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QUALITYFOREST

•BEKWAAMHEIDSONDERDEEL•

Het vellen en verder verwerken van een
boom d.m.v. een kettingzaag



PARTNERS

- SPANJE**
- CTFC**  ■ CONSORCIO CENTRO DE CIENCIA Y TECNOLOGÍA FORESTAL DE CATALUÑA
Rosa M. Ricart
rosa.ricart@ctfc.cat

 Generalitat de Catalunya
Consorci per a la Formació Contínua de Catalunya
Esperanza Rodríguez
esperanza.rodriguez@gencat.cat

■ FRANKRIJK

-  ■ CENTRE FORESTIER DE LA RÉGION PROVENCE ALPES CÔTE D'AZUR
Christian Salvignol
salvignol@centre-forestier.org

■ BELGIË



Christine Verecken
christine.verecken@lne.vlaanderen.be

■ PORTUGAL

-  ■ ASSOCIAÇÃO NACIONAL DAS EMPRESAS FLORESTAIS, AGRÍCOLAS E DO AMBIENTE
Pedro Ramos
geral@anefa.pt

■ BULGARIJE

-  ■ UNIVERSITY OF FORESTRY
Petar Antov
p.antov@ltu.bg

■ POLEN

-  ■ SZCZECINSKA SZKOŁA WYZSZA COLLEGIUM BALISTICUM
Maria Bitel
m.bitel@cb.szczecin.pl

■ SLOVENIË

-  ■ ZAVOD ZA GOZDOVE SLOVENIJE
Jurij Beguš
Jurij.Begus@zgs.si

Bijkomende partners

 Generitat de Catalunya
Institut Català de les Qualificacions Professionals

 **EFESC**
European forestry and environmental skills council

 **hazi**
SERVEIS PROFESIONALS D'INVESTIGACIÓ, FORMACIÓ I APRENDIZATGE

 **cifse**

 Centro de Formación e Experimentación Agroforestal de Ourense
CONSELLERÍA DO MEDIO RURAL

 GOBIERNO DE CANTABRIA
CONSEJERÍA DE EDUCACIÓN
I.E.S Foramontanos
Avda. de la Constitución 51
39500 Cabezón de la Sal (Cantabria)

 INSTITUTO DE FORMACIÓN
AGROFORESTAL DE LA ALBERCA

 JUNTA DE ANDALUCÍA
CONSEJERÍA DE MEDIO AMBIENTE Y ORDENACIÓN DEL TERRITORIO

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BEKWAAMHEIDSONDERDEEL

Het vellen en verder verwerken van een boom d.m.v. een kettingzaag

Level: 2

Code: UC1116_2

State: BOE (Official State Gazette)

Professionele presatie en prestatiecriteria

PP1: Het dagelijks onderhoud en Xservicing van de kettingzaag en de werkuitrusting om een perfecte werking te behouden

PC1.1 De functionaliteit van de veiligheidsvoorzieningen worden gecontroleerd of deze in goede staat zijn en ze worden vervangen of hersteld indien nodig om de veiligheid en gezondheid op de werkplek te vrijwaren.

PC1.2 De gehele ketting wordt nagekeken, scherp gesteld, vastgemaakt of vervangen indien nodig op veilige werkomstandigheden te garanderen die in lijn liggen met het aangerade gebruik door de fabrikant of in het handboek.

PC1.3 Het zaagblad wordt nagekeken, proper gemaakt en aangepast indien nodig om veilige werkomstandigheden te garanderen die in lijn liggen met het aangerade gebruik door de fabrikant of in het handboek.

PC1.4 De bougie en de lucht- en brandstoffilters worden nagekeken of vervangen volgens de instructies van de fabricant om een correcte mix van brandstof en/of smeermiddelen te garanderen. Op een manier die de impact op het milieu tot een minimum beperkt en de performancie van het toestel verhoogt evenals de leefduur van het machine te verlengen.

PC1.5 Het tandwiel van de kettingzaag wordt nagekeken en indien nodig vervangen om slijtage aan de drive links te vermijden en om het invetten volgens de voorgestelde condities van de fabrikant of in het handboek te faciliteren.

PC1.6 Het startmechanisme wordt nagekeken, proper gemaakt en aangepast indien nodig om veilige werkomstandigheden te garanderen die in lijn liggen met het aangerade gebruik door de fabrikant of in het handboek.

PC1.7 De kettingzaag wordt aangezet en nagekeken om zich ervan te verzekeren dat alles goed werkt en dat aanpassingen en/of reparaties uitgevoerd zijn indien nodig.

PC1.8 De persoonlijke beschermingsmiddelen (PBM's) worden regelmatig nagekeken om te verzekeren dat deze gepast is en volledig in overeenstemming is met de veiligheidsregels die van kracht zijn. De veroudering van de deadline of periode van veroudering van PBM's of de componenten van de PBM's mag niet verlopen zijn. Verder moet elke slijtage of verslechtering nagekeken worden zodoende de veiligheid van de werker te verzekeren.

PC1.9 De EHBO kit wordt regelmatig nagekeken om zeker te zijn dat alle nodige elementen hier in zitten en nog steeds in goede conditie zijn. Waarbij niets mag vervallen zijn om de aanwezigheid van de basis sanitaire uitrusting te garanderen in het geval van een ongeluk.

PC1.10 Het werk wordt in veilige werkomstandigheden en met oog voor de gezondheid uitgevoerd. Dit in naleving van de voorschriften binnen de beroepsrisico's en/of het veiligheidsplan. Tegelijk wordt de omgeving gerespecteerd overeenkomstig specifieke wetgeving met betrekking tot het uitgevoerde werk.

PP2: Bij het vellen van bomen met een kettingzaag voor economische exploitatie wordt de velsnede zo laag mogelijk gemaakt, terwijl de beroepsrisico's tot een minimum worden beperkt.

PC2.1 goederenvervoer? The ground is outlined in order to organise the work and facilitate haulage.

PC2.2 Het vellen wordt voorbereid door de stam proper te maken, het bepalen van de valrichting en door de vluchtroute vrij te houden van obstakels.

PC2.3 Een valkerf wordt gemaakt om de valrichting te bepalen om de volgende processen en het goederenvervoer te faciliteren om de schade te minimaliseren.

PC2.4 De valkerf wordt uitgevoerd d.m.v. verschillende technieken rekening houdende met de relatie tussen de lengte van het kettingzaagblad, de diameter van de boom en de helling zodoende de boom in de juiste richting valt zonder houtschade en om beroepsrisico's tot een minimum te beperken.

PC2.5 Dwerkingskosten voor de zelfstandigen moet geschat worden met zicht op hogere overheadkosten.

PC2.6 Het werk gebeurd in veilige en gezonde werkomstandigheden, in naleving van het beroepsrisicoreglement en/of het veiligheidsplan. Tegelijk wordt de omgeving gerespecteerd en in overeenstemming met elke specifieke reglementering over het uitgevoerde werk.

PP3: Bij het verwerken van het hout en de boomstammen met een kettingzaag voor economische exploitatie wordt het meeste hout verzekerd terwijl de beroepsrisico's tot een minimum beperkt blijven.

PC3.1 Het ontakken met een kettingzaag gebeurt met technieken die de perfomantie verhogen en beroepsrisico's minimaliseren.

PC3.2 Het hout van de geveld boom wordt gemarkeerd om de boomstam (log) in de juiste lengte te zagen.

PC3.3 Het hout wordt loodrecht gezaagd langst de gemarkeerde punten om stammen te verkrijgen en scheuren of het vastzitten van het kettingzaagblad te vermijden.

PC3.4 De stammen worden volgens hun kwaliteit en bestemming gebundeld om het opladen met de kraan te faciliteren.

PC3.5 The cost of work to be carried out by the self-employed should be estimated with a view to advancing the cost of overheads.

PC3.6 The work is carried out in safe and healthy working conditions, complying with occupational risk regulations and/or the site's safety plan, while respecting the environment and in accordance with any specific regulations on the work being performed.

Professional context

Means of production

Measuring equipment: measuring tapes, tree callipers and so forth. Means and material for signage and marking. Personal protective equipment for working with a chainsaw. Felling lever, axe, mallet and suchlike. Belt with: auto-rewind tape measure, cant hook, pliers, wedges, files, chainsaw ignition keys and a first aid kit. Winch. Debarker. Spare parts for the basic upkeep of the machinery.

Products and outcomes

Felled, limbed, bucked and occasionally debarked trees. Logs selected and bunched together.

Information used or generated

Topographical plans. Catalogues of forest species. Production charts. Price lists of wood and logs.

Price lists of different jobs. Technical plan or project of forest use.

Machinery and equipment user and maintenance guides. Examples of occupational risk prevention plans and safety plans.

Regulations in force regarding health and safety. Specific legislation on the work to be carried out.

LEARNING MODULE

Felling and tree's processing with a chainsaw.

Level: 2

Code: MF1116_2

Related to the CU: UC1116_2 - To carry out the felling and tree's processing using a chainsaw.

Duration (hours): 120

State: BOE (Official State Gazette)

Capacities and assessment criteria

C1: To describe the features and parts of a chainsaw as well as the equipment necessary to work and maintain it.

AC1.1 Describe the personal protective equipment for work with a chainsaw.

AC1.2 Describe chainsaws' safety features.

AC1.3 Describe ancillary equipment for work with chainsaws.

AC1.4 Explain the components and the functioning of the machine, defining the different working elements, their functionality and optimum work features.

AC1.5 Describe the regular maintenance tasks performed on the machine and the equipment.

AC1.6 Explain how to refuel and restart the chainsaw safely.

AC1.7 In a perfectly identified case study involving the maintenance of a chainsaw and the equipment necessary to work with one:

- Check that all elements of personal protective equipment are available and that they are in good working order; if not, discard them.
- Check that the machine and especially its safety features are operative.
- Carry out maintenance on the safety features.
- Carry out maintenance on the cutting system (blade, chain and sprocket).
- Perform cleaning operations and replacement of filters and the spark plug.
- Carry out adjustment and replacement of starting mechanism components.
- Check that the first aid kit has everything necessary and is ready for use.
- Refuel the machine with the correct mix and top up the chain oil reservoir.
- Start up the chainsaw safely, keeping correct work positioning while checking its safe operation and taking any necessary measures in case it is not in good working order.
- Complete a maintenance report, recording any observations and an estimated time for the next service.
- Perform the aforementioned work while taking the necessary occupational risk prevention measures, minimising environmental impact in line with regulations in force.

C2: To describe tree felling techniques with a chainsaw in different situations to obtain the greatest amount of timber possible while keeping risks to a minimum.

AC2.1 Describe the constraints determining the natural fall direction of a tree and the circumstances that may oblige one to choose a different one.

AC2.2 Explain how to make the directional knot in a tree, bearing in mind the different circumstances one may be in (balance, lean, hollowness, etc.).

AC2.3 Explain the different techniques for the felling cut with respect to the tree's diameter, the blade and possible special conditions of the tree and its surroundings.

AC2.4 Explain how to control tree fall speed, the main risks involved in the task and the working techniques and preventative measures to be taken.

AC2.5 When presented with a tool or a piece of material or equipment used in the felling and use of trees with a chainsaw, describe it and relate it to such work (wedges, lever, mallet, etc.).

AC2.6 Present occupational risk situations during tree felling and processing operations with a chainsaw and the preventative measures to avoid them.

AC2.7 In a perfectly identified practical case study:

- Outline the ground, setting its edges and planning the haulage work.
- Prepare an action plan in the event of emergency and have the necessary means available to carry it out.
- Check that all possible work equipment is at hand even in the event of possible incidents and that it is in perfect working condition.
- Perform preparatory tree felling operations: clearing of the base of the tree and the escape routes, delimiting and ensuring that there is no risk to bystanders or animals.
- Carry out the felling of straight or slightly forward leaning trees with a cutting diameter which is inferior to blade length
- Carry out the felling of straight or slightly forward leaning trees with a cutting diameter which is superior to blade length but less than double its length.
- Carry out the felling of straight or slightly forward leaning trees with a cutting diameter which is superior to double blade length.
- Carry out the felling of hard leaning or top heavy trees.
- Carry out the felling of trees against the natural lean.
- Carry out the felling of hollow, rotten and dried out trees.
- Carry out the felling of trees downed by the wind.
- Solve situations in which trees are stuck.
- Do calculations in order to evaluate the work financially.
- Carry out the aforementioned work while taking occupational risk prevention measures, minimising environmental impact and following the regulations in force.

C3: To describe tree processing techniques with a chainsaw to facilitate their later utilisation.

AC3.1 Determine the risks involved and explain the preventative measures to be taken during delimiting operations.

AC3.2 Explain different delimiting techniques and state which one is recommendable in each case.

AC3.3 Explain how to mark with auto-rewind tape measures to obtain logs to the required measurements.

AC3.4 Determine the risks involved and explain the preventative measures to be taken during log cutting and stacking operations.

AC3.5 Explain cutting techniques which avoid unnecessary risks and facilitate efficient work, indicating particularly when wood tension and compression is present.

AC3.6 In a perfectly identified practice on the processing of a felled tree:

- Carry out risk evaluation and take preventative measures prior to task commencement.
- Prepare an action plan in the event of emergency and have the necessary means available to carry it out.
- Check that the necessary equipment is at hand and that it is in perfect working condition.
- Carry out delimiting and marking with suitable techniques.
- Cut logs to the required length.
- Stack the logs, bunching them by quality and facilitating their subsequent haulage.
- Leave the work area tidy and clean and if necessary, leave warning signs to prevent any accidents.
- Do calculations in order to evaluate such work financially.
- Perform the aforementioned work while taking the necessary occupational risk prevention measures, minimising environmental impact in line with regulations in force.

Capacities whose acquisition should be completed in a real working environment

C1 with respect to CE1.7; C2 with respect to CE2.7; C3 with respect to CE3.6.

Other capacities:

Adapt to the company's work organisation and understand the hierarchical relations within it.

Interpret instructions properly and become responsible for carrying them out.

Communicate effectively with the right interlocutor at every moment.

Follow timetables and the rhythm of work, fulfilling daily performance objectives fixed by the company.

Display interest in the company's growth forecasts.

Become involved in the company's quality plan and in the improvement of occupational health and safety.

Display a respectful attitude to colleagues, procedures and the company's internal regulations.

Contents

1 The chainsaw and its equipment

Chainsaws: types, components, safety devices and elements. Personal protective equipment. Ancillary work equipment.

2 Maintenance

Maintenance and repair of minor breakdowns. Refuelling and start up. Tools and means to be used.

Risk assessment and preventative measures to be taken (health, safety and ergonomics).

3 Felling

Felling: choice of chainsaw and/or type of blade and chain. Planning of felling: sequence of work, extraction routes, obstacles, inspection of the tree to be felled and meteorological conditions, escape routes, preparation for cutting. Cutting techniques: notch and felling cut, control of falling speed, different

techniques according to the relation between the cutting diameter and blade length,

Special techniques: leaning and top heavy trees, hollow trees.

Particularly hazardous situations. Procedure in the event of emergency and evacuation.

4 Processing

Delimbing techniques. Log cutting: tension and compression of wood, cutting techniques. Stacking.

Procedure in the event of emergency and evacuation.

5 Basic regulations regarding the felling and processing of trees.

Forestry legislation. Environmental regulations. Regulations on occupational risk prevention.

Learning context parameters

Spaces and facilities

An agricultural workshop with an area of 90 m²

Multipurpose classroom of at least 2 m² per student. Premises: Minimum area of 10 hectares (wooded ground) (A unique space not necessarily situated in the educational centre)

Professional profile of teaching staff:

1. Command of the knowledge and techniques related to the felling and processing of trees with a chainsaw, which should be accredited in one of the following ways:

- An academic qualification as a Technical Engineer or of a similar type at higher level and related to this professional field.

- Professional experience of at least 3 years in the competences related to this learning module.

2. Accredited pedagogical competence in accordance with the relevant authority's regulations.



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