

ESF programm „Kutsete süsteemi arendamine“

Occupational standard

Senior Gardener, level 5

The **occupational standard** is a **document**, that describes the job and competence requirements, i.e. a set of skills, knowledge and attitudes required for successful job performance in a particular occupation.

Application areas of the occupational standard

- 1) Drafting of curricula and training programmes meeting the requirements of labour market.
- 2) Evaluation of competence of the people, incl self-evaluation and conformity evaluation upon awarding an occupational qualification.
- 3) Description and introduction of occupational qualifications.
- 4) Career planning and creation of a basis for lifelong learning.
- 5) Identification of personnel training needs and planning of training.
- 6) Drafting of job descriptions and recruitment of employees.
- 7) Comparison of occupational and educational qualifications.

Occupational qualification title		Estonian qualifications framework (EstQF) level
Senior Gardener, level 5		5
Specialization	Title on the certificate	
Vegetable growing	Senior gardener of vegetable growing	
Fruit growing	Senior gardener of fruit growing	
Flower growing	Senior gardener of flower growing	
Arboretum work	Senior gardener of arboretum	

Part A

JOB DESCRIPTION

A.1 Job description

There are three occupational qualifications on the professional field of gardening: gardener's assistant, level 3; gardener, level 4 and senior gardener, level 5.

Level 5 senior gardener is a gardening specialist with extensive knowledge base, fulfilling different tasks (including in unexpected circumstances), plans relevant changes and organizes their implementation. They are specialized on growing fruit, vegetables or flowers or arboretum work and plan work and growing volumes in their professional field. In their professional field, their main tasks are planning work, preparing sowing and planting ground, sowing and planting and caring for horticulture plants; harvesting crops/produce, preserving it and preparing it for sale.

A senior gardener chooses and implements technologies, methods and tools, adjusts their behavior according to situation. They are responsible for the work of the work group, evaluate work quality and analyze its results. A senior gardener values ethical beliefs and ideas, follows good gardening practice and environmental- and work safety requirements.

A.2 Units

The job of a senior gardener includes obligatory and optional units.

Obligatory units

- A.2.1 Planning work and tools
- A.2.2 Preparing the sowing and planting area, and sowing and planting
- A.2.3 Caring for horticultural plants
- A.2.4 Harvesting crops / produce, its preservation and preparation for sale
- A.2.5 Propagating foliage and growing cuttings
- A.2.6 Management

Optional units

- A.2.7 Planting and maintaining lawn
- A.2.8 Creating and maintaining greenery
- A.2.9 Installing paving (concrete stone, natural stones, wood- and sifting paths)
- A.2.10 Selling garden goods
- A.2.11 Creating flower arrangements and compositions
- A.2.12 Establishing and maintaining indoor greenery

Specialization takes place according to the professional field: growing vegetables, growing fruit, arboretum work, floriculture, etc. All specializations are directly related to previously described tasks.

The list of tasks connected to units has been specified in Annex C.3 „Units and tasks“ of the occupational standard.

A.3 Working environment and specific aspects of work

The work of a senior gardener has flexible working hours, if necessary, it also includes holidays. The work is diverse and takes place in both indoor and outdoor environment.

The health risks related to the work of a senior gardener are lifting weights, noise, working with mechanisms, working in heights, variations of weather conditions and temperatures, humidity and

contact with different allergens (e.g. plants, chemicals, pollen, etc.).

A.4 Tools

Main tools of a gardener are:

gardening tools: substrates, packaging materials, fertilizers, pots, plant protecting agents, horticultural covering materials, supporting means, mulches, carts, shovels, rakes, spades, different cutting and other tools;

machinery and devices: tractors, soil cultivation tools, sowing and planting machines, fertilizers, plant protection sprayers, harvesting machines, mowers, edgers, chainsaws, hedge cutters, loaders, watering systems, greenhouse automatics and other machines and devices;

measuring tools: growth parameter indicators, measuring tape, scales and other measuring tools;

means of communication: computer and phone, etc.;

other tools: cleaning and other equipment.

A.5 Personal characteristics necessary for this job: abilities and personality traits

The work of level 5 senior gardener requires honesty, motivated attitude, co-ordination, laboriousness, resilience; good stress-, load- and environmental tolerance; ability to adapt, take responsibility and make decisions, work in a team and learn from experience; correctness, social attitude, creativity, independency and desire to improve.

A.6 Occupational training

Position of a level 5 senior gardener is usually held by people who have at least vocational education, two years of work experience in their professional field and who have passed a specialization-related training.

A.7 Possible job titles

Vegetable grower, fruit grower, gardener, arboretum gardener, flower grower, production manager.

A.8 Regulations on working on the professional field

Plant protection certificate according to Plant Protection Act.

Part B COMPETENCE REQUIREMENTS

B.1. The structure of the occupational qualification

When applying for the occupational qualification of senior gardener, level 5, certification of obligatory competences B.2.1-B.2.6 and B.2.13 (transversal competence) is required, additionally one can choose to certify optional competences (optional competences B.2.7 -B.2.12).

Specialization takes place according to the professional field: growing vegetables, growing fruit, arboretum work, floriculture, etc. All specializations are directly related to previously described tasks. Competences will be assessed according to the specialization.

B.2 Competences

Obligatory competences

B.2.1 Planning work and tools	EstQF level 5
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) creates sowing procedures and production plan and calculates necessary volumes according to specifics of the company and market situation; 2) calculates the volume of materials (soils, foliage, seeds, pots, fertilizers, garden tools, etc.) by considering planned production volume, specifics of the company and market situation; acquires additional information from relevant sources; 3) chooses and acquires materials according to calculated volumes and characteristics of tools while taking into account the cost-quality ratio; 4) plans and chooses horticultural plants according to the growth location, -substrate and suitability of soil; 5) plants plant protection procedures according to the type of horticultural plants; 6) creates a fertilization plan according to the requirements of horticultural plants; 7) plans demand for labor according to production volume; 8) plans the necessity of mechanisms according to production specifics and -volume; 9) plans work time and –volume within the whole production process according to the specifics of the company and market situation; 10) creates a cost budget for the production process according to the work and material cost. 	
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) materials and their qualities; 2) qualities of soil and growth substrates; 3) basics of business; 4) legal requirements applying to their professional field; 5) basics of organization management; 6) classification of horticultural facilities (greenhouses, growth tunnels, seedbeds, repositories, protective constructions, irrigation systems, etc.) and production technologies (equipment, mechanisms, etc.). 	
<p><u>Assessment method(s):</u> Practical work and interview.</p>	
B.2. Preparing sowing and planting ground, and sowing and planting	EstQF level 4
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) prepares the workplace and growing area of horticultural plants (installs necessary means, weeds, 	

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<p>cleans, digs, flattens, etc.) according to planned activities, by using manual or mechanical tools if necessary; if necessary, includes a subcontractor according to planned activities;</p> <ol style="list-style-type: none"> 2) fertilizers horticultural plants manually, with hand mechanisms, fertilizer feeder or fertilizer sower, according to the fertilization plan, tunes and, if necessary, adjusts mechanisms according to their user manuals and work safety requirements; if necessary, includes a subcontractor according to planned activities; 3) visually assesses the quality of nursery stock, including assessing the quality of forced horticultural plants and categorizes it according to specified requirements; 4) adjust sowing- and planting norms according to the plan; sows seeds, prickles soil and plants horticultural plants manually or with a machine, according to sowing norms and planting schemes; inspects the work result according to the characteristics of horticultural plants; 5) mulches both manually and by using different mechanisms, while considering agrotechnological requirements of horticultural plants and checking the final work result; 6) supports horticultural plants by considering their characteristics; plans and supervises the creation of support system, if necessary, includes a subcontractor according to the volume of work; 7) instructs colleagues and checks the work result according to the work goal.
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) classification of nursery stock, qualities and quality requirements; 2) classification of most commonly grown plants and common weeds; 3) classification and growth requirements of forcing materials; 4) basics of the agrotechnology of horticultural plants (see Annex 2) according to specialization; 5) principles of fertilizing within the area of specialization, principles/methodology of watering and irrigation systems.
<p><u>Assessment method(s):</u> Practical work.</p>

B.2.3 Caring for horticultural plants	EstQF level 5
<p><u>Performance indicators:</u> According area of specialization:</p> <ol style="list-style-type: none"> 1) establishes the maintenance need of horticultural plants according to the agrotechnology of horticultural plants; 2) establishes fertilization norms, fertilizes horticultural plants manually, with fertilizer feeder or fertilizer sower, according to the fertilization plan, tunes and, if necessary, adjusts mechanisms according to their user manual and work safety requirements; if necessary, includes a subcontractor according to the volume of work; 3) establishes watering norms of horticultural plants, waters horticultural plants manually or by using watering systems, adjusts and, if necessary, regulates watering mechanisms (including automated irrigation systems) while following user manual and work safety requirements; if necessary, includes a subcontractor according to the specifics of work; 4) performs maintenance activities (including monitoring the growth conditions of forced plants) manually or by using suitable machines; if necessary, includes a subcontractor according to the specifics of work; 5) performs plant protection procedures (including with plant protection agents that require a plant protection certificate) and follows work- and environmental safety requirements; keeps account of plant protection agents; 6) organizes weed-killing according to work volume; 7) protects the plantation from unfavorable weather conditions, animals and birds by using relevant auxiliaries; 	

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8) shapes and cuts plants according to agrotechnical characteristics and needs of horticultural plants or sorts.
<u>Supporting knowledge:</u> 1) basics of agrotechnology; 2) ways for protecting horticultural plants from unfavorable weather conditions; 3) ways for protecting horticultural plants from animals and birds; 4) principles and methods of caring for horticultural plants; 5) classification, qualities and care requirements of forcing materials; 6) classification of most commonly grown plants and common weeds; 7) classification of most common plant diseases and pests, principles of plant protection.
<u>Assessment method(s):</u> Practical work.

B.2.4 Harvesting crops or produce, preserving it and preparing it for sale	EstQF level 5
<u>Performance indicators:</u> 1) assesses the conformity of the quality of crops or produce to quality requirements; 2) performs selective and bulk harvesting and pieces out the produce according to quality requirements; 3) plans and manages storage conditions according to the type of horticultural plants; 4) plans storage and stores the produce by using necessary techniques and considering work safety requirements and storage conditions; 5) sorts the crops or produce according to quality requirements and categories; 6) packages and labels the crops or produce according to relevant requirements.	
<u>Supporting knowledge:</u> 1) quality requirements and categories; 2) legal requirements to packaging and labeling; 3) classification of repositories and basics of storage conditions; 4) storage conditions of crops or produce.	
<u>Assessment method(s):</u> Practical work, interview.	

B.2.5 Propagation of foliage and growing cuttings	EstQF level 4
<u>Performance indicators:</u> by taking into account propagation time, -conditions and -methods: 1) grafts (buds, scion grafts, etc.); 2) propagates foliage (ground shoots, stolons, etc.) by taking into account the propagation methods of plants; 3) propagates with cuttings (leaf-, root-, branch cuttings, woody-stemmed cuttings, softwood cuttings, turion, etc.); 4) propagates generatively (picks out plants and seeds, pollinates, etc.) depending on plants; 5) grows cuttings by taking into account the growth requirements of different plant species; 6) packages and labels the produce according to the specifics of foliage.	
<u>Supporting knowledge:</u> 1) principles of vegetative propagation of foliage; 2) principles of generative propagation of foliage; 3) principles of arboretum management.	
<u>Assessment method(s):</u> Practical work and theoretical task.	

B.2.6 Management	EstQF level 5
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) creates a business plan based on existing start-up capital and possibilities; 2) considers the cost-effectiveness of the organization based on the principles of financial accounting; 3) manages and supervises the work of one gardener or a small workgroup by considering their tasks, their efficient management, occupational health and work safety requirements and the choice of suitable tools and methods of work; 4) advises their colleagues in analyzing and fixing mistakes, by considering given tasks, the choice of proper tools and work methods and quality requirements; 5) creates a budget and work schedule according to production activities of the company and observes that they will be fulfilled; 6) assures that quality requirements are being followed, monitors the compliance of storing and preparation of goods, analyses work results according to relevant legislation and characteristics of horticultural plants. 7) creates and submits relevant reports according to valid legislation. 	
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) basics of business and management; 2) principles of creating a business plan; 3) principles of personnel management; 4) requirements of legislation concerning the professional field of a gardener. 	
<p><u>Assessment method(s):</u> Practical work.</p>	

Optional competences

B.2.7 Planting and maintaining lawn	EstQF level 4
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) prepares the ground by taking into account its special characteristics, if necessary, performs chemical weed-killing by using relevant technical means and following environmental- and work safety requirements; 2) lays down the grass area according to the project (work description); 3) sows grass seed and fertilizer either manually or with a sower while considering sowing norms; 4) installs transplant grass, by taking account the specifics of the ground and weather conditions; 5) waters the grass after sowing, assesses the periodical need for watering and waters it as necessary in the whole extent of the grass surface; 6) assesses the need for mowing and mows the lawn by using mechanisms (lawnmower, edger) and following work safety requirements; 7) assesses the need for fertilization and fertilizes the lawn either manually or with a sower as necessary; 8) performs other maintenance tasks (mulching, aerating, erect cutting, killing moss, correction- and supplementary sowing, etc.). 	
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) lawn types; types and sorts of grass seeds and their suitability for seed mixes; 2) basics of manual and mechanical soil cultivation; 3) principles of use of tools for soil cultivation and grass grooming; 4) principles of creating different types of lawn; 5) principles of laying down a lawn area; 6) principles of watering and fertilizing horticultural plants; 7) principles of maintenance work. 	

<u>Assessment method(s):</u> Practical work.	
B.2.8 Establishing and caring for greenery	EstQF level 4
<u>Performance indicators:</u> <ol style="list-style-type: none"> 1) according to the project (work description) marks planting areas, their height and location of plants; 2) prepares the growth base by taking into account the project, existing ground and plants to be planted and, if necessary, kills weed; 3) installs the edges of the planting area according to the vertical planning of the location; 4) installs geotextiles according to the project (work description) and specifics of the location; 5) sows seeds; plants, waters, supports and cuts back plants according to the project (work description) and by taking into account the type and size of the cutting, its species, growth requirements, weather- and soil conditions; 6) plants large trees/brushes according to the project (work description) and by following work safety requirements; 7) mulches according to the project (work description) and growth requirements of plants; 8) clips or rejuvenates hedges by using proper hedge cutters and –trimmers, and by following work- and workplace safety requirements and good gardening practice; 9) maintains (supports, cuts, waters, mulches, aerates, weeds, prepares for winter) plants and planting areas, while following good gardening practice; 10) performs plant protection procedures by using plant protection agents according to established requirements; 11) fertilizes according to the fertilization system and by considering fertilization norms;' 12) performs maintenance-, shaping- and rejuvenation cutting of fruit- and decorative trees and berry- and decorative bushes while following good gardening practice; 13) composts plant waste in order to create an organic circulation and assure ecological strengthening of plant health. 	
<u>Supporting knowledge:</u> <ol style="list-style-type: none"> 1) classification and growth requirements of garden plants; 2) classification of common weeds; 3) planting requirements of plants arising from the growth environment at the location; 4) types of cuttings; 5) categorization of geotextiles, mulches and different edge materials; 6) categorization and work- and maintenance principles of measuring instruments used for laying down horticultural plants and greenery (horizontal and vertical); 7) principles of laying down horticultural plants and greenery; 8) categorization of plant protecting agents and principles of plant protection tasks; 9) basics of fertilizing horticultural plants; 10) caring principles of greenery; 11) work- and maintenance principles of tools used in caring for greenery; 12) principles of maintenance cutting and shaping of horticultural plants; 13) principles of composting (or compost management) and waste handling. 	
<u>Assessment method(s):</u> Practical work, interview.	
B.2.9 Installing paving (concrete stone, natural stones, wood- and sifting paths)	EstQF level 4
<u>Performance indicators:</u>	

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<ol style="list-style-type: none"> 1) lays down paths and sites according to the project (work description) and, if there is no project, taking into account the specifics of the location; 2) hollows out the path and installs base layers (filling layer, cold protection layer, carrying layer, leveling layer), by using suitable techniques and following legislation concerning landscaping and work safety requirements; 3) installs path edges and paving, performs necessary concrete works according to the project (work description), and by using grinder or stone cutting guillotine if necessary, and by following work safety requirements; 4) finishes different types of paving while following quality requirements and project (work description).
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) principles of hollowing out paths and building base layers; 2) principles of laying down paths and sites; 3) construction requirements of paths and sites; 4) principles of use of simpler mechanisms (grinder, stone cutting guillotine, tamper and concrete mixer); 5) principles of mixing concrete.
<p><u>Assessment method(s):</u> Practical work.</p>

B.2.10 Selling garden goods	EstQF level 4
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) designs the interior and display of the sales location, if necessary, by co-operating with specialists and taking into account the specifics of the sales location; 2) prepares goods for sale and puts them out in the salesroom by considering the specifics of sales location; 3) compiles and handles accompanying documents and sales reports of the goods and checks the product volume in stock as required; 4) finds out the needs of customers by asking guiding questions and taking into account their opportunities and wishes, cultural background and traditions of the customer; 5) formalizes orders received from customers and arranges them to be fulfilled by taking into account the specifics of the order; 6) advises the customer and introduces goods by recommending different options and opportunities; 7) sells products and offers an opportunity to make additional purchases, assuring the satisfaction of the customer; 8) handles customer accounts by using different payment methods (cash, payment terminal, invoice); 9) packages goods by taking into account the specifics of work, weather conditions and means of transportation; 10) solves problems and customer complaints within their sphere of competence, if necessary, forwards the problem to a more experienced colleague. 	
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) classification and qualities of foliage and garden goods; 2) basics of sales work and client service and good practice; 3) company's requirements; 4) principles of placement of goods; 5) understanding the compliance of goods and accompanying documents; 6) principles of stock accounting; 7) basics of the seasonality of garden goods; 8) basics of cash management; 	

9) packaging principles of gardening goods.
<u>Assessment method(s):</u> Practical work, interview, observation, combined method.

B.2.11 Creating flower arrangements and compositions	EstQF level 4
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) chooses the best arrangement or composition for the idea or composition solution; 2) establishes a work goal and chooses appropriate work methods, materials and techniques, by taking into account the requirements of specific task (size, heaviness, volume, steadiness, durability, conditions); 3) plans their time consumption by considering the size, difficulty and volume of the task; 4) co-ordinates the distribution of work of their subordinates according to the task in hand; 5) establishes the price of work by considering its size, materials used, level of difficulty, volume, conditions and time cost; 6) packages flower arrangements by taking into account the specifics of the work and weather conditions; 7) if necessary, organizes the transportation of flower arrangements according to the order. 	
<u>Supporting knowledge:</u>	
<ol style="list-style-type: none"> 1) rules of composition; 2) different flower arrangements; 3) placement methods and techniques; 4) tools and materials; 5) work methods; 6) packaging principles; 7) principles of transport management; 8) principles of price design. 	
<u>Assessment method(s):</u> Practical work, interview, observation, study map, combined method.	

B.2.12 Establishing and caring for indoor greenery	EstQF level 4
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) analyses the situation at the location of indoor greenery by taking into account the specifics of the location and project goal; 2) creates project (work description) budgets by considering materials used for establishing and caring for indoor greenery and their volumes; 3) establishes indoor greenery according to the project (work description) and specifics of the location; 4) decides on the caring requirements of indoor greenery and performs maintenance by considering the project (work description) and specifics of the location; 5) establishes a maintenance schedule. 	
<u>Supporting knowledge:</u>	
<ol style="list-style-type: none"> 1) classification and caring principles of house plants; 2) growth requirements of house plants; 3) growth systems of plants (pots, watering systems, etc.); 4) classification of most common plant diseases and pests, principles of plant protection; 5) basics of creating a maintenance schedule for indoor greenery; 6) principles of creating a budget. 	
<u>Assessment method(s):</u> Practical work.	

Transversal competences

B.2.13 Senior gardener, level 5 transversal competence	EstQF level 5
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) values good gardening practices and gardener’s ethics; 2) plans work in long term, supervises and instructs colleagues; 3) fulfils responsibilities taken and achieves work goals within the specified time period; gives rational evaluations and analyses feedback and accepts relevant decisions and assures that they will be fulfilled; 4) creates a functioning contact network inside the organization; communicates with customers, colleagues and monitoring agencies; is open to cooperation, participates in teamwork, shares necessary and useful information with others, acts towards achieving the best common result; 5) wants, can and dares to voice and defend their opinion; has necessary knowledge and skills for instructing colleagues; presents written materials in a structured and logical form; 6) uses area-specific knowledge and develops work-related skills through continuous professional development; is open to acquiring new tasks, methods and techniques; shares their knowledge with colleagues; 7) uses, collects and analyses information, which they will use for making decisions or coming up with working solutions for different problems; seeks opportunities to improve the company; generates and proposes new ideas, thoughts and solutions; 8) learns from their success, failures and criticism; has good stress tolerance and can handle fallbacks; controls their emotions in complicated situations and solves conflicts; 9) keeps long-term goals and company’s interests in mind in their activities; follows and maintains existing quality level and works efficiently; is oriented to fulfilling customer needs and assuring customer satisfaction; 10) uses resources, including time, efficiently, follows deadlines throughout the process; arrives to work and meetings in time; follows work regulations; 11) keeps in touch with the activities of competitors and colleagues and market activity; sees and understands new business opportunities; takes into account the financial side of processes and activities; keeps track of expenses; 12) assesses risk factors and environmental risks connected to the job and implements measures for dampening such risks, takes into account environmental requirements; assures that all safety requirements are being followed during the work; keeps their workplace clean; 13) in case of an accident, provides first aid, calls for professional help and notifies the location manager or their employer of the situation; 14) language skills: proficiency level C1 in Estonian and B2 in one foreign language (see Annex 3); 15) uses computer on level AO1-AO4, AO6 and AO7 (see Annex 4). 	
<p><u>Supporting knowledge:</u></p> <ol style="list-style-type: none"> 1) definition of terms used in relevant manuals; 2) plant names in Latin; 3) most common horticultural plants and their species, principles of growing seeds and plant breeding (differences between sorts propagated by cloning and with seeds); classification of common weeds; 4) agrotechnology of horticultural plants; 5) ergonomics, environmental- and work safety requirements and waste handling; 6) work methods and tools; 7) anatomy, physiology and systematics of plants; 8) classification of most common plant diseases and pests, principles of plant protection; 9) work and maintenance principles of mechanisms used in gardening; 10) principles of composting (compost management) or waste handling. 	
<p><u>Assessment method(s):</u></p>	



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Integrated with assessment of other competences specified in the occupational standard.

Part C

GENERAL INFORMATION AND ANNEXES

C.1 Information on the preparation and approval of the occupational standard, on the body awarding occupational qualifications, and reference to the location of the occupational standard in classifications	
1. Designation of the occupational standard in the register of occupational qualifications	11-29052012-3.3/5k
2. Professional field and occupational qualifications of the field	Gardening Gardener's assistant, level 3 Gardener, level 4 Senior gardener, level 5
3. Related professional fields and occupational qualifications	Landscaping Landscape's assistant, level 3 Landscape, level 4 Senior landscaper, level 5
4. <i>The occupational standard is compiled by:</i>	Madis Kahu, <i>AS Sagro</i> Leo-Kaupo Kivirand, <i>FIE Lillekasvatus</i> Tiina Paasik, <i>Räpina School of Horticulture</i> Mihkel Saar, <i>Hansaplant</i> Aita Sauemägi, <i>SA Innove</i> Indrek Teder, <i>Baltic Agro AS</i> Elmar Zimmer, <i>Seedri Puukool</i>
5. The occupational standard is approved by:	Toiduainetööstuse ja Põllumajanduse Kutsenõukogu
6. No. of the decision of the Sectoral Council:	16
7. Date of the decision of the Sectoral Council:	29.05.2012
8. The occupational standard is valid until (date)	28.05.2017
9. Occupational standard version No.	5
10. Reference to the Classification of Occupations (ISCO 08)	611 Field crop and vegetable growers
11. Reference to the level in the European Qualifications Framework (EQF)	5
C.2 Title of occupational qualification in foreign languages	
In Estonian Meisteraednik	
In Finnish Kokenut puutarhuri	
In Russian Опытный / Мастер садовод	
C.3 Annexes	
The list of foliage (including designations in Latin) have been defined on threshold level by Estonian Gardening Association. The list of plants specified by Estonian Gardening Association is available on their website and will be the grounds for the creation of curricula and training programs and professional evaluation. Annex 1 Units and tasks	



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Annex 2 Terms related to the professional field of a gardener
Annex 3 Language skills
Annex 4 Computer skills

Units and tasks

Senior gardener, level 5 is a gardening specialist with an extensive knowledge base, who fulfills different tasks (including arranging relevant changes in unexpected situations and organizes their implementation). They are specialized on growing fruit or vegetables, floriculture or working in arboretum and plan their work and growing volumes on their field of specialization. On their field of specialization, their main tasks are planning their work, preparing sowing and planting ground, sowing and planting, taking care of horticultural plants, harvesting crops or produce, preserving it and preparing it for sale.

A master gardener chooses and implements technologies, methods and tools, and adjusts their behavior according to the situation. They are responsible for supervising a workgroup, assess the quality of work and analyze work results. A senior gardener values ethical beliefs and ideas, by following good gardening practices and environmental- and work safety requirements.

1	Planning work and tools	Gardener's assistant, EQF level 3	Gardener, EQF level 4
1.1	calculating production plan and –volume and putting together procedures for sowing		X
1.2	calculating material volume		
1.3	selecting and acquiring materials		X
1.4	assessing the growth substrate and location		X
1.5	organizing plant protection procedures		
1.6	organizing fertilizing		
1.7	planning the demand for labor		X
1.8	planning the demand for mechanisms		
1.9	planning the work time and -volumes		X
1.10	creating a budget of expenditures		
2	Preparing the sowing and planting area, and sowing and planting		
2.1	preparing the workplace (depending on field)	X	X
2.2	fertilizing		X
2.3	assessing the quality of nursery stock	X	X
2.4	sowing, prickling and planting	X	X
2.5	mulching	X	X
2.6	supporting	X	x
2.7	instructing colleagues		X
3	Caring for horticultural plants		
3.1	assessing the need for care procedures		X
3.2	fertilizing	X	X
3.3	watering	X	X
3.4	performing mechanical (furrow harrowing, cultivation, etc.) care		X

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3.5	performing plant protection tasks (chemical and biological)	X	X
3.6	weed repellence (hoeing, weeding)	X	X
3.7	protecting the plantation		X
3.8	design and cutting		X
4	Harvesting crops / produce, its preservation and preparation for sale		
4.1	assessing the quality of crops / produce		X
4.2	selective and bulk harvesting and piecing out the produce	X	X
4.3	determining and managing the storage conditions		
4.4	storage	X	X
4.5	sorting and determination of quality categories for the produce		X
4.7	packaging and labelling		X
5	Propagating foliage and growing cuttings		
5.1	grafting		
5.2	propagating foliage		
5.3	propagating cuttings		
5.4	generative propagation		
5.5	growing cuttings		
5.6	packaging and labelling produce		
6	Management (level 4)/Management and budgeting (level 4)		
6.1	creating business plan		
6.2	calculating the profitability of the organization		
6.3	supervising one gardener or a small workgroup		X
6.4	counselling colleagues		X
6.5	creating a budget and work schedule and making sure that it will be fulfilled		
6.6	checking if quality requirements are being followed		X
6.7	compiling and presenting reports		
	Optional competences		
7	Propagating foliage and growing cuttings		
7.1	grafting	X	X
7.2	propagating foliage	X	X
7.3	propagating cuttings	X	X
7.4	generative propagation	X	X
7.5	growing cuttings	X	X
7.6	packaging and labelling produce	X	X
8	Planting and maintaining lawn		
8.1	ground preparation	X	X

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8.2	laying down the grass surface	X	X
8.3	sowing	X	X
8.4	installing transplant grass	X	X
8.5	watering the grass	X	X
8.6	evaluating the need for mowing, and mowing grass	X	X
8.7	evaluating the need for fertilization, and fertilizing	X	X
8.8	caring for lawn	X	X
9	Creating and maintaining greenery		
9.1	marking planting areas, their height and location of plants	X	X
9.2	preparing growth base	X	X
9.3	installing the edges of the planting area	X	X
9.4	installing geotextiles	X	X
9.5	sowing seeds	X	X
9.6	planting large trees/brushes	X	X
9.7	mulching	X	X
9.8	clipping or rejuvenating the hedge	X	X
9.9	caring for plants and planting areas	X	X
9.10	performing plant protection activities	X	X
9.11	fertilizing	X	X
9.12	taking care of and styling fruit trees and berry bushes, rejuvenation clipping	X	X
9.13	composting plant clippings	X	
10	Installing paving (concrete stone, natural stones, wood- and sifting paths)		
10.1	laying down paths and sites	X	X
10.2	hollowing out the path and building a ground layer	X	X
10.3	installing path borders and paving	X	X
10.4	finishing different types of paving	X	X
11	Selling garden goods		
11.1	designing the interior and exposition at the sales location	X	X
11.2	preparing goods for sale and placing them to the sales area	X	X
11.3	compiling and handling accompanying documents and parcel reports	X	X
11.4	finding out the needs of customers	X	X
11.5	formalizing orders received from customers	X	X
11.6	counselling customers and introducing products	X	X
11.7	selling products and offering an opportunity to perform additional purchases	X	X
11.8	billing customers	X	X

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11.9	packaging goods	X	X
11.10	solving problems and customer complaints	X	X
12	Creating flower arrangements and compositions		
12.1	picking the best solution	X	X
12.2	establishing a goal	X	X
12.3	planning time	X	X
12.4	co-ordinating the distribution of work of subordinates	X	X
12.5	establishing the price of work	X	X
12.6	packaging flower arrangements	X	X
12.7	organizing the transportation of flower arrangements	X	X
13	Creating and maintaining indoor greenery		
13.1	analyzing the condition of the object of indoor greenery	X	X
13.2	creating a project budget (work description)	X	X
13.3	establishing indoor greenery	X	X
13.4	deciding on the maintenance requirements of indoor greenery and performing maintenance	X	X
13.5	establishing a maintenance schedule	X	X
	Transversal competences		
14	Transversal competences of a gardener's assistant		
14.1	values ethical beliefs	X	X
14.2	long-term planning of work and instructing colleagues		
14.3	showing physical co-ordination and resilience	X	
14.4	fulfilling obligations taken and carrying out work goals within specified time period	X	X
14.5	creating an internal contact network within the company		
14.6	participating in teamwork	X	X
14.7	voicing and defending their opinion		X
14.8	developing work-related knowledge and using field-specific knowledge		
14.9	analyzing, using and collecting information		
14.10	learning from success, failures and criticism		
14.11	following long-term goals and interests of the company in their activities		
14.12	using resources efficiently, keeping up with deadlines		



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14.13	is familiar with activities of competitors and colleagues and economy		
14.14	assessing risk factors and environmental risks	X	X
14.15	keeping workplace and tools in good order	X	
14.16	providing first aid	X	X
14.17	language skills	X	X
14.18	using a computer	X	X

Terms related to the professional field of a gardener

FUNDAMENTALS OF AGROTECHNOLOGY (including floriculture)

1. Selecting site
2. Cultivating in crop rotations
3. Cultivating in monoculture
4. Intermediate crops
5. Preparing seeds
 - 5.1 Sorting
 - 5.2 Processing seeds / sets before sowing / planting
 - 5.3 Stratification
6. Sowing seeds / planting sets
 - 6.1 Sowing and planting period
 - 6.2 Sowing methods, depth and nearness
 - 6.3 Planting depth
 - 6.4 Machinery
7. Growth time care
 - 7.1 Goals and care systems
 - 7.2 Weed-killing systems, chemical weed-killing
 - 7.3 Agricultural machinery and minimizing care procedures
8. Watering
 - 8.1 Water consumption and factors affecting it
 - 8.2 Optimal moisture and defining the watering time
 - 8.3 Watering norms-, intensity, -systems
 - 8.4 Machinery
9. Cultivation tools
10. Harvesting
 - 10.1 Harvesting times and methods
 - 10.2 Harvesting machinery, loss of harvest during harvesting
11. Different growing technologies / according to the specifics of product use
 - a) mechanization options and their economic analysis
 - b) diseases and repellents
 - c) pests and repellents
 - d) seed cultivation
 - e) preservation:

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- 1) preparation for preservation
- 2) factors affecting preservation, loss on preservation,
- 3) storage, equipment

OTHER TERMS

1. Vegetables – vegetables and fruits and garden berries (Source:ÕS)
2. Horticultural products (vegetables, flowers, sets)
3. Dendrology – science of trees and shrubs (Source:ÕS)
4. Plantation – plot where perennial crops have been planted together (Source:ÕS)
5. Clone sorts and crops reproduced by seeds (population and line sorts) (Source: Puuviljad ja marjad Eestis 2010. 1.4.3)
6. Culture (garden, agricultural, etc.) – a plant culture growing in the garden or field (Source:ÕS)
7. Microreproduction (shoot-tip grafting and microcloning) (Source:Taim ja aednik, 8.2.5)
8. Cuttings and green cuttings (Source: Taim ja aednik, 8.2.5)
9. Seedling- and clone stock (Source: Puuviljad ja marjad Eestis 2010. 7.1)