Skilled agricultural workers comprise an important but declining share of total EU-28 employment. In countries such as Romania, Portugal, Greece and Croatia, a substantial proportion of job opportunities in the next decade will be for skilled agricultural workers.

Skilled agricultural workers tend to be trained ‘on-the-job’ and, as a consequence, hold only low-level qualifications.

Agriculture, forestry and fishing are at the forefront of sustainable development efforts. Not only will this drive skills needs, but it is expected to raise skill and qualification levels as well.

There are three distinct groups of skilled agricultural workers:

- Market-oriented skilled agricultural workers plan, organise and perform farming operations to grow and harvest crops and produce a variety of animals and animal products.
- Market-oriented skilled forestry, fishery and hunting workers plan, organise and perform operations to cultivate, conserve and exploit natural and plantation forests, breed and raise fish, harvest and catch fish and hunt and trap animals.
- Both of the market-oriented groups sell the product of their activities to wholesale buyers, marketing organisations or at markets. The third group, subsistence farmers, fishers, hunters and gatherers perform similar functions, but do it in order to provide food, shelter and a minimum of cash income for themselves and their households.

What do they do?

Skilled agricultural workers are an occupational group encompassing all skilled agricultural, forestry and fishery workers. They grow and harvest or gather crops and wild produce, breed, tend or hunt animals, fish, other forms of aquatic life, produce a variety of animal husbandry products, and cultivate, conserve and exploit forests.
Employment outlook

In 2013, there were around 9.5 million skilled agricultural workers across the EU-28 countries. This equated to 4% of total EU-28 employment (see Figure 1), a share of employment that has declined significantly over the last decade following a similar pattern to most skills manual occupations. However, the decline in skilled agricultural worker employment appears to have eased somewhat in the most recent years.\(^3\)

Unsurprisingly, around nine out of ten skilled agricultural workers are found in the agriculture, forestry and fishing sector. There is, though, a small proportion of these jobs (around 6% of all workers) based in the administrative and support services sector.

The number of people employed as skilled agricultural workers fell by just under 1.5 million from 2003 to 2013. In the agriculture, forestry and fishing sector, specifically, this equated to a 10% decline in the overall number of skilled agricultural workers. The pattern of decline was fairly steady over the course of the decade.

Apart from elementary occupations (i.e. unskilled), skilled agricultural workers are the least qualified group of workers. Fewer than one in ten skilled agricultural workers holds a high-level qualification (see Table 1). Even compared with skilled and semi-skilled manual occupations, skilled agricultural workers are much more likely to hold low-level qualifications. However, the lack of qualifications hold by these workers is not necessarily indicative of low skill levels. It reflects that skills are often learned ‘on the job’ and not accredited.\(^4\)

\[\text{\ding{182}}\text{Table 1 – Share of Skilled agricultural workers by qualification level compared to all occupations, EU-28, 2013}\]

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled agricultural workers</td>
<td>44.1%</td>
<td>47.5%</td>
<td>8.4%</td>
</tr>
<tr>
<td>All occupations</td>
<td>21.2%</td>
<td>48.1%</td>
<td>30.7%</td>
</tr>
</tbody>
</table>

A look into the future

Figure 2 shows that the fall in employment for skilled agricultural workers is forecast to continue up to 2025. There is expected to be almost a further one percentage point fall in the share of total EU-28 employment. That will be the third largest for any occupational group. Overall, around 1.2 million jobs are expected to be lost.

However, there are six EU-28 countries forecast to expand the overall number of skilled agricultural workers in the period to 2025. Furthermore, the substantial need to replace workers who leave their jobs due to retirement and for other reasons is forecast to offset overall decline to create job opportunities in the coming years.

\[\text{\ding{182}}\text{Figure 2 – Future share of Skilled agricultural workers, EU-28}\]

Despite expected significant falls in overall employment levels, skilled agricultural workers are forecast to comprise 6% of total EU-28 job openings by 2025. Figure 3 shows that there is tremendous variation between countries. In Romania, more than one in three job openings are anticipated to be for skilled agricultural workers. In Portugal, nearly one in four job openings relates to this group. In Greece, Croatia, Poland, Austria and Bulgaria, skilled agricultural workers account for at least one in ten job openings – far above the overall EU-28 share of these jobs. Conversely, there are seven countries in which less than one out of every 50 job openings are forecast to be for skilled agricultural workers.

Qualification levels amongst skilled agricultural workers are forecast to rise over the next decade, although the occupational group is still expected to contain a higher share of low-qualified workers than other skilled and semi-skilled manual occupations. However, the share of skilled agricultural workers with high-level qualifications is expected to grow to around 14% (i.e. nearly doubling), which is a larger share than other comparable occupations.
Skills challenges

Skilled agricultural workers require a range of job-specific skills, generic skills, personal attributes and abilities6 7 8.

- **Job-specific skills**: There are a range of skilled occupations which require job specific skills usually acquired through an apprenticeship or similar level qualifications mixing a formal training environment with work application and experience. Job specific skills include: knowledge and care of plants and animals, their growth and cultivation, handling and storage, interactions with each other and the environment; understanding and operating tools and equipment, understanding raw materials, applying skills with accuracy and precision.

- **Generic job skills**: Due to breeding and production cycles, skilled agricultural workers require time management, resource planning, production processes, team working and communication skills. Quality control analysis of animals and crops is also important to evaluate performance, make improvements or take corrective action.

- **Physical skills**: Manual dexterity and co-ordination, visualisation and physical strength/stamina are important skills and attributes in these trades.

- **IT skills**: Increasingly, technology is becoming embedded in tools and equipment, as well as hand-held devices for monitoring resources and quality, navigation, and work organisation9.

Changes in technology, work organisation, tools, and crops and animals have, and are, changing the skills requirements of skilled agricultural workers:

- **Green skills**: Agriculture is central to discussions of sustainability given the sector’s impact on the environment. Therefore, skilled agricultural workers increasingly need to have a holistic awareness of sustainability (i.e. not just on their specific working environment and technical skills, but a wider awareness of environmental issues). This may relate to understanding of the warming climate, the reduction of carbon emissions, renewable energy, biofuels, management of water resources and ecosystem services. In addition, these workers need to keep abreast of new regulations and legislation linked to the sustainability agenda; as this can entail regular updating of skills and, importantly for this sector, the accreditation of those skills10 11 12.

- **Technological change**: A crucial challenge for the agricultural, fisheries and forestry sectors in the future relates to the increasing implementation of technology or ‘agri-tech’. Skilled workers will need to be able to understand and apply these technologies, including those related to: primary production for both food and non-food uses; soil science; crop and livestock genetics; agri-chemicals; and general purpose technologies such as remote sensors, satellites and robotics13 14 15.

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