at the professional portals,
- interview in regional Poznan TV,
- cooperation with HR Students Association at the Poznan University of Economics,
- looking for the additional funds to support the EurOccupation project, that enable to hire the pollsters - after the bureaucratic procedure we got the money from Polish government. In November 2008 we hired the pollsters to gather the expert questionnaires (paper version). Pollsters hired in Poznan, contacted individual experts and organizations in Poland, conducted the interviews (during the interview questionnaires were completed) and transferred the answers to the questionnaires at the web. This method enabled us to gather more than 300 questionnaires.

⁵ However, no student picked up the topic (so far).

We found that the most successful method of expert recruiting were: contacts with individual experts by sending them links to the selected questionnaires and cooperation with pollsters, who reached the experts asking them to fill in the paper questionnaires.

2.1.2 Additional data collection

Occupational worker enquiry

Additionally, occupational workers were also consulted in order to gather additional occupation information and to obtain insight in differences between actual and required educational levels. The occupational worker questionnaire is included in Appendix D. The occupational workers were recruited by means of weblinks on the WageIndicator websites (see www.WageIndicator.org) and additional recruitment activities by the EurOccupations partners.

Partner questionnaire

For occupations for which it was extremely difficult to recruit experts to complete occupation questionnaires, our national EurOccupations partners completed a partner questionnaire (see Appendix E). They completed this questionnaire based on desk research. If possible, experts were asked to validate the answers.

2.2 Expert response numbers for the cluster Trade & agriculture

The number of responses from each country to the expert enquiry is shown below. The country abbreviations which are used in the tables are: BE – Belgium, DE – Germany, ES – Spain, FR – France, IT – Italy, NL – the Netherlands, PL – Poland and UK – the United Kingdom.

Key occupation	BE	DE	ES	FR	IT	NL	PL	UK	Total
Agricultural advisor	1	2	2	2		2	2	1	12
Beautician	1	2	3	2		3	3	4	18
Butcher or fishmonger in retail		3	3	2		2	3		13
Department store manager		2	4	2		3	7	2	20
Display decorator		2	3	3		2	3	1	14
Field crop or vegetable grower		2	2	2		2	5	1	14
First line supervisor landscaping, lawn service, or groundskeeping workers	1	3	3	2		3	1	1	14
Florist	1	2	3	3		2	3	2	16
Food science technician	1	2	2	1		1	3	4	14
Gardener		3	2	2		4	1	1	13
Hairdresser	2	7	5	3		3	10	4	34
Horse riding instructor		2	2	2		4	2	1	13

Inland waters fisherman		2	2			2	3	1	10
Livestock farm helper			2	2		3	3	1	11
Mixed crop farm manager	1	2	2	2		3	4	1	15
Non-farm animal caretaker	2	1	2	1		5	3	1	15
Sales clerk	2	7	2	3		4	4	1	23
Sales representative other products	2	2	2	1		6	5	2	20
Shoemaker, leather repairer	1	2	2	3	1	2	3	1	15
Shop sales assistant	1	6	4	2		3	7	1	24
Surgical footwear maker			2				1		3
Vermin control worker			1				1		2
Veterinarian		15	2	3		3	3	4	30
Total	16	69	57	43	1	62	80	35	363

The table shows only the responses that were considered usable, i.e. enough questions were answered by the respondent. The actual total number of responses for this cluster is 415. The proportion of respondents who left the questionnaire after completing two or three pages is 14% (14.5% for all clusters). The whole online questionnaire consisted of 17 pages of questions in total, of which 6 pages were included in the part 1 of the enquiry.

The number of responses to the partner questionnaire is shown below.

Key occupation	NL	UK	Total
Agricultural advisor	1	1	2
Beautician	1	1	2
Butcher or fishmonger in retail		1	1
Department store manager	1	1	2
Display decorator	1	1	2
Field crop or vegetable grower	1	1	2
First line supervisor landscaping, lawn service, or groundskeeping workers	1	1	2
Florist		1	1
Food science technician		1	1
Gardener	1	1	2
Hairdresser		1	1
Horse riding instructor	1	1	2
Inland waters fisherman	1	1	2
Livestock farm helper	1	1	2
Mixed crop farm manager		1	1
Non-farm animal caretaker	1		1
Sales clerk	1	1	2
Sales representative other products		1	1
Shoemaker, leather repairer	1	1	2
Shop sales assistant	1	1	2
Surgical footwear maker			
Vermin control worker			
Veterinarian	1	1	2
Total	15	20	35

3. Analyses of EurOccupations data

Cluster Trade & agriculture

General introduction

The sections that follow present an analysis of the data collected via the expert enquiry on each of the occupations in this cluster. Responses made by occupational experts and by project partners (based on desk research) are included. The analysis is restricted to the questions in Part 1 of the questionnaire.

This analysis of responses to the questions posed in the questionnaire highlights, for each occupation, where patterns of consistency, similarity or deviation are evident in the data across the countries involved in the study. Given the limited and variable number of responses available for each country, this is necessarily a broad, indicative analysis. Issues relating to language and culture must also be considered in analysing the expert responses.

As to Part 2 of the expert questionnaire, the results of the analysis are presented in [Appendix A](#)⁶. For details of the expert questionnaire (Parts 1 and 2) please see [Appendix B](#)⁷.

The country abbreviations which are used throughout the chapter are: BE – Belgium, DE – Germany, ES – Spain, FR – France, IT – Italy, NL – the Netherlands, PL – Poland and UK – the United Kingdom.

3.1 Occupation: Agricultural advisor

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/agricultural_advisor.doc

The summary

In respect of the dominant frequency of tasks, this varies considerably across countries, with broad agreement only on one daily/weekly task and some responses indicating a task is never performed.

Significant consistency is evident across groups of countries regarding the importance of tasks, and most countries regard the substantive tasks as of major or some importance. However, those concerned with educating and informing the wider community and promotional activities are regarded

⁶ http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/part_2_analysis_trade_agr.xls

⁷ http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/expert_questionnaire.doc

as less important by many respondents, leading to questions about whether these tasks should be included in the core list.

The most important competencies are initiating action, communicating and networking, applying know-how and problem-solving.

There is some inconsistency regarding the required educational level for entry within some countries (DE, FR), whilst most responses fall between upper secondary (ISCED 3) and first stage of tertiary (ISCED 5) levels⁸. Additional formal or legal requirements are evident for ES and FR.

Most EurOccupations countries report the occupation to be stable in terms of its size over the next five years.

3.2 Occupation: Field crop or vegetable grower

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/field_crop_grower.doc

The summary

The varied responses regarding frequency of tasks may in large part be due to how frequency is interpreted in relation to the annual cycle of agricultural activities, so that some indicate selecting, sowing and planting is a daily activity, other indicate it is annual.

Most responses for most countries regard competence in actual farming activity as more important than in business and administrative support tasks.

Required educational levels vary from ISCED 1 (UK) to ISCED 3 (specified by four out of seven respondents). Only PL indicates any additional formal certification requirement.

Applying know-how and planning are commonly regarded as the dominant competencies.

⁸ The ISCED levels are:

- 0 - Pre-primary education
- 1 - Primary education or first stage of basic education
- 2 - Lower secondary or second stage of basic education
- 3 - (Upper) secondary education
- 4 - Post-secondary non-tertiary education
- 5 - First stage of tertiary education
- 6 - Second stage of tertiary education

Five out of six respondents expect the occupation size to decline.

3.3 Occupation: First line supervisor landscaping, lawn service or groundskeeping workers

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/landscaping_supervisor.doc

The summary

Five of the eleven tasks in the list are highlighted in the frequency table as daily tasks. Others have varied frequency responses, ranging from weekly, monthly to mixed frequency.

In respect of the importance of tasks, all have responses of major or some importance from all countries, with those relating to planning and supervising considered as most important.

Most responses to the question about minimum educational level are for ISCED 3, with the exception of the UK which specifies ISCED 1. Additional formal requirements are identified by DE and NL.

Five competencies are highlighted as of major/some importance; in addition to 'Applying know-how', the focus is on planning, problem solving and initiating action.

No respondents expect the occupation to decline in size over the next five years. Most specify stability.

3.4 Occupation: Florist

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/florist.doc>

The summary

Most tasks are carried out on a daily basis, according to most respondents, and most of the tasks in the list relate directly to the occupation rather than to the associated support tasks.

There is broad agreement and consistency across countries on the importance of competence in the tasks listed. DE, ES, FR, NL, PL and UK responses are particularly consistent.

Two UK respondents state ISCED 1 as the minimum educational requirement, whereas the other responses (one from FR, two from NL) specify ISCED 3. BE, DE, FR and NL indicate additional formal requirements for this occupation.

Applying know-how is the single dominant competency widely regarded as of major importance.

Whilst FR, NL and UK responses indicate a decline in the occupation size, ES and PL expect it to increase, DE to remain stable.

3.5 Occupation: Food science technician

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/food_science_technician.doc

The summary

The task frequency list for the food science technician reports most being daily tasks, although two have responses of 'never' from BE and FR. It appears (from comments from experts) that the German occupational title is unclear in terms of which occupation is being selected, resulting in 'Never' responses for all tasks.

There is consistency and broad agreement on eight tasks that are most important from a competency perspective, and on the least important (ordering laboratory supplies).

A puzzling record of ISCED 1 as the minimum educational level for this occupation from the UK is assumed to be an error. This highlights the danger of interpreting quantitatively on the basis of a very small sample. Most responses are for ISCED 3 or 5. Additional formal requirements (diploma, certificate) are recorded for ES and UK, respectively.

Applying know-how and following instructions are the two competencies identified as dominant.

Six country responses indicate an increasing occupational size, with only PL expecting stability over the next five years.

3.6 Occupation: Gardener

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/gardener.doc>

The summary

As in the case of the field crop or vegetable grower, responses to the task frequency question are mixed, due in part to the annual cycle associated with gardening. Most tasks are, however, carried out daily or weekly.

Whilst there is considerable consistency in respect of the importance of most tasks, FR appears to deviate from this for almost all tasks.

Again, UK specifies ISCED 1 as the minimum educational requirement. FR records ISCED 2, with the rest (DE, NL) agreeing on ISCED 3.

The single, dominant core competency is applying know-how.

Responses on the occupation size are equally divided between stability and increase over the next five years.

3.7 Occupation: Horse riding instructor

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/horse_riding_instructor.doc

The summary

Respondents indicate that most tasks in the list are carried out on a daily basis, with four of these being dominant. Support activities (administration, marketing and promotion) may be daily or weekly. The German response that this is not an occupation in Germany, but a recreational activity, warrants some further investigation.

There is variation and inconsistency across countries regarding the importance of various tasks, implying that this occupation may be differently organized and structured across the EurOccupations group.

Minimum educational levels are available only for NL and UK, with the former showing all three responses identifying ISCED 3, and the UK showing one entry each for ISCED 2 and 3. There are additional certification or other requirements for FR, NL and UK.

Although no core competency is highly dominant, Applying know-how and Communicating are the most notable.

Responses for the size of occupation are split between stability and increasing size.

3.8 Occupation: Inland waters fisherman

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/inland_waters_fisherman.doc

The summary

Responses to the frequency of tasks question is varied, with 'Never' replies to six of the tasks from Germany which point to a possible mis-match in terms of the title and the description for that country that requires further investigation.

The question on importance of tasks shows a considerable degree of consistency in responses across a number of countries, particularly where the daily tasks are concerned.

Minimum education levels range from ISCED 1 (UK), 2 (NL) and 3 (DE). Additional formal requirements are identified for DE and UK.

Only Planning and organizing is singled out as a dominant core competency.

Two responses (ES and UK) indicate a decline in occupation size; two (DE and PL) expect it to be stable.

3.9 Occupation: Livestock farm helper

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/livestock_farm_helper.doc

The summary

Daily activity predominates across the task frequency list for this occupation, with broad agreement on seven tasks.

Evidence of broad consistency and agreement on the dominant importance of many of the tasks listed points to this occupation being similarly organized across most of the EurOccupations countries. However, a Germany response to the enquiry is that 'In Germany this is not considered as an occupation. It is seen as an unqualified helpers job.' This requires further investigation.

NL and UK responses specify ISCED 1 as the minimum educational level for this occupation, whilst another NL response gives ISCED 2, and PL ISCED 3. Only NL identifies an additional formal requirement (= diploma).

Applying know-how is the single dominant core competency.

Whilst one response from NL indicates the occupation increasing, most (FR, NL, PL, UK) expect it to decline.

3.10 Occupation: Mixed crop farm manager

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/mixed_crop_farm_manager.doc

The summary

As with other occupations relating to growing crops and plants, there is a varied mix of responses regarding the frequency of tasks, relating in large part to how the question has been interpreted. Thus, deciding or advising on the crops to be grown has responses of 'Daily' and 'Yearly'. It is noted that responses to the question on the task 'Perform practical farm work' vary from 'Daily' to 'Never', indicating that the occupation may be structured differently across countries and, indeed, within countries. Moreover, only three countries have identified this task of major or some importance, and some responses have indicated the task is 'Not at all important'. Consistency of country responses on the importance of tasks is evident for six or seven tasks, but varied for the others, again indicating that the occupation structure is not the same across the EurOccupations countries.

Minimum education requirements vary between ISCED levels 2 and 4, with additional certification or other requirement specified by FR and DE only.

In terms of transferable skills, those that would be expected to relate to a managerial role predominate: for example, initiating action; communicating; negotiating; forming strategies.

Views are mixed with regard to expectations about the size of the occupation over the next five years.

3.11 Occupation: Non-farm animal caretaker

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/animal_caretaker.doc

The summary

All twelve tasks in the list are identified as daily tasks by some respondents, with seven tasks predominating.

There is widespread agreement by countries regarding the importance of the tasks, with most countries regarding all of the tasks listed as of major/some importance. This indicates the occupation is similarly organized across the EurOccupations group of countries.

Minimum education levels vary from ISCED 0 (NL) to ISCED 3, with BE and NL referring to additional diploma requirements.

Applying know-how is one of the core competencies that predominate, along with Initiating action and Following instructions and procedures.

Most respondents have suggested the occupation will be stable in size over the next five years.

3.12 Occupation: Vermin control worker

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/vermin_control_worker.doc

The summary

As this is one of the key occupations where responses to the expert questionnaire were not actively sought by the project partners, there is only a response from Spain. Consequently, it is not feasible to present a summary of the results.

3.13 Occupation: Veterinarian

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/veterinarian.doc>

The summary

Comments received from respondents point to the fact that the list of tasks relates primarily to the occupation of Veterinary Practitioner, but that Veterinarians have potentially a much wider range of roles (e.g. working in the public sector on issues of general animal health and safety, or conducting research). It is therefore suggested that the occupation title be amended to *Veterinary Practitioner* to match the task list. (It is also noted that German responses to the current task list for the occupation Veterinarian specified 'Never' to seven of the tasks, again indicating a mis-match between the title and occupation content.)

All of the tasks listed are identified by some respondents as daily, although seven predominate.

Most countries identify most tasks as of major/some importance (the exceptions being FR and ES for a range of support tasks relating largely to education, training, PR and management functions of this occupation).

ISCED levels 5 and 6 are identified as the minimum educational requirement. In addition, various diploma, certification, legal and professional protocols are specified by six countries.

Five core competencies are widely regarded as of major/some importance, ranging from Communicating; Applying know-how; professional expertise; Problem solving; Dealing with contingencies; and Coping with stressful situations.

Most respondents expect the occupation size to remain stable or to increase over the next five years.

3.14 Occupation: Beautician

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/beautician.doc>

The summary

All tasks are identified as daily by some respondents, and ten in the full list of twelve are dominant in this respect, indicating that the occupation content is highly standardized and common across all EurOccupations countries.

Again, with regard to the importance of tasks, there is a high level of consistency across countries and across the full range of tasks, with few exceptions.

All respondents answering the question about minimum educational level have specified ISCED 3, with several countries indicating that additional formal or legal requirements exist for this occupation.

In contrast with the high level of agreement and consistency for other responses, considerable variation is evident for the relevance of core competencies.

Respondents expect the occupation size to remain stable or to increase over the next five years. No response indicating a decline is recorded.

3.15 Occupation: Butcher or fishmonger in retail

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/butcher.doc>

The summary

There is broad agreement on the frequency of tasks, with nine out of the ten listed being common to many respondents as a daily task. There is a problem with some German responses associated with the apparent combining of two entire separate occupations (Butcher and Fishmonger).

In respect of the importance of these tasks, however, Germany is included in the group of four or five countries showing considerable consistency in regarding most tasks as of major importance. Spain is the only country to emphasise the task of running the retail business as of major importance.

Minimum education levels range from ISCED 0 through to ISCED 3, with one or two countries identifying additional formal or legal requirements.

Two core competencies are singled out as dominant: Applying know-how; and Commercial thinking.

Mixed responses are evident with regard to expectations of occupation size, with most opting for stability over the next five years.

3.16 Occupation: Department store manager

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/department_store_manager.doc

The summary

The predominant daily tasks in terms of frequency relate to the HR function. Other tasks associated with the business of merchandising are more varied in terms of frequency, implying that the occupation may be differently structured across organizations and countries. In particular, it is noted that tasks relating to merchandising (7-12) are deemed not part of this occupation by Germany.

Further evidence that HR-related tasks are dominant in this occupation is in the table showing the importance of tasks. Most countries focus on tasks 1 to 6 (HR plus formulating policies and planning functions) as of major importance. Responses in respect of merchandising tasks are more varied (including a nil response from Germany).

Responses to the question on about minimum educational levels range from ISCED 1 (UK only) to 5, with NL and DE specifying additional formal requirements.

In common with other managerial level occupations, a wide range of competencies is regarded as of major/some importance, with nine being highlighted as dominant.

Responses regarding occupation size are varied: three countries expect a decline, two expect stability, and four expect an increase over the next five years.

3.17 Occupation: Display decorator

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/display_decorator.doc

The summary

There is wide variation from respondents regarding the frequency of tasks for this occupation, but two (relating directly to the physical tasks of designing and constructing displays) predominate.

Responses are also mixed in respect of the importance of tasks, with a number of countries assigning 'some importance' to several tasks.

Only two ISCED categories are identified by respondents as minimum educational levels for this occupation: 2 and 3. NL and SP also specified additional formal requirements.

Varied responses to the question of core competencies resulted in no dominant categories being identified, although the most notable skills were 'Communicating' and 'Applying know-how'.

More countries expect the occupation size to increase over the next five years than those expecting a decline.

3.18 Occupation: Hairdresser

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/hairdresser.doc>

The summary

Ten of the twelve tasks in the list are commonly identified as daily tasks, and all tasks are regarded as of major/some importance by all countries with the exception of France, where responses are mostly in the 'Some importance' category. This indicates that the occupation is similarly organised across the EurOccupations group of countries.

Differences emerge, however, in respect of minimum educational levels, from ISCED 1 (UK), ISCED 2 (DE, PL), to ISCED 3 (DE, FR, NL, UK). Some countries identify additional formal and legal requirements for certification and/or working to a professional code (BE, DE, FR, NL, PL).

Communicating and Applying know-how are the two predominant competencies.

Most respondents in most countries expect the occupation size to remain stable or to increase over the next five years.

3.19 Occupation: Sales clerk

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/sales_clerk.doc

The summary

Whilst five out of the ten tasks listed are commonly agreed as being carried out on a daily basis, there is variation between countries; and two tasks have 'Never' responses.

On the other hand, almost all countries assign major/some importance to the full range of tasks.

Minimum educational levels are narrowly defined to ISCED 2 and 3 by all countries responding to this question. Additional formal/legal requirements are identified by DE, NL, PL, UK.

Five competencies are widely regarded as of major importance, including 'Communicating' and 'Commercial thinking'.

Responses vary both within and across countries regarding the likely changes in occupation size over the next five years.

3.20 Occupation: Sales representative

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/sales_representative.doc

The summary

Six tasks are widely identified as performed on a daily or daily/weekly basis. These relate mainly to direct customer interaction. Other support tasks (such as identifying potential customers, monitoring product development or market conditions) have more mixed responses in terms of frequency of performing the task.

There is, however, consistency in responses to the importance of tasks, in that most countries agree that all of the tasks listed are of major/some importance.

Most responses assign ISCED 3 as the minimum educational level. Additional requirements are identified by DE, NL, PL.

A broad range of ten competencies is regarded as of major importance, ranging from initiating action, relating and networking, applying know-how, dealing with contingencies and commercial thinking.

Varied responses are evident within countries in relation to the expected change in occupation size over the next five years.

3.21 Occupation: Shoemaker, leather repairer

The analysis is presented in the document

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/shoemaker.doc>

The summary

Eleven of the twelve tasks listed are commonly identified as daily tasks by respondents. The twelfth task is associated with the maintenance of the business (marketing, budgeting etc.).

Although there are no tasks highlighted as predominant, there is sufficient consistency to infer that the occupation is similarly organised across most countries.

Minimum educational requirements range from ISCED level 1 (UK), level 2 (NL), level 3 (DE, FR, IT, NL). Additional certification requirements are specified by BE, ES, FR.

Only two competencies are highlighted as core to this occupation: 'Applying know-how' and 'Following instructions and procedures'.

Expectations regarding change in the occupation size over the next five years vary across countries, with BE, NL, PL and UK specifying decline; DE expecting stability; ES and FR showing responses both for stability and increase.

3.22 Occupation: Shop sales assistant

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/shop_sales_assistant.doc

The summary

All tasks are identified as being performed on a daily basis, with eight out of the ten listed highlighted as common to many respondents.



The importance of these tasks shows a high degree of consistency across countries, with most responses for all tasks being in the major or major/some importance category. This implies that the occupation is similarly organised across the EurOccupations group of countries in terms of its content.

However, responses to minimum education levels are varied, from ISCED 0 (NL), 1 (UK), 2 (NL, PL) and 3 (DE, FR, NL). Additional formal requirements are specified by NL and PL.

Four competencies are highlighted as of major/some importance, including 'Commercial thinking' and 'Communicating'.

Whilst most respondents from most countries regard the occupation size as stable over the next five years, some from DE and PL expect a decline, and some from ES and PL expect an increase.

3.23 Occupation: Surgical footwear maker

The analysis is presented in the document

http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/surgical_footwear_maker.doc

The summary

As this is one of the key occupations where responses to the expert questionnaire were not actively sought by the project partners, there is only a response from Spain. Consequently, it is not feasible to present a summary of the results.

4. Revisions of the EurOccupations task descriptions

Below are the task descriptions for occupations within the Trade & Agriculture cluster for which revisions have been suggested by respondents to the expert enquiry.

- Additions to the task list (either by amending an existing task or by inserting a new task) are shown in bold. Deletions are greyed out.
- The country/ies from which suggested changes came are shown following the amendment. Where further explanation is needed, this is in the form of a footnote at the end of the relevant occupation.
- Excluded from this section are those occupations for which no changes are proposed to the task list.

Field crop or vegetable grower

Field crop or vegetable growers plan, direct, coordinate and perform farming operations to grow field crops, such as grain and vegetables.

1. Develop annual business plans and determine types and quantities of crops to be grown, according to factors such as market conditions, governmental support and soil conditions.
2. Prepare soil (e.g. plough, harrow) by hand or machine, and spread fertilisers and manure.
3. Select and sow seeds, and plant seedlings.
4. Maintain crops e.g. by cultivating soil, by transplanting, pruning or thinning plants, and by setting up and operating irrigation equipment.
5. Control weeds, pests and diseases e.g. by applying weedkillers and pesticides commensurate with hygiene and health standards.
6. Harvest crops and destroy diseased or superfluous crops.
7. Inspect, clean, grade, sort, package, store and load crops for marketing.
8. Evaluate product marketing alternatives, establish market strategies, promote and market products, and organise the sale and transportation of products.
9. Recruit, coordinate and direct farm workers **and organise training.** (UK)
10. Keep inventory, and purchase supplies.
11. Maintain farm buildings, fences, equipment and water supply systems.
12. Perform administration duties, including keeping financial records, and managing budgets and accounts.
- 13. Operate agricultural vehicles.** (UK)

Livestock farm helper

Livestock farm helpers attend to live farm animals, e.g. cattle, sheep, pigs, horses and poultry. Their duties may include e.g. feeding, watering, herding, grooming, weighing, catching and loading animals.

1. **Select**, herd or move livestock to desired locations, e.g. pastures for grazing, or to scales, lorries and enclosures. (UK)
2. Weigh and measure foodstuffs, and mix feed, additives and medicines in prescribed portions.
3. Monitor food and water supplies, and distribute feed and water to livestock.
4. Drive lorries, tractors and other equipment.
5. Clean barns, sheds, pens, yards and equipment, e.g. using disinfectant solutions, brushes, shovels, water hoses, pumps, etc.
6. Groom, clip, trim, shoe and castrate animals, dock ears and tails, shear coats to collect hair, and mark livestock to identify ownership and grade using brands, tags, paint or tattoos.⁽¹⁾
7. Milk animals, such as cows and goats, and collect eggs, honey, etc.
8. **Attend to welfare of animals**, examine animals to detect illness, injury or disease, and to check physical characteristics, such as rate of weight gain. (NL)
9. Care for sick animals, treat minor ailments and administer medications, vaccinations or insecticides as appropriate.
10. Perform duties related to livestock reproduction, such as breeding animals within appropriate timeframes, performing artificial inseminations and helping with animal births.
11. Keep records on animals, e.g. about feeding and breeding.
12. Maintain farm machinery and buildings.
13. **Prepare and monitor pasture and other outdoor sites for livestock.** (UK)

Note: (1) This is not a task in NL.

Mixed crop farm manager

Mixed crop farm managers plan, organise and coordinate the activities and resources of farming establishments cultivating arable crops.

1. Plan farm strategy, targets, finances and production.
2. Decide or advise on the kind of crops to be grown, and the area to be sown or planted.
3. Purchase machinery, equipment and supplies, such as seed, fertiliser and chemicals.
4. Plan the type, intensity and sequence of farm operations (e.g. determine the best time for planting, spraying and harvesting).
5. Recruit, train, direct, coordinate and supervise staff.
6. Maintain and monitor quality of produce, ensuring compliance with regulations.
7. Establish market strategies, market and arrange for the sale of crops and other farm produce.
8. Produce and maintain records of production and finances, and prepare financial and operational reports.
9. Apply health and safety standards across the farm estate **including action on environmental performance.** (UK)
10. Organise farm administration.
11. Arrange the maintenance and repair of farm buildings, machinery and equipment.
12. Perform practical farm work.

Non-farm animal caretaker

Non-farm animal caretakers feed, water, groom, exercise, monitor or otherwise care for pets, zoo animals and other non-farm animals. May keep records of animals and clean animal quarters.

1. Prepare food, and feed and water animals, e.g. according to schedules and feeding instructions.
2. Clean, organise and disinfect animal quarters such as pens, stables, cages and yards, and animal equipment such as saddles and bridles, and change animal bedding.
3. Perform animal grooming duties such as washing, brushing, clipping, trimming coats, cutting nails, cleaning ears and treating animals with insecticides.
4. Exercise, train, handle and play with animals.
5. Respond to questions from visitors or animal owners, and provide information to them about animals, such as behaviour, habitat and breeding habits, or facility activities.
6. Answer telephones and schedule appointments, e.g. with animal owners.
7. Examine, observe and monitor animals to detect signs of illness, disease or injury **and take measures to ensure their wellbeing.** (NL)
8. Provide treatment to sick or injured animals, or contact veterinarians to secure treatment.
9. Collect and record animal information such as weight, size, physical condition, behaviour, treatments received, medications given and food intake.
10. Transfer animals between enclosures, search for and capture stray animals.
11. Assist other professionals (e.g. veterinarians or scientists), e.g. in animal laboratory tests, with humane killing of animals and handling of dead animals.
12. Order, unload and store feed and supplies.
- 13. Develop knowledge about species being cared for.** (PL)

Horse riding instructor

Horse riding instructors teach people of all ages, levels of ability and experience to ride horses.

1. Plan and organise horse riding practice sessions for groups or individuals.
2. Develop training programmes suited to individual riders and groups.
3. Conduct practice sessions to teach horse riding and related activities to groups or individuals, making sure that training is carried out safely.
4. Give practical demonstrations of riding activities.
5. Observe riders in order to spot and help correct problems in riding techniques, etc.
6. Select, store, inspect and maintain specialised clothing, equipment and supplies.
7. Help individual riders or teams to find appropriate competitions (e.g. show jumping, eventing and dressage), and to prepare for them.
8. Undertake related administrative tasks such as booking venues and budgeting.
9. Manage marketing and promotional activities.
10. Teach assistant instructors.

11. **Establish and implement horse care policy**, supervise and participate in the work in the stable (e.g. feeding, cleaning). (UK)

12. **Train horses for use in riding practice.** (NL, UK)

First line supervisors landscaping, lawn service or groundskeeping workers⁽¹⁾

First line supervisors landscaping, lawn service or groundskeeping workers plan, organise, direct or coordinate activities of workers engaged in landscaping or groundskeeping activities.

1. Interpret plans and drawings.
2. Confer with clients, contractors, other supervisors or other relevant parties to plan and coordinate work activities.
3. Schedule work for crews, e.g. depending on work priorities, crew and equipment availability, and weather conditions.
4. Direct and supervise activities of workers who perform duties such as landscaping, cultivating lawns or planting and maintaining vegetation.
5. Provide workers with assistance in performing duties as necessary.
6. Monitor project activities to ensure that instructions and schedules are followed, quality is maintained and deadlines are met.
7. Inspect completed work to ensure conformity to specifications, standards and contract requirements.
8. Train workers, e.g. in tasks such as transplanting and pruning trees and shrubs, finishing cement, using equipment, and caring for turf.
9. Establish and enforce operating procedures and work standards that will ensure adequate performance and personnel safety.
10. Take inventory of tool, equipment and materials supplies to ensure that sufficient supplies are available and items are in usable condition.
11. Suggest changes in work procedures when necessary.

12. **Participate in garden design and select and purchase appropriate materials (plants, ornaments)** (DE, FR)

Note: (1) Problems were highlighted by DE regarding the occupational title and tasks list, but applies only to DE.

Gardener

Gardeners plant and maintain public or private gardens and lawns, and construct garden features.

1. Prepare the ground, e.g. prepare soil, install drainage, and level the ground.
2. Plant trees, hedges, garden plants, grass, etc.
3. Construct features and facilities within gardens, such as paths or paved areas, walls, rockeries, ponds and water features, sheds and fences.

4. Check the health of plants and trees, identify and treat weeds, pests and diseases, and apply mulch and fertilisers.
5. Prune and trim trees, shrubs and hedges, and install plant supports and protection.
6. Roll, mow, aerate and edge lawns.
7. Raise plants from seeds or cuttings.
8. Install, operate and maintain irrigation systems.
9. Tidy garden areas (e.g. pathways), for example by clearing leaves, snow and litter.
10. Maintain and repair gardening tools, equipment and structures.
11. Advise clients on garden **planning**, maintenance and answer questions. (DE, NL, UK)

Veterinarian⁽¹⁾

Veterinarians diagnose and treat sickness, disease and injury in all types of animals, and advise on preventative action.

1. Examine animals to detect and determine the nature of diseases, disorders or injuries.
2. Carry out diagnostic tests, such as x-rays, blood samples and ultrasound, and interpret the results.
3. Treat sick or injured animals, e.g. by prescribing and administering medication, setting bones, dressing wounds, or administering anaesthetics and performing surgery.
4. Perform routine medical tests and checks, and inoculate animals against various diseases such as rabies and distemper.
5. Euthanise animals.
6. Advise animal owners regarding sanitary measures, feeding and general care necessary to promote the health of animals.
7. Educate the public, e.g. about diseases that can be spread from animals to humans.
8. Train and supervise workers who handle and care for animals.
9. Inspect hygiene and care standards in animal quarters, e.g. farms, zoos, kennels, riding stables, pet shops, cattle markets, animal shows and sporting events.
10. Maintain records, and provide reports and certificates in compliance with current legislation.
11. Manage practice finances, marketing and staff recruitment.
12. Conduct research in animal health and related areas.

Note: (1) DE, FR, NL, UK all refer to the limited range of tasks here that relate to veterinary practice. No account is taken of their role in public health, food safety policy, drug regulation etc. It is therefore suggested that the occupational title be amended to '**Veterinary Practitioner**'.

Agricultural advisor

Agricultural advisors assist and advise farmers, agricultural businesses, rural industries and government in the production, processing and distribution of farm products.

1. Collaborate with clients (e.g. farmers, agricultural businesses, rural industries) in order to identify and evaluate business and technical requirements.
2. Diagnose clients' management and production problems.
3. Advise clients in areas such as feeding and health maintenance of livestock, growing and harvesting practices, choice of machinery and equipment, **environmental issues** etc. (FR)
4. Solve problems (e.g. nutrient disorders in plants and livestock, management of weeds and plant diseases) and create solutions, including organising and conducting field trials.
5. Assist clients with business planning, planning applications, government grant applications and new business ventures.
6. Schedule and make regular visits to clients.
7. Collect and analyse data, crop yield and financial reports to measure clients' performance.
8. Gather relevant information (e.g. as requested by clients) and keep up to date with any relevant developments.
9. Conduct classes or deliver lectures, presentations and demonstrations on subjects such as farming techniques, business management and new regulations.
10. Prepare and distribute leaflets, pamphlets and visual aids for educational and informational purposes.
11. Organise, advise and participate in community activities and organisations such as fair events and agricultural clubs.
12. Maintain client records (e.g. services provided to clients, the effects of advice given), manage budgets and accounts, prepare reports and undertake general administrative duties.

Display decorator

Display decorators plan and erect commercial **and promotional** displays, e.g. in windows and interiors of retail stores and at trade exhibitions **and trade fairs**. (DE)

1. Consult with relevant parties (e.g. clients, advertising and sales staff, or supervisors) to obtain necessary information, e.g. the type of merchandise to be featured and time and place for each display.
2. Obtain plans from display designers or display managers, and discuss their implementation with relevant parties (e.g. clients, in-store sales staff or supervisors).
3. Develop ideas or plans for merchandise displays or window decorations **in collaboration with sales and exhibition personnel and other design and marketing personnel**. (DE)
4. Sketch and draw designs and plans, e.g. by hand or computer.
5. Construct or assemble displays and display components from various materials (e.g. fabric, glass, wood, paper, plastic) according to specifications, e.g. using hand tools and power tools.
6. Obtain products and other display items from supplying parties.
7. Arrange the display or window setting, according to the design plan, using properties, furniture, merchandise, **lighting**, backdrops and other accessories, placing prices and signs, etc. (DE)

8. Take photographs of displays and signage, e.g. to create visual merchandising packs to ensure all stores are consistent with the company brand and image.
9. Dismantle existing displays and return merchandise.
10. Advise retailers on the optimum display of merchandise.
11. Give feedback about displays, e.g. to head office, buying teams, etc.

Beautician

Beauticians carry out various beauty treatments and give advice to clients, e.g. on skin and body care.

1. Discuss clients' requirements and carry out skin analysis **and skin tests as appropriate**. (UK)
2. Prepare treatment plans for clients.
3. Perform facial treatments, e.g. apply creams, lotions and masks, perform facial massage, tint eyelashes and eyebrows, apply make-up, etc.
4. Perform body treatments, e.g. perform body massage, UV or spray tanning, hydrotherapy, body hair removal, etc.
5. Perform cosmetic hand, nail and foot treatments (e.g. manicures, pedicures, nail **extensions enhancements**). (UK)
6. Perform specialist treatments, e.g. acne treatment, electro-therapy, skin rejuvenation therapies, camouflage treatments, electrolysis, etc.
7. Advise clients, e.g. on skin care, make-up, nutrition, exercise programmes, etc.
8. Recognise problems and refer clients to medical practitioners.
9. Sell and give advice on cosmetic products and services.
10. Maintain client records.
11. Perform reception duties, e.g. schedule appointments, answer the telephone, order supplies and operate cash register to receive payments.
12. Keep the salon, work station and tools clean and tidy, **sterilise equipment**. (UK)

Hairdresser

Hairdressers wash, cut, colour, style and treat hair⁽¹⁾.

1. Discuss client's requirements and analyse their hair and other relevant physical features to define the desired hair style.
2. Shampoo, condition and rinse client's hair with water, liquid soap or other solutions **and perform head massage**. (PL)
3. Cut, trim and shape hair to achieve the desired style, e.g. using scissors, comb, clippers, trimmers and razors, **and applying hair extensions**. (DE, NL, UK)
4. Bleach, colour, perm or straighten hair using various chemical products, and make sure the products are used and stored correctly.
5. Style hair e.g. by combing, brushing, blow-drying, straightening, curling, **or waving or adding hair pieces**. (DE, NL)

6. Provide basic treatment for minor hair and scalp problems.
7. Demonstrate and sell hair care products **and accessories**, and advise clients on hair care. (FR)
8. Maintain client records.
9. Perform reception duties, e.g. schedule appointments, answer the telephone, order supplies and operate cash register to receive payments.
10. Keep the salon, work station and tools clean and tidy.
11. Keep up-to-date with new products, styles and techniques.
12. Train and supervise other hairdressers or assistants.
- 13. Cut, shave and trim moustaches and beards.** (NL)

Note: (1) Reference was made by some countries (DE, FR) to including manicure and make-up under this occupation. However, given that the Beautician is in the key occupation list, this suggestion has been disregarded here.

Sales clerk

Sales clerks undertake administration and other office-based duties to support sales activities.

1. Organise contact between sales executives and customers.
2. Maintain records of customers and sales team visits.
3. Prepare estimates and quotations for customers.
4. Draw up tender documents or sales contracts.
5. Take, progress and monitor orders.
6. Maintain and check records of sales and payments.
7. Reconcile accounts correcting any errors and discrepancies.
8. Compile reports for management, e.g. using records of sales targets and actual figures.
9. Provide advice and information on products and services when necessary, **and handle possible complaints, and maintain and update information on products and markets.** (NL)
10. Perform general office duties, e.g. handle correspondence and answer telephones.

Sales representative

Sales representatives sell goods or services (of the company they represent) to customers, e.g. industry, business and professional establishments, and wholesale or retail outlets.

1. Identify potential customers e.g. by using business directories, following leads from existing clients, participating in organisations and clubs, and attending trade shows and conferences.
2. Contact and visit potential customers.
3. Maintain and develop relationships with existing customers.
4. Give presentations, demonstrate products and show samples or catalogues.
5. Discuss customer requirements and advise them on the capabilities and limitations of the goods or services being sold, and make recommendations.

6. Quote prices, credit or contracts terms, warranties, delivery dates and other bid specifications, and prepare sales contracts for orders obtained.
7. **Develop and review sales plan**, negotiate prices and terms of sales and service agreements. (NL, UK)
8. Arrange for delivery and installation of goods and provision of services, if appropriate.
9. Handle customer complaints and resolve any problems.
10. Maintain records of customers and sales, **and review sales performance against targets**. (UK)
11. Stay abreast of advances in product or field, and monitor market conditions and competitors' activities.
12. Collaborate with colleagues, e.g. to exchange information about selling strategies, sales trends, or to make suggestions about new products or improvements to existing products.

Butcher or fishmonger in retail

Butchers or fishmongers in retail cut, trim or prepare consumer-sized portions of meat or fish for use or sale in retail establishments.

1. Order meat or fish supplies and maintain stocks.
2. Receive, inspect and store meat or fish upon delivery, and arrange payment.
3. Prepare standard or specially ordered cuts and products of meat or fish, e.g. cut, slice, trim, bone, shape, tie and grind meats (e.g. beef, pork, poultry), or scale, head, gut, wash and bone fish.
4. Price and place meat or fish cuts and products in display counters.
5. Sell meat or fish to customers, including wrapping, weighing and labelling products, and collecting payments.
6. Advise customers, e.g. on storing, preparing and cooking meat or fish, or on estimating food portions.
7. Clean tools and work surfaces **and maintain workplace hygiene standards**. (DE, NL, UK)
8. Undertake activities related to running a retail business, e.g. maintain financial and other records, arrange advertising, security, etc.
9. Manufacture own meat or fish products, e.g. marinated meats, sausages, pies, ready-to-cook foods, etc.
10. Supervise staff, e.g. other butchers, meat cutters, fishmongers or fish filleters.

Shoemaker, leather repairer

Shoemakers, leather repairers construct, decorate or repair leather and leather-like products, such as shoes, belts and bags.

1. Confer with customers to obtain relevant information, e.g. their requirements, and to give them advice.
2. Calculate the costs of requested products or services such as custom footwear or footwear repair, and receive payment from customers.

3. Select materials (e.g. leather or fabric), **take measurements** and choose or prepare patterns. (FR)
4. Position or outline patterns onto materials, and cut out parts, e.g. using knives, shears, scissors, and machine presses.
5. Treat leather or other materials to obtain desired effects, decorations or shapes, using various techniques such as dyeing, painting, stamping, stitching, staining or punching holes.
6. Join parts, e.g. by aligning and stitching or glueing materials.
7. Attach insoles to shoe lasts, affix shoe uppers, and apply heels and outsoles.
8. Position and secure linings, and attach accessories, e.g. buckles and eyelets.
9. Finish and clean the product, e.g. trim soles and heels to shape, check the product quality, and polish shoes.
10. Repair footwear and other leather products, e.g. replace worn soles and heels, insoles or accessories (buckles, zips, straps, etc.) and renew stitching; **make small orthopaedic adjustments to ready-to-wear shoes.** (NL)
11. Keep the work area tidy, and clean and maintain tools and machinery.
12. Perform business-related tasks such as marketing, purchasing supplies and equipment, keeping financial records, etc.

Shop sales assistant

Shop sales assistants sell goods to customers in retail establishments.

1. Greet customers and ascertain what they require.
2. Advise customers, e.g. on the location, availability, selection, price, delivery, use and care of merchandise.
3. Tabulate and total sales bills, and receive and process cash or credit payments.
4. Package merchandise for customers and arrange delivery if necessary.
5. Take special orders for items not currently in stock, and notify customers when the goods have arrived.
6. Handle returns and exchanges, and deal with customer complaints.
7. Price, arrange and display merchandise, and keep the shop tidy and attractive.
8. Perform cash till tasks at the beginning or end of day, e.g. count money, separate charge slips, coupons and vouchers, balance cash drawers, and make deposits to cash office.
9. Watch for and recognise security risks and thefts, and know how to prevent or handle these situations.
10. Assist with stocktaking, product selection, ordering items and receiving deliveries, **and check sell-by dates for products.** (DE, UK)

Department store manager

Department store managers plan, organise, direct and control the activities of a department store, following the company guidelines.

1. Formulate policies and operating procedures for the store, following the company guidelines.
2. Plan and organise store activities.
3. Assign tasks to staff and delegate responsibilities.
4. Prepare budgets and approve budget expenditures, and determine prices and discount rates.
5. Perform human resources activities, including recruitment and dismissal of staff.
6. Supervise and monitor staff performance.
7. **Attend shows with main department buyers or oversee purchase of forward bought goods;** ensure that adequate reserves of merchandise are held, and that stock keeping is carried out efficiently. (UK)
8. Liaise with other managers and staff, e.g. to provide information about merchandise, procedures, performance and new initiatives, to organise special promotions, etc.
9. Handle customer complaints, comments and queries regarding sales and service.
10. Ensure standards for quality, customer service, health and safety and security are met.
11. Analyse and interpret customer preferences, market trends, competitors' activities and operational records, and initiate changes to increase sales and improve efficiency; **keep up to date with retailing trends.** (UK)
12. Promote the store locally by liaising with the community, newspapers, schools, etc.
13. **Monitor store's takings (oversee cash registers).** (NL)

5. Required national educational levels

Below is a table showing the actual educational levels for the 1,500 extended list of occupations in the area of work 'Agriculture, nature, animals, environment'. The mean educational levels are based on the WageIndicator data (period: last quarter of the year 2004 until last quarter of the year 2008). The numbers in the tables are the averages of ISCED⁹ codes.

ISCO 08 code (prov.)	occupation / occupational group	country							
		BE	DE	ES	FR	IT	NL	PL	UK
1310	Farm, forestry and fisheries managers	4.0		5.0			3.3		4.3
1311	Crop farm manager	5.0		5.0				5.0	3.5
1311	Crop farm supervisor			5.0				3.0	5.0
1312	Livestock farm manager			3.0					
1313	Mixed crop farm manager			5.0				4.0	5.0
1319	Animal breeding centre manager				6.0				
1319	Animal home manager			2.0					5.0
1319	Fisheries manager								5.0
1319	Forestry manager							4.7	5.0
1319	Horse riding centre manager								5.0
2133	Agronomists and related professionals	4.8	5.3	5.0			4.2	3.0	5.2
2133	Agricultural scientist	5.0		5.1				5.2	5.5
2133	Food science technician	6.0		5.0					
2134	Veterinarian	5.3		4.9			4.9	5.5	5.1
2150	Architects, planners, surveyors and designers	4.8	4.9	5.2		5.0	4.8	5.0	4.8
2152	Landscape architect			5.0				5.0	6.0
3143	Veterinary assistant		2.8	3.0			3.2		4.0
3144	Agricultural technician			4.6				4.0	
3144	Agricultural inspector			5.0				5.0	4.0
3144	Horticulture technician			5.0		2.0		5.0	5.0
3146	Forestry technician	4.3		4.8			4.3	3.5	3.0
3146	Florist			2.0		2.0		2.0	5.0
3147	Farming and forestry advisers	5.0		4.0			4.9	5.0	5.0
3147	Agricultural advisor	5.0		5.0				4.3	5.0
3147	Farming advisor							5.0	

⁹ The ISCED levels are:

- 0 - Pre-primary education
- 1 - Primary education or first stage of basic education
- 2 - Lower secondary or second stage of basic education
- 3 - (Upper) secondary education
- 4 - Post-secondary non-tertiary education
- 5 - First stage of tertiary education
- 6 - Second stage of tertiary education

3147	Forestry advisor								5.0
3443	Horse riding instructor								4.0
6111	First line supervisor farming workers			1.0				3.0	2.0
6111	First line supervisor fishing workers			3.0					2.0
6111	First line supervisor forestry workers							5.0	
6112	Field crop or vegetable grower	2.5	1.9	2.8			3.0	4.0	3.5
6113	Tree or shrub crop grower	3.2		3.2			3.0		3.5
6113	Winegrower			5.0					
6114	Gardeners, horticultural and nursery growers	3.7	2.4	2.1				4.0	3.4
6114	First line supervisor landscaping, lawn service, or groundskeeping workers	3.5		4.0					3.5
6114	Gardener	2.0		2.0		3.0		4.0	3.8
6114	Green keeper golf court			5.0					2.5
6114	Greenhouse worker	4.0		2.0				4.0	
6114	Grounds man	5.0			3.0			4.0	2.8
6114	Horticultural grower	5.0							
6114	Horticultural nursery grower			3.5					3.5
6114	Horticultural nursery worker							3.0	
6114	Horticultural worker	3.5						3.0	4.2
6114	Public park gardener			3.0					5.0
6114	Flower binder							5.0	
6115	Mixed crop grower	4.0		3.0				4.0	3.7
6121	Livestock farm supervisor	2.0		5.5			3.1	3.3	3.4
6122	Livestock producers								5.5
6122	Cattle breeder			5.0					5.0
6122	Pig breeder								2.0
6122	Other livestock producer								3.0
6123	Dairy producer			5.0					4.7
6124	Poultry producer	3.0		3.3				2.0	3.2
6125	Apiarists and sericulturists			1.7				3.0	
6129	Market-oriented animal producers and related workers nec	2.8	2.4	5.0			3.3		3.0
6129	Animal trainer			2.0					5.0
6129	Horse breeder								5.0
6129	Laboratory animals worker			5.0					
6129	Non-farm animal caretaker	4.0		2.3		2.0			4.8
6129	Pet animal breeder	3.0		5.0					
6129	Stable groom							3.0	5.0
6130	Market-oriented mixed crop and animal producers	4.5	2.2	1.0			3.2	4.3	3.4
6131	Mixed crop or livestock farm supervisor			5.0				5.0	5.0
6132	Market-oriented mixed crop or animal producer			5.0					
6141	Forestry workers and loggers	2.8	1.4	4.0			2.8		5.0
6141	Forest ranger			2.5				5.0	
6141	Forestry planter							5.0	
6141	Game-warden			5.0					3.0
6141	Logging worker								2.0

6141	Lumberjack								5.0
6141	Nature park warden			3.0				4.5	4.0
6141	Wild life warden								5.0
6142	Charcoal burner or related worker								6.0
6151	Aquaculture workers	1.5		5.0			3.3	4.0	
6151	Pisciculture fishery worker			3.0					
6151	Seafood farmer						2.8		
6151	Other aquaculture worker								5.0
6152	Coastal waters fisherman	3.5	2.0	1.0			2.8		0.0
6153	Deep-sea fishery worker			3.0					
6154	Hunter, trapper		3.4	1.0			1.3		2.0
6154	Pest control worker								2.0
6154	Vermin control worker				1.0				
6210	Subsistence agricultural, fishery or forestry worker	3.0		3.7					2.0
7233	Agricultural machinery erector-installer	3.2		3.0					5.0
7233	Agricultural machinery mechanic	3.3	1.9	2.6			3.3	3.7	3.7
8341	Motorised farm and forestry plant operators						2.9		
8341	Motorised farm equipment operator			2.0		1.0		3.0	3.0
8341	Motorised forestry equipment operator			1.7					
9211	Crop farm helper							3.0	1.8
9211	Cattle station helper			1.5					
9211	Fruit picker			1.0					2.5
9211	Harvest hand	3.4		1.7			2.7	5.0	3.4
9212	Livestock farm helper								5.0
9213	Mixed crop or livestock farm helper	3.0							3.7
9214	Garden helper			2.5					2.0
9215	Forestry helper	5.0		2.5					3.0
9216	Fishery or aquaculture helper	2.3		2.0					2.5

The table for the area of work 'Commercial, shop, buy and sale' is shown below.

ISCO 08 code (prov.)	occupation / occupational group	country							
		BE	DE	ES	FR	IT	NL	PL	UK
1221	Purchasing manager	5.0		3.3				4.8	4.6
1221	Sales manager	4.5		4.1	5.3	5.0		4.1	4.3
1420	Shop Managers	3.5		3.1			3.9	3.7	3.4
1420	Retail chain manager	4.0		2.4				4.8	3.8
1420	Wholesaler	4.4		3.7	4.8			3.6	4.0
1420	Department store manager			2.6		4.0			4.4
1420	Other shop manager-owner			2.3				4.4	3.6
1420	Greengrocer, fruit trader			3.5		4.0		3.6	5.0
1420	Grocer			2.4		5.0		3.3	4.3
1420	Jeweller			2.7					3.8
1420	Video renter								3.0

1420	Other shop manager, non-owner			2.9		3.8		3.7	4.2
1439	Call centre manager	5.0		3.8		4.0			4.4
1439	Shopping centre manager	3.0		3.0				5.0	
2153	Commercial products designer			4.5					
2461	Sales department manager	4.8		3.4		4.0		4.1	3.0
2461	Sales engineer	5.0		4.9		4.3		4.5	4.1
2465	Technical or medical sales professional (excluding ICT)			4.7	6.0			4.7	
3315	After sales manager			4.7					
3315	Commercial traveller	4.6		4.0				4.5	4.5
3315	First line supervisor of sales representatives			2.8		6.0		5.0	5.0
3315	Sales agent	4.4		3.3	4.2			3.9	3.8
3315	Sales representative chemical products	5.0		3.0				4.4	
3315	Sales representative computer equipment	5.0		4.0				5.0	3.3
3315	Sales representative educational materials	5.0		1.0				3.0	
3315	Sales representative farm products	6.0		3.0	6.0			4.4	
3315	Sales representative other products	4.3		3.9		4.3	4.0	4.1	3.8
3315	Sales representative pharmaceutical products	5.0		5.0				5.0	5.0
3315	Sales representative technical products	5.0		3.8				4.6	4.5
3316	Buyers	4.2		3.8			4.2	4.2	3.7
3316	Buyer chemical products	5.0		3.3				3.7	3.0
3316	Buyer computer equipment	5.0		3.3					5.0
3316	Buyer educational materials			2.0					1.0
3316	Buyer farm products	5.0		6.0					5.0
3316	Buyer other products / services			3.5				4.2	4.9
3316	Buyer pharmaceutical products	5.0		2.0					5.0
3316	Buyer technical products	5.0		4.3		5.0		4.4	4.4
3316	Purchasing department manager	5.0		4.3				4.3	4.7
3323	Other business services agent or trade broker			3.2				4.1	4.3
3329	Business services representative	5.0		3.3				4.3	
3452	Display decorator	4.4		3.6		4.0	4.2	4.0	4.4
3452	Display worker			2.5					5.0
3452	Window dresser, visual merchandiser	3.0		4.0					4.5
4199	Sales clerk	4.3		2.6	6.0	4.4		3.9	4.0
4211	Cashier	3.5		2.3				2.9	4.1
4221	Client information clerk			3.0				3.5	5.0
4222	Call centre agent inbound			2.9				4.3	4.1
4222	Customer service representatives	4.5		3.3	3.0			4.4	4.3
4222	Emergency centre telephonist	5.0		3.0				4.5	5.0
4222	Contact centre information clerk	4.3	4.0	3.7		3.0		5.0	3.7
4225	Inquiry clerk			3.4				4.0	4.0
4227	Survey or market research interviewer	4.0		3.5					3.0
4229	Other client information worker			3.3				4.6	4.4
5140	Hairdressers, beauticians and related workers	3.3	2.8	1.9			3.2		3.1
5141	Hairdresser	3.0	1.6	2.2				5.0	3.4
5141	Barber	4.0						4.0	3.0
5142	Beautician	4.5	2.5	2.8	4.0			3.0	3.0
5142	Make-up artist			2.0					4.0

5142	Pedicurist								0.0
5211	Market vendor	3.5		2.8				4.2	3.7
5211	Stall sales person			1.0					
5212	Street vendor food	4.2		2.0			3.0	4.3	
5220	Shop salespersons	3.5	2.4	2.5		2.0	3.5	3.7	3.3
5221	Shop supervisor	3.7		3.8	3.7				4.2
5221	First line supervisor of retail sales workers			4.0				4.4	4.2
5222	Shop sales assistant	4.2		2.4				3.5	3.8
5232	Sales demonstrator	4.0		3.0				3.0	4.0
5233	Door to door salesperson	3.8		3.4				4.1	3.3
5234	Call centre agent outbound		2.7	3.1		4.0			4.2
5239	Other sales worker			3.0		1.5		3.8	4.2
5239	Driver/sales worker	3.0		1.7				3.6	4.0
7311	Clock repairer			2.0					
7511	Butcher or fishmonger in retail	5.0		2.5				5.0	4.0
7512	Baker in retail	3.7		2.0					3.4
7537	Shoe-makers and related workers	3.6	2.3	1.8			2.9		2.0
7537	Shoemaker, leather repairer	4.0		1.7					
9334	Shelf stacker		3.7	2.3		4.0		3.7	3.7
9510	Street and related service workers			1.3				4.0	3.0
9520	Street vendor non-food			2.8		5.0		3.0	3.0
9623	Vending-machine money collectors, meter readers and related workers	3.6		5.0					3.1

6. Problematic occupations

Key occupation	Problematic issues
Agricultural advisor	There is evidence from the Netherlands about differences regarding the task list. In Germany a clear distinction should be made between agricultural engineering and business management, furthermore the occupation differs considerably in terms of the role of the employing institution.
First line supervisors landscaping, lawn service or groundskeeping workers	In Germany the occupational title is correct but will in future be replaced by 'Staatlich geprüfte/r Agrarbetriebswirt/in'. There is evidence that the task list does not match the occupational content entirely in Germany and the Netherlands. In the UK the occupational title is complex and covers two areas: landscaping and grounds keeping/lawn service.
Food science technician	In Germany there are several specialisations of 'Techniker - Lebensmittel' and it is unclear to which specialisation the task list refers. There are responses from Belgium and France implying that the occupational content in those countries may not wholly match the task list.
Gardener	The gardening occupations are organised differently in Germany, and the occupational title 'Gardener' and its task list do not reflect this correctly. There are some responses from the Netherlands suggesting that the task list does not quite match the occupational content.
Horse riding instructor	In Germany, 'Horse riding instructor' is regarded as a recreational activity, not an occupation.
Inland waters fisherman	For Germany, the task list does not describe the occupation adequately. There is a comment that the occupation does not exist in Belgium. The occupation is rare in the UK, and the title is rarely used. Furthermore, there are responses from the UK indicating that some tasks are not relevant for the occupation.
Livestock farm helper	In Germany this is not considered as an occupation but as an unqualified helper's job.

Mixed crop farm manager	There is evidence that the occupation may be structured differently across countries and within countries.
Non-farm animal caretaker	In Germany the tasks of this occupation differ according to the specialisation. In the Netherlands the title covers several occupations. There are some responses from Belgium and Poland suggesting that the task list may not entirely match the occupational content.
Veterinarian	Comments from the UK and Germany suggest that the task list relates only to practising veterinarians. For the Netherlands, the task list is not representative.
Beautician	There is a comment from Germany that the task list is too strongly restricted to facial treatments.
Butcher or fishmonger in retail	Comments from both the UK and Germany state that the title refers to two occupations, 'Butcher' and 'Fishmonger' and should be split, and the task lists should be changed accordingly. For the Netherlands, there should be less emphasis on selling, and more on administration (there is an entrepreneur and a craftsman side to the occupation).
Department store manager	In Germany, this is regarded as a specialisation and a function, not an occupation. There is evidence from the respondents that the occupation may not be structured in the same way in all countries.
Display decorator	In Germany the occupation is characterised by a much broader range to task areas, particularly the design of sales, presentation and show rooms as well as the design of advertising media and vehicles. Work areas include promotion of sales, presentation of goods, products and services in retail, fairs and exhibitions. There is evidence from French and Polish respondents that the occupational content in those countries may not completely match the task list.
Hairdresser	In the Netherlands the term 'Hairdresser' is a general term that applies to various professionals/specialists.
Sales clerk	There is evidence that the occupation may be structured differently across countries, and the task list may not apply to several countries as such.

Sales representative	In the UK the title 'Sales manager' is often misused for this area of work. There are responses from Poland indicating that the occupational content may not completely match the task list.
Shoemaker, leather repairer	In the Netherlands, the task list is a mix of two occupations, Orthopaedic shoe technician and Shoe manufacturer/leather repairer.
Shop sales assistant	There are some responses from Germany and the Netherlands indicating that the occupational content may not completely match the task list.
Surgical footwear maker	In the UK, this is a very rare occupation.

7. Proposed revisions for the EurOccupations extended list of occupations

Key occupation	Revisions to extended list
Field crop or vegetable grower	Change the German title to 'Gärtner/in - Gemüsebau'. Change the UK title to 'Arable farmer' or 'Farmer'.
First line supervisors landscaping, lawn service or groundskeeping workers	Change the German title to 'Staatlich geprüfte/r Agrarbetriebswirt/in' when appropriate. Change the UK title to 'Head groundsman'.
Food science technician	Change the German title to 'Techniker/in - Lebensmittel (Verarbeitungstechnik)'.
Gardener	Change the German title to 'Gärtner/in – Garten- und Landschaftsbau'.
Inland waters fisherman	Change the German title to 'Fischwirt/in - Seen- und Flussfischerei'. Change the UK title to 'Fish farm worker'.
Livestock farm helper	Change the UK title to 'Stockman' or 'Assistant Stockperson'.
Mixed crop farm manager	Change the UK title to 'Arable farm manager' or 'Farm manager'.
Non-farm animal caretaker	Change the UK title to 'Animal care worker'. In general, consider whether there are several occupations under this title.
Vermin control worker	Change the UK title to 'Pest controller'.
Veterinarian	Change the Dutch title to 'Dierenarts'. Change the UK title to 'Veterinary practitioner'. New entries should be added for veterinarians working in the public sector or associated industries.
Beautician	Change the UK title to 'Beauty therapist'.
Butcher or fishmonger in retail	Change the German title to 'Fachverkäufer/in - Lebensmittelhandwerk (Fleischerei)' which refers to Butcher. In general, this occupation should be split into 'Butcher (retail)' and

	'Fishmonger (retail)'.
Display decorator	Change the UK title to 'Window dresser'.
Sales clerk	Change the UK title to 'Sales support clerk'.
Sales representative	Change the UK title to 'Sales representative' as it is not clear where 'other products' refers to.
Shoemaker, leather repairer	In the UK, the title 'Cobbler' is often used.

8. Conclusions and discussion

8.1 Selection of occupations within the cluster

There are 'new' or developing occupational areas that should be represented in the list of key occupations for this cluster, notably those relating to the ***environment and conservation***.

Sales clerk should arguably have been assigned to the Clerks cluster.

Unless *Surgical footwear maker* is an occupation frequently encountered in other countries in the EurOccupations group, this should be deleted from the cluster.

8.2 Response rates

Most countries have recorded usable responses to the expert enquiry of two or three per occupation (see the table at section 2.2, above). The occupations *Hairdresser* and *Veterinarian* have the highest total number of recorded expert responses (34 and 30, respectively, for all countries), whilst most fall into the low- to mid- teens.

The expert enquiry and the completed partner questionnaires have yielded interesting and useful data, but caution must be exercised in the interpretation of these data and, in particular, in extrapolating quantitatively from the information available. The conclusions in the following sub-sections, based on the analyses of the data, are necessarily qualitative. They look in turn at the various dimensions of occupations in the cluster as they arise in Part 1 of the expert questionnaire and identify emerging themes.

8.3 Frequency of tasks

An analysis has been made of the task frequencies, as shown in the table under the relevant paragraph of each occupational report (see the links given in section 3, above).

Occupations can be characterised as simple (most tasks are consistently performed on a daily basis) or complex (tasks are performed variously on a daily, weekly, monthly or annual basis). Those that fall into the 'simple' category are typically those that are highly structured and/or involve a face-to-face customer or client relationship and are defined by that relationship (for example, *Florist*, *Beautician*, *Hairdresser*, *Shop Sales Assistant*). 'Complex' occupations in this cluster either depend upon the agricultural or growing cycle (for example, *Gardener*) or they are higher level occupations that involve a wide variety of types of task and that probably offer the jobholder a greater degree of autonomy in terms of structuring tasks over the short-, medium- and longer-term (for example, *Sales representative*, *Department store manager*, *Agricultural adviser*). Some high level occupations, such as *Veterinarian* also involve a face-to-face, client relationship where most tasks are performed on a daily basis, but there are other tasks involving advice, education and research that have a longer time-frame.

In many cases, the competencies that are highlighted in bold text in the individual report table may represent a minimum set of tasks that constitute the core occupation content (for example, *First line supervisor landscaping, lawn service or groundskeeping workers, Sales representative, Display decorator*).

8.4 Importance of tasks

Variation in responses regarding the importance of tasks, as shown in the table under the relevant paragraph of each occupational report (see the links given in section 3, above), probably reflects differences in the way the occupation is organised or structured across the EurOccupations group of countries, and *vice versa*. An example of an occupation in this cluster that appears to be differently organised across the EurOccupations group of countries is *Horse riding instructor*; an example of an occupation with strong similarities in the way it is organised would be *Livestock farm helper*.

It is noted that more French responses fall into the 'Some importance' category than is the case for all other countries. This raises the possibility that value-laden questions of this kind are open to different interpretation across national and cultural boundaries.

8.5 Required national educational level for entry into the occupation

It is apparent from the tables reporting responses to this question that the UK specifies lower ISCED levels for many occupations than do other countries. This may reflect more flexibility with regard to entry qualifications for the UK (and this view is further supported by the fact that the UK reports fewer additional formal/legal requirements for a given occupation). However, there are frequently at least three ISCED levels identified in responses across and sometimes within countries for a specific occupation, which raises the issue of how well the question has been understood by respondents – in particular, what is meant by the minimum entry requirement.

8.6 Relevant competencies for the occupation

Dominant categories in responses to this question (shown emboldened in the penultimate table in the individual occupation reports) might usefully be interpreted as the generic competencies constituting core skills that would be transferable to a broader range of occupations. It is generally evident that the higher the level of the occupation, the greater is the number of agreed dominant competencies (and *vice versa*). Thus, the *Agricultural Adviser* report highlights six dominant competencies, whereas the *Field crop or vegetable grower* report highlights just two: 'Applying know-how, professional expertise' ; and 'Planning and organising'. The *Department store manager* report highlights nine competencies, whereas the *Shoemaker, leather repairer* report highlights just two: 'Applying know-how, professional expertise' and 'Following instructions and procedures'. These two competencies appear to be the minimum and typically are assigned to lower level occupations. Interestingly, however, they are reported as the two dominant competencies for the *Food science technician*. The

reason for this may relate to the fact that it is a laboratory-based occupation and in this instance 'know-how' and 'professional expertise' are both at a high level and crucial to the occupation. It is also the case that the range of alternative occupations for which competence as a food science technician is relevant would be somewhat limited.

8.7 Change in occupation size

Some evidence is available from the final table in the individual occupation reports of an expected decline in agriculture related occupations, and an expected increase in service occupations such as *First line supervisor landscaping; hairdresser; horse riding instructor* over the next five years. However, the responses are generally mixed so no firm conclusion can be derived.

8.8 Revisions to the task list

The revisions in section 4 (above) show that very few of the tasks listed for the expert enquiry are proposed for deletion. Additions to the list are relatively few in number. These minimal changes do not, however, necessarily reflect broad agreement across all countries on the full task list; rather, the changes are made on the basis of whatever level of consensus is achievable, recognising that some countries will not find the results fit their national circumstances.

Attention is drawn to the individual occupation reports (for which links are provided in section 3, above). In these, the emboldened text shows where a reasonable degree of consensus is evident; but whilst similarities are highlighted, notable differences are also recognised.

8.9 General observations

(i) It is apparent from examination of responses that many occupations in Germany are more tightly prescribed by the list of relevant tasks and the qualifications required for entry to the occupation than is the case for other countries (see, for instance, *Gardener; Food science technician*).

Two occupations are also identified by German respondents as 'Non-occupations' – *Horse riding instructor* (a recreational activity), and *Livestock farm helper*. This issue would be usefully clarified.

(ii) An important omission from the list of key occupations relates to the environment and conservation. This would be of relevance both in the Trade and Agriculture cluster, and in Staff, Management etc. Consideration could be given to other 'new' occupational areas to ensure they are encompassed within the EurOccupations database.

8.10 General conclusion

A general conclusion that derives from this detailed investigation of occupations in this cluster is that there is considerable variation across countries in the nature of the tasks associated



with specific occupations. For most 'simple' occupations that require fairly low levels of qualifications for entry, there is a reasonable degree of correspondence between countries in the structure of the tasks and the competencies required. However, for the more complex occupations in the cluster, significant variations are seen between countries. This is where the Eurooccupations database at its most detailed level will be particularly useful, in that it highlights these differences and allows users to decide on the extent of comparability between occupations on the basis of job title alone.

Appendix A [Additional analyses of EurOccupations data Trade & agriculture](#)¹⁰

The above link shows the results of the detailed analysis of Part 2 of the expert and partner questionnaires.

Future changes in occupational content

In Part 2 of the expert and partner questionnaires a question about any expectations of future changes in the content of the occupation was posed. A summary of the areas where changes are anticipated is presented below, showing the occupations and the countries.

Technological change/ automation/ scientific progress

Field crop or vegetable grower (NL), Livestock farm helper (NL), Veterinarian (DE PL), Agricultural advisor (ES), Food science technician (DE ES), Display decorator (UK), Beautician (NL PL UK), Hairdresser (NL), Sales clerk (DE), Sales representative (DE NL), Shoemaker, leather repairer (NL PL)

Expanding to new areas/ skills

Florist (PL), Horse riding instructor (NL), Gardener (DE), Veterinarian (DE NL), Agricultural advisor (NL), Beautician (DE UK), Hairdresser (NL UK), Butcher or fishmonger in retail (NL), Shop sales assistant (UK), Inland waters fisherman (UK), Department store manager (PL)

More market-orientation/ competition/ commercial or economic issues

Field crop or vegetable grower (NL), Mixed crop farm manager (PL), Non-farm animal caretaker (PL), Florist (UK), Veterinarian (NL), Agricultural advisor (NL), Display decorator (UK), Hairdresser (UK), Sales clerk (NL), Sales representative (NL PL), Department store manager (UK)

Energy/ environmental/ sustainability issues

Field crop or vegetable grower (NL), Mixed crop farm manager (NL), Veterinarian (DE), Agricultural advisor (FR), Inland waters fisherman (UK)

Larger scale operation

Field crop or vegetable grower (NL), Mixed crop farm manager (NL)

Specialisation

Veterinarian (UK), Display decorator (UK), Beautician (NL), Hairdresser (DE UK)

¹⁰ http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/part_2_analysis_trade_agr.xls

New legal requirements/ regulation/ codes of practice/ health and safety requirements

Non-farm animal caretaker (NL), Horse riding instructor (NL), Veterinarian (UK), Beautician (UK)

More complex tasks

Gardener (DE), Veterinarian (DE)

Changes in gender proportions

Veterinarian (NL)

Future changes in educational requirements

In Part 2 of the expert and partner questionnaires there was a question about any expectations of future changes regarding the educational requirements for the occupation. A summary of the anticipated changes is presented below, showing the occupation and the country.

Requirements of higher qualifications/ certification

Field crop or vegetable grower (NL), Horse riding instructor (NL UK), Gardener (DE), Veterinarian (DE), Food science technician (UK), Display decorator (UK), Beautician (NL PL UK), Sales clerk (DE), Sales representative (DE), Department store manager (PL UK)

Training in specialisations/ new areas

Mixed crop farm manager (NL), Non-farm animal caretaker (NL), Gardener (NL), Veterinarian (PL UK), Agricultural advisor (ES), Display decorator (UK), Beautician (DE), Sales representative (NL), Butcher or fishmonger in retail (PL), Shoemaker, leather repairer (NL), Shop sales assistant (DE)

Transfer of knowledge from the EU

Mixed crop farm manager (PL)

More educational opportunities/ general training

Florist (PL), Food science technician (PL)

Life long learning

Beautician (UK), Hairdresser (DE)



Appendix B [Occupation questionnaire for experts](#)¹¹

Appendix C [Education questionnaire for experts](#)¹²

Appendix D [Occupational workers questionnaire](#)¹³

Appendix E [Partner occupation questionnaire](#)¹⁴

¹¹ http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/expert_questionnaire.doc

¹² http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/education_questionnaire.doc

¹³ http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/worker_questionnaire.doc

¹⁴ http://www2.warwick.ac.uk/fac/soc/ier/research/completed/eurocc/partner_questionnaire.doc