

Wild cherry

Wild cherry (*Prunus avium*) is a broadleaved species usually found as a companion tree in oak woodland, mixed forest and riverside woodland. It is fairly common in the mountainous areas in eastern Galicia, where the populations are relatively unaltered. In the rest of Galicia, it occurs as isolated specimens or in small stands. It occurs preferentially in cool, shady zones close to rivers and in valley bottoms and mountainous areas.

The timber produced by this species is considered fine hardwood and has a high market value. Growth is intermediate, with trees reaching more than 30 m in height and more than 50 cm in stem diameter.

Planting of selected, certified autochthonous material of known quality and adapted to local environments, with appropriate planting systems on good quality land must be promoted to yield good results in the medium term.



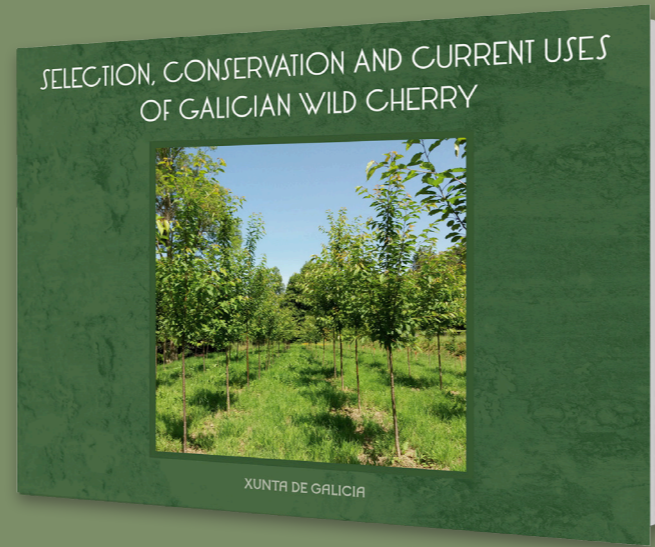
Establishment of cherry forest plantations

Establishment of forest plantations should include the following considerations:

- Use of plants of good genetic and morphological quality, grown for 1-2 years in a nursery, and of height 1-1.5 m.
- Use of soil of suitable depth, with good availability of water and not subjected to flooding or drought during the growth period, to enable optimal growth of the trees.
- Planting in sheltered areas. Valleys and former agricultural land are recommended. Hilltops and areas exposed to prevailing winds should be avoided. The trees should also be protected from predators by fencing the plots, and if considered necessary, using tree guards and stakes.
- Use of suitable spacing, e.g. 4 x 4 m.
- Application of forest management techniques, to yield good growth in a 30-year rotation.
- Pruning branches, especially in trees that tend to form thick branches or whorls that compete with the main stem and prevent formation of straight stems. Branches can be partially pruned at age 1 or 2 years and then completely removed in subsequent years.

More detailed information can be found in the following publication

Selection, conservation and current uses of Galician wild cherry.
2018. Xunta de Galicia.



More detailed information is provided in
<http://lourizan.xunta.gal>
<http://mediorural.xunta.gal>

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NEW REGISTERED VARIETIES OF GALICIAN CHERRY TREES FOR FOREST USE



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Tree selection in the Lourizán Forest Research Centre

Research on the conservation, selection and genetic improvement of the main forest species of interest in Galicia, including cherry, is currently being undertaken at the Lourizán Forest Research Centre.

Preselection of the trees is carried out in the natural area of distribution. The trees are then multiplied in the research centre's nursery. The plants thus obtained are used to establish clonal banks for carrying out experimental trials under controlled conditions. Tree characteristics such as growth, stem and branch form, phenology of shoot emergence and flowering, and resistance to drought and diseases are assessed during the trials. The trees displaying the best characteristics are registered and transferred to the sector.

Collections of selected trees are important for conserving genetic resources and are of great value for studies of the evolutionary origin and environmental adaptation of the different varieties.



Prunus avium Lourizán-3

The survival rate of trees of this clone in the clonal bank is 100%. At age 4 years, the mean height (3.46 m) and mean diameter (2.7 cm) of the trees are greater than in clones *Prunus avium* Lourizán-1 and Lourizán-2 and 26% higher than the overall mean values for trees in the clonal bank.

At age 14 years the mean height of the trees in the clonal bank is 13.6 m and the mean diameter, 14 cm. At 19 years the mean height is 18 m.

All trees have straight stems. The branch insertion angle is more than 60°.

The leaves are mid- to dark green, elliptical tending to oval, with crenate and serrated edges and reddish green kidney-shaped nectaries located on the petiole and at the base of the leaf blade. The clone shows good resistance to cylindrosporiosis and the few fungal spots observed at the end of the vegetative period occupy less than 20% of the leaf surface.

The trees of this clone are the first of the cherry trees in the Lourizán forest material collection to flower. Flowering is abundant, long-lasting and is classified as very early, beginning in the first week of March.



Registered cherry clones

Plantations intended for timber production should be established with clones of demonstrated value, which have been approved for use as reproductive forest material and are adapted to the soil and climate in the proposed planting area.

Before certification, tests must be carried out to demonstrate the quality of the clone in relation to growth, stem form and resistance to diseases. The trees must also be identified by using molecular markers, and the phenological and morphological features of the trees, leaves, flowers and fruit characterised.

Prunus avium Lourizán-1

The survival rate of trees of this clone in the clonal bank is more than 94%. Failures in the plantations are due to a lack of soil of sufficient depth for optimal growth of the trees.

Stem height and diameter growth are respectively 26% and 44% higher than the mean values obtained for trees in the initial trial plantations established with preselected clones. The Lourizán-1 clone tolerates flooding but is very sensitive to drought. When water availability is optimal, height growth of more than 1 m can occur during the vegetative growth period. The trees have straight stems, with no bifurcations in the timber-yielding zone, and branching occurs in whorls.

The leaves are elliptical, elongated, light green and have a short petiole: the mean length of the leaf blade is 11 cm. The leaves usually have one or two reddish-yellow kidney-shaped nectaries. The clone shows good resistance to cylindrosporiosis.

Flowering occurs late in the season, in the second week of April in coastal areas of Galicia.

This clone was registered in 2011 and selected as the reference clone for use in posteriorly established plots. The clones are thus compared with material of known characteristics.



Prunus avium Lourizán-2

This clone is being evaluated, along with the previous clone, in six clonal plantations established since 2004, and the tree survival rate is more than 90%.

Stem height and diameter growth are respectively 14% and 10% higher than the overall mean values obtained in the initial plantations with preselected clones. This result places the clone in the top-performing group, although below *Prunus avium* Lourizán-1.

The trees tolerate flooding but are sensitive to summer drought. When water availability is optimal, height growth of more than 1 m can occur during the vegetative growth period, although stem diameter growth is lower than in *Prunus avium* Lourizán-1. Completely straight stems are observed in 87% of the trees. The stems are not bifurcated and branching occurs in whorls. The angle between the branches and the main stem (insertion angle) is more than 60°.

The leaves are elliptical, light green and have one or two reddish-yellow nectaries. The mean length of the leaf blade is 9 cm. The clone displays good resistance to cylindrosporiosis.

Flowering occurs early on in the season, from 24 March.



Prunus avium Lourizán-4

The survival rate of trees of this clone in the clonal bank is 100%. At age 4 years, the mean height of trees is 3.18 m and mean diameter, 2.4 cm, values which are higher than the overall mean values for the clonal bank and for clones *Prunus avium* Lourizán-1 and Lourizán-2.

At age 14 years, the mean height of the trees in the clonal bank is 10.4 m and the mean diameter, 10 cm. At age 19 years, the trees reach a mean height of 14 m.

All trees in the clonal bank have straight stems. The branches occur in whorls, with a wide insertion angle.

The leaves are mid-to dark green, elliptical tending to oval, with crenate and serrated edges and reddish-yellow kidney-shaped nectaries, located on the petiole and at the base of the leaf blade. The clone shows good resistance to cylindrosporiosis, and the few fungal spots observed at the end of the vegetative period occupy less than 20% of the leaf surface.

The trees in the Lourizán forest material collection flower at the end of March.



Prunus avium Lourizán-5

The survival rate of trees of this clone in the clonal bank is 100%. At age 4 years, the mean height reached is 3.4 m and the mean diameter, 2.4 cm, values which are higher than the overall mean values for the clonal bank and for clones *Prunus avium* Lourizán-1 and Lourizán-2.

At age 14 years, the mean height of the trees in the clonal bank is 13.4 m and the mean diameter, 11 cm. At age 19 years, the mean height reached is 17 m.

All of the trees have straight stems. The branches occur in whorls, with a wide insertion angle.

The leaves are mid- to dark green and are elliptical tending to oval, with crenate and serrated edges and reddish yellow, kidney-shaped nectaries located on the petiole and at the base of the leaf blade. The clone shows good resistance to cylindrosporiosis, and the few fungal spots observed at the end of the vegetative period occupy less than 20% of the leaf surface.

The trees in the Lourizán forest material collection flower at the end of March.

