



Plants are a valuable asset to the environment, but this is enhanced by treating them for **diseases** and protecting them from **insects**:

- large trees may have **stability problems** and create hazards for people and things [foto 1, 2, 3];
- **pest control** against mosquitoes, insects and rats, indoors and outdoors;
- **plans for protection** against diseases and insects in nurseries, grass pitches, gardens, orchards and vineyards;
- **biological or chemical treatments** in gardens;
- **specific technical assessment** for claims and estimates regarding damage to property;
- specific treatment to prevent car bodywork and windows from being stained by **tree resin**.



Regular annual visual monitoring with auscultation of the trees using a rubber hammer

The objective of this is to monitor all green areas, assuming full responsibility for all civil and criminal liability for any falling trees or parts of trees and reporting on which trees should be pruned or cut down [foto 4].

Endotherapy treatments for diseases and insects on trees using authorized products

The care of trees [foto 9] is a very important point, as well as being one of the many aspects regarding respect for nature and can be compared to the care of a mother for her children. No doubt a nice garden with trees and plants leaves visitors with a pleasant memory (eg parks with healthy trees). However, besides the well-being of the visitors, attention to diseases that may affect the trees is of vital importance to the trees themselves. Some diseases such as cancer of the cypress or DED- infected elm are lethal to the plants concerned. Endotherapy is carried out using the Arborjet system, which respects the environment because of the small doses it distributes. It respects the operators because they are not in contact with the mixture thanks to its closed system of recirculating fluid. Citizens in open areas and children in school areas, are also safe because plugs close the holes tightly without leaking the product. The trees are protected due to the immediate

closure of the small holes, preventing any insects or bacteria from settling. The procedure causes no disturbance to traffic and the weather conditions are irrelevant as the product is protected from rain and only one application guarantees protection for one year. This system is the best among those on the market for the rate at which it spreads along plant stems and has recently been used by the University of Bologna in a specific experimental research project. Endotherapy treatments are performed to prevent damage to people (e.g. bugs that sneak into houses like elm seed bugs or pine caterpillar with its stinging hairs), to things (contamination of benches, street furniture or cars in car parks by limescale) or to the plants themselves (defoliation of the horse chestnut by the leafminer Cameraria [foto 10] or the drying effects on palm trees by the red palm weevil or paysandisia [foto 11, 12,13, 14]).



Stereoscopic and microscopic investigations with relevant technical reports

The observation of disease or damage to plant organs is very important if it is supported by microscopic investigations to evaluate the etiological cause, and then to decide the most adequate type of treatment and care to be carried out, (organic, integrated, agronomic, microbiological, chemical).

The latest generation of microscopes used have the ability to take digital photos or video recordings as evidence to be attached to technical reports.



Static control of trees by the instrumental VTA method

The assessment includes analysis and direct measuring using the latest specialized equipment. The measurements are taken using an electronic pulse hammer that detects the presence of any wood alterations due to fungal attacks which have caused the wood to decay or any other internal defects, such as fractures or cavities. This is performed by measuring the reduction of the speed at which the sound wave spreads in the woody tissue of the tree. If any internal defects are found, dendro-B400 Returns hydrometer is used. This can measure the density of the wood and therefore the presence of any cavities, caries, fractures in the wood fibre. The residual strength of the wood tissues is measured with a fractometer which provides measurements on the wood's

resistance to breaking and determines the degree of resistance to the weight of the entire tree. For monumental trees or on the basis of customer requests, we can carry out an innovative and non-invasive Arbotom 3-D tomography, which is simply a three-dimensional map representing the different speeds at which a sound pulse travels inside the tree. The speed of sound is not constant in a section of a trunk, but varies depending on many factors, such as the presence of knots, gaps, cavities and other wood defects that may affect its stability. A Tomographic map highlights: the presence, location and extent of any structural defects. The VTA method also allows the assessment of the hazard of falling trees because of damage to the main roots due to various causes.

Visits to excavation sites affecting the root systems of trees

Technical evaluations, including emergencies, for the assessment of damage to trees, due to excavation for new building works or broken underground facilities [foto 5, 6, 8]. The aim is to verify mechanical stability following the necessary procedures using visual assessments and specialized equipment. Depending on the results of the assessment technical guidelines will be provided for the maintenance work to be carried out [foto 7].

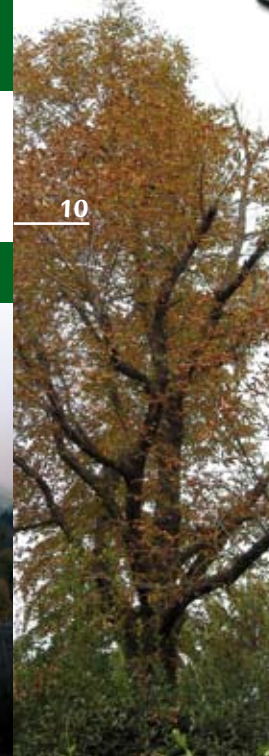


Applying to cut down trees

Technical assessments using visual or instrumental testing can be provided in order to apply for permission to have dangerous or dead trees cut down.

Census of trees

The awareness of the heritage of trees is a cornerstone in any management plan. The use of GPS to position trees along with appropriate planning using this information is very important for the management target requested by the client.



Updating of the census and addition of any missing tags

Updating of the data collected is an interesting aspect as it keeps previous work up-to-date. Many plants may over time lose their identification tags due to their rapid growth in diameter (eg plane trees), or due to the negligence on the part of curious people or simply because of vandalism.

Other possible services

We offer pruning and other services for trees, expert assessments for estimates regarding damage caused to our tree heritage, experimental treatments and relevant reports on plots with appropriate plans, the taking of samples for analysis, the static evaluation of wooden beams in houses or buildings, on-site plant disease assessments, training courses, and we are happy to provide specific estimates for any proposed requests

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