Single tree silviculture (STS)

Silvicultural approach that early selects a limited number of target trees to which ensure a free and harmonious development of crown and trunk. The thinnings are selective or from above and they are oriented to remove the direct competitors of the target trees, preserving the remaining stand. The target trees are chosen as a function of vigor, stability, tree morphology, spatial distribution. The number of released target trees (from 50 to 120 per hectare) depends on the site characteristics, the species, the biotic and abiotic risks, the type of owner, the silvicultural goal. · This approach can be applied in high forests and in coppices, in conifers (as Pinus nigra and Pseudotsuga Douglasii) and broad-leaved species, to social (Fagus sylvatica and Quercus sp.) and valuable (Castanea sativa) or sporadic tree (Prunus avium, Sorbus sp., Fraxinus sp., …) species, in public or private property. To apply this method is necessary: Specific training and care of technicians and workers from tree marker to logging Specific training of people involved in the control of the forest utilization. · From an economic and productive point of view: decreasing the management costs reduction of rotation time increasing of quantity and quality of assortments production of high-quality timber relatively quickly enhancement of phenotypes and / or species potentially able to produce quality timber - From an ecological and environmental point of view: increase of individual and stand stability increase of biodiversity increase of structural complexity maintenance of an irregular canopy cover protection of sporadic species - From a social point of view: integration with the traditional forestry increase of non-wood products increase of landscape value

DETAILS

ORIGIN OF WOOD
Forest

TYPE OF WOOD
Stemwood

KIND OF WOOD CONCERNED
Stemwood

IMPACT ON ENVIRONMENT & BIODIVERSITY
Positive effects

INCOME EFFECT
Possibility to obtain income more frequent during the rotation period

EXPLOITATION POTENTIAL
--

HUB
--

ECONOMIC IMPACT
Enhancement of valuable assortments; decrease of management cost but increase of expertise of forest companies

MOBILIZATION POTENTIAL
Similar to traditional silviculture but with a higher amount of big and more valuable assortments

SUSTAINABILITY POTENTIAL - VALUE
--

EASE OF IMPLEMENTATION
Medium implementation due to the great attention during the cutting and logging phases

EASE OF IMPLEMENTATION - EVALUATION
--

KEY PREREQUISITES
Awareness of all stakeholders in the supply chain

TYPE OF EVENT WHERE THIS BPI HAS BEEN FEATURED
--

JOB EFFECT
Connection to other wood and no-wood chain

COSTS OF IMPLEMENTATION (EURO - €)
--

SPECIFIC KNOWLEDGE NEEDED

Forest training

MORE DETAILS

CHALLENGE ADDRESSED

--

DOMAIN

Forest management, ecosystem, resilience

TYPE OF SOLUTION

--

KEYWORDS

--

DIGITAL SOLUTION

No

INNOVATION

No

COUNTRY OF ORIGIN

Italy

SCALE OF APPLICATION

National

START AND END YEAR

2010 - 2019

CONTACT DATA

OWNER OR AUTHOR

REPORTER

francesco.pelleri@crea.gov.it

REFERENCES AND RESOURCES

MAIN WEBSITE

http://www.selvicoltura.eu/

RESOURCES

--

PROJECT WEBSITE

--

PROJECT REFERENCE

--

PROJECT UNDER WHICH THIS FACTSHEET HAS BEEN CREATED

Rosewood

POST DATE

18 Sep 2019

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862681

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY