

FACTS AND FIGURES

Dagnija Lazdiņa and Santa Celma

Definitions

Coppice – deciduous tree stand that develops from shoots. Development of coppice depends on shoot production and regeneration ability. Trees that can regenerate with shoots multiple times include grey alder, black alder, birch, aspen, ash, oak and willow. Shoot sprouting activity gradually increases with tree age until it reaches physical maturity. At this point tree has the highest ability to sprout and grow shoots. Therefore, it is important to set an appropriate felling age to fit trees maturity (40-60 years). Felling time influences natural regeneration as well. The second half of winter is considered the most appropriate time for felling, since tree stumps sprout productively in the next spring and they have enough time to mature before autumn frosts start.

J. Bisenieks

Meža enciklopēdija, Apgāds “Zelta grauds”, 2005

Atvasājs — lapkoku audze, kas izveidojusies no atvasēm. Atvasāja veidošanās atkarīga no koku atvašu dzišanas spējas. Vairākkārt un ilgstoši atjaunoties ar atvasēm spēj baltalksnis, melnalksnis, bērzs, apse, osis, ozols un vītols. Pieaugot koka vecumam, pieaug arī atvašu dzišanas spējas, līdz koks sasniedz fiziskās gatavības vecumu. Tad kokam ir visaugstākā atvašu dzišanas spēja. Tādēļ, lai pēc mātesaudzes nociršanas panāktu sekmīgu izcirtuma apmežošanu ar atvasēm, jānoteic koku fiz. gatavības laikam (parasti 40—60 g.) pieskaņots cirtmets. Dabiskā atjaunošanās atkarīga arī no koku ciršanas laika. Par izdevīgāko uzskata ziemas otro pusi, jo tad pavasarī celmi bagātīgi dod atvases un tās līdz rudens salnām paspēj nobriest.

Legal Framework

1. Short rotation coppice - as agricultural land if planted with *Salix* spp., *Populus* spp., *Alnus incana*, on rotations of no more than 5 years. No restriction for density.
2. Forest land - more than 20% cover and over 5 m height.
 - 2.1. Plantation forests - no restriction for felling age.
Pine at least 1,000 plants/ha initially; oak - 800/ha; ash - 500/ha.
 - 2.2. Forest - defined felling by age or dimensions, initial density 3,000/ha pine, other species 2,000. (www.likumi.lv). NB: “Natural regeneration” means that <50% of trees were planted/seeded.

Statistics

There are no official statistics for coppice. Species that can regenerate as coppice in Latvian forests (total area 2,903,413 ha) are: birch (1,001,737 ha), aspen (151,855 ha), black alder (121,770 ha), grey alder (32,502 ha), ash (18,529 ha), oak (8,846 ha), linden (1,982 ha) and beech (119 ha). Species managed as agricultural crops that were declared for common agriculture payments in 2016 are: willow (516 ha), aspens (174 ha) and grey alder (14 ha).

Typology

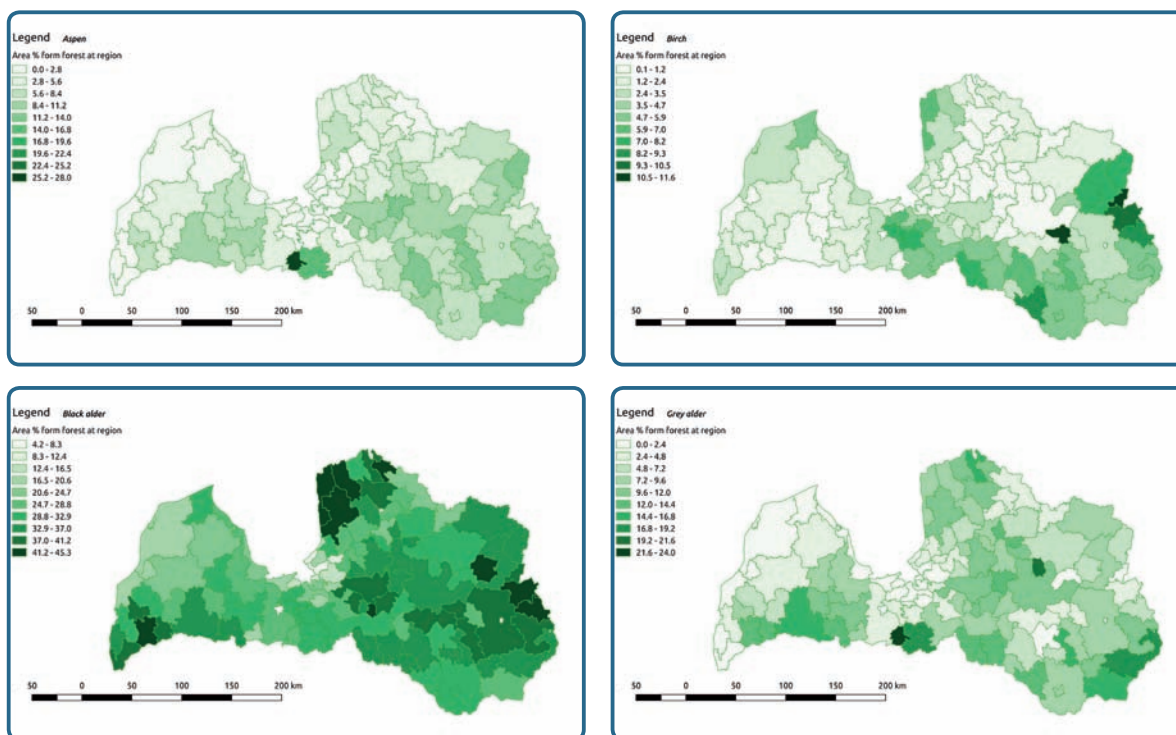
Simple coppice	Traditional natural forest regeneration method
Coppice with standards	Uncommon; <i>Populus</i> , <i>Alnus</i> , <i>Betula</i> , seldom <i>Salix</i>
Pollarding	Only on roadsides and in gardens
Short rotation coppice	<i>Populus</i> , <i>Alnus incana</i> , <i>Salix</i>
Other types	Few stands regenerated with poles or stakes (1.5 - 2 m)

Images



MAPS

Dagnija Lazdiņa



Distribution of four tree species sometimes used for coppice in Latvia (species as % of forest in region):
Aspen (upper left), birch (upper right), black alder (lower left) and grey alder (lower right).

Data source: Latvia State Forest Service Statistic CD 2016

DESCRIPTION

Dagnija Lazdiņa

Coppice as a forest management system is not separated from forestry in general. However, short rotation coppice (SRC) is separately defined as “areas planted with certain tree species, where the tree roots and stumps are left in the soil after harvesting and in the next vegetation season gives new shoots”. The rotation period of SRC is normally five years, in order to receive common agriculture payments. However, it is allowed to keep up to 15 year rotation periods for poplars, willows and grey alder and still be considered an agricultural crop. In 2016, 516 ha of willows, 174 ha of aspens and 14 ha of grey alder received common agriculture payments.

No statistics on coppice forests in Latvia are available. However, it is estimated that aspen, birch, alder, willow and osier are common coppice species in naturally regenerated and planted forest areas, where they have naturally sprouted from former forest stand tree stumps or root suckers (Fig. 1). Hazel, linden and ash are also at times naturally regenerated as coppice in some old wetlands. Coppice is more common in privately owned forests, which have a greater proportion of broadleaves than the state forests (Fig. 2). The proportion of private and state forests is close to 50:50.



Figure 1. Coppice in Latvia landscape and forests; willow on roadside (left), hybrid aspen stands (middle), black alder wetlands (right)

Both grey and black alder are widely spread in the Latvian landscape. Grey alder is a pioneer species on abandoned former agriculture land, but black alder contributes to the biodiversity of old forests in wetlands providing habitat for living organisms. Black alder also grows on the banks of small forest rivers and ditches.

Willows are mainly distributed near water reservoir banks, protected wetlands and “poorly managed” forest properties. In addition to their use in short rotation coppice, willows, including decorative varieties, are also used in flower gardens and industrial parks. Coppice forest products are becoming fashionable as interest increases in the centuries-old traditions

of using willows and osiers materials for different craft work, fences and apiculture as early flowering trees.

Poplars are still used as windbreaks, shelterbelts and fast growing landscaping trees; they are commonly planted along roads and on borders between properties.

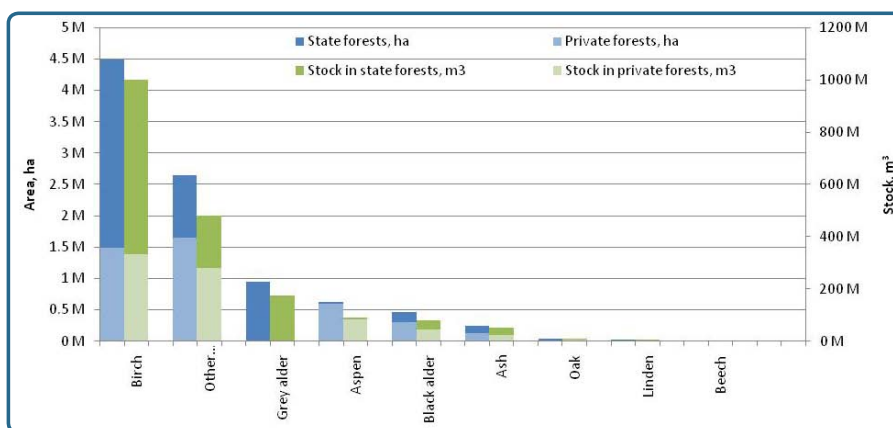


Figure 2. Growing stock (in millions – M) of traditional coppice forest species and area in Latvia forests (Source: VMD CD2016)

FORESTRY REGULATIONS

Kristīne Štikane and Dagnija Lazdiņa

Latvia is situated in the boreo-nemoral zone, a transition between the temperate and boreal forest zones where mixed forests of broadleaves and conifers are common. Forests cover about 50% of the area of Latvia.

Basically, the three dominant tree species in the forests of Latvia are pine (*Pinus sylvestris*), spruce (*Picea abies*) and birch (*Betula pendula*). According to the 2010 National Forest Inventory (NFI) data, potential coppice species making up of the forest area of Latvia include birch (27.9%), grey alder (*Alnus incana* 9.8%), aspen (*Populus tremula* 7.7%), black alder (*Alnus glutinosa* 5.1%), ash (*Fraxinus excelsior* 0.8%) and oak (*Quercus* spp. 0.7%). There is no data available for willow (*Salix* spp.) because it is not widely planted as a main species in the forest.

After the restoration of Latvia's independence in 1990, the forestry sector has become one of the most important sectors in the country's economy. Since then, the forest area in the country has increased by around 60,000 hectares per year. That was the first time when representatives of the timber industry began to gather together in associations, so as to be able to defend their interests more successfully; not only in Latvia, but also in export markets. Exports of forestry products are more than 70 times higher than they were 20 years ago. Meanwhile, a list of specially protected environmental territories (IADT) was established in 1993.

On April 28, 1998, the government of Latvia adopted the **Forest Policy**, which has been developed to reach a compromise among all stakeholders interested in forestry. Prerequisites of a sustainable forest management are the targets defined and principles established in Latvia's Forest Policy. In 2000, the **Latvian**

Forest Industry Federation was established to assist in the development and coordination of the activities of the various associations, in order to agree on fundamental principles aimed at preserving the national forest for future generations, as well as representing the interests of the timber industries at the international level. Since 2000, the **Ministry of Agriculture** performs the regulatory function laid down in the Forest Policy while the monitoring function is done by the **State Forest Service**.

In Latvia, considerable emphasis is placed on “planted forests”, in which over 50% of trees were planted or sown, as opposed to having regenerated naturally, and this is reflected in the national regulations and definitions. The rationale is that improved planting material from tree breeding leads to a higher forest productivity and it is, thus, good practice to ensure as many trees as possible originate from such a source. It results in particular consequences for coppice, since for each shoot of stump or root origin, at least one additional tree should be planted or sown for the stand to achieve the desirable “planted forest” status.

The major part of the forest area possessed by the state is managed by the state-owned business operator; the **joint-stock company “Latvijas valsts meži”** (Latvian State Forests) manages and administers 1.63 million ha of land, including 1.60 million ha of forest land, which incorporates 1.41 million ha of forest.

In 2004, when Latvia joined the European Union, it automatically became part of the unified **Natura 2000** network of protected territories in the EU. Among the species and biotopes that are listed in the EU's bird and biotope directives, Latvia protects 60 types of

biotopes. There are several protected forest biotopes in Latvia which are listed in the relevant EU directive – boreal forests, primary forests along meandering rivers, certain coniferous forests, stands of oaks, forests on hillsides and in valleys, swampy forests, wet broadleaf forests, forests on river banks with oak and elm trees, dry fields of heather along seashore lowlands and other areas, wet fields of heather with crossleaved heath (*Erica tetralix*), as well as stands of juniper in calcified meadows.

There are many **forest habitats in Latvia protected by the EU directive**, which includes territories in which coppice tree species are common:

9010* Western taiga, which is typically dominated by pine, spruce, aspen and birch, or their combination.

9020* Fennoscandian hemiboreal communities of natural, old broad-leaved deciduous forests (of *Quercus*, *Tilia*, *Acer*, *Fraxinus* or *Ulmus*); rich in epiphytes. The tree layer typically is dominated by an admixture of ash, elm (*Ulmus* spp.), willow, lime (*Tilia* spp.), oak and aspen in different combinations, but with none of them dominant. A minor admixture of spruce, birch and pine is possible.

9080* Fennoscandian deciduous swamp forests are typically dominated by alder, ash, birch, or in admixture.

References

https://www.zm.gov.lv/public/ck/files/ZM/mezhi/buklets/MN_20_EN.pdf Latvia's Forests

<https://www.zm.gov.lv/en/mezi/jaunumi/the-land-forest-are-major-natural-resources-in-latvia?id=4100>

https://daba.gov.lv/upload/File/Publikacijas/ROKASGR_biotopi_EN.pdf European Union protected habitats in Latvia

9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli community, typically dominated by oak, hornbeam and lime, or in admixture.

9180* Tilio-Acerion forests of slopes, screes and ravines where the tree layer is dominated by lime, ash, oak, elm, willow and maple (*Acer* spp.), or in admixture.

91D0* Bog woodlands are typically dominated by one or more species of pine, spruce and birch; occasionally aspen or alder are found in admixture, but these rarely dominate.

91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-padion*, *Alnion incanae*, *Salicion albae*) are protected under the EU habitat directive where the main species are ash, alder, elm (*Ulmus* spp.), willow, grey alder and bird cherry (*Prunus padus*). These are distinguished by an underlayer of brush and other various trees in admixture with a canopy dominated by aspen or birch.

91F0 Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmion minoris*) typically dominated by oak, elm, willow, or ash, or in different combinations of these species.

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