Foundation Arboretum Wespelaar
Year Report 2022

This was another year of extreme drought and heat in spring and summer. And although some woody species benefited from these unmerciful weather conditions, it was hardship for the vast majority of our trees and shrubs.

Nevertheless, we can consider 2022 a year of successes: receiving a renewal of the highest level IV in the ArbNet accreditation programme confirmed that Arboretum Wespelaar is highly regarded on the international stage.

For our site in Marche-en-Famenne we are entering a new phase: construction works are coming to an end and the many plantings are starting to flourish. A preliminary inauguration of the site is planned for 2023!

THE COLLECTIONS

The **living collection of woody plants** in the Arboretum currently (as of 30 December 2022) contains 5,367 specimens representing 2,331 different taxa (versus 17,545 specimens and 5,062 taxa on the whole of the estate). These numbers include the 385 new accessions on the estate during 2022 of which 78 (or just over 20%) are of documented wild origin.

Around 90 **woody plants were removed** from the collection as part of an ongoing effort to improve the aesthetic value, interest and health of the living collection. This is more than in previous years. This is partly coincidental, but in 2022 we took a closer look at the young tree collection of the Vijverbos. After the felling of the poplar trees, we started expanding the dendrological collection there in 2007. 15 years later, a thorough evaluation was needed and we have removed several uninteresting or unsuitable plants. In 2013 and 2014, we established a collection of yet **unnamed Magnolia crosses**. These were thoroughly evaluated in recent years and in 2022 all inferior specimens were removed. This also resulted in an increase in the number of woody plants that were cut. In the years to come, the remaining Magnolias will continue to be assessed and further felling will undoubtedly follow. Only the best hybrids will be allowed to remain and will possibly be given a cultivar name and be registered and propagated. Wood samples of the important specimens (rare and/or wild origin) are kept in our own xylarium but are also shared with the Tervuren Wood Collection of the Royal Museum for Central Africa.

The year started in February with some **violent storms** that even got their own names (such as Eunice and Franklin). Overall, the damage in the arboretum was not too bad, but in the neighbouring private garden of Herkenrode, some Leyland cypress trees were uprooted or decapitated with occasional collateral damage to some important collection plants such as *Acer capillipes* or *Euonymus myrianthus*.

Photo 1 – *Magnolia* ('Big Dude' x 'Vulcan'), a yet unnamed *Magnolia* cross under evaluation.

This year too, we opened the Arboretum before the scheduled date due to **another early spring** with spectacular flowering on *Prunus*, *Camellia* and *Magnolia*. But the first weekend of April we had a very vicious night frost (-4°C) which resulted in a lot of damage: all the *Wisteria* flowers were frozen and even the packing of our rare *Tilia endochrysea* with a fleece was to no avail.

The flowering of the **Rhododendrons** in May was truly breath-taking and we have confirmed the decision that this genus (mainly species and first-generation hybrids) will remain one of the priority collections of the Arboretum. The Brexit has meant that importing plants from the U.K. has become very difficult but we were still able to expand our collection with some rare *Rhododendron* species thanks to a specialist breeder from Brasschaat in northern

Belgium. Not all these species (*R. barbatum, falconeri* subsp. *eximium, fulvum, mallotum, piercei* and *serotinum*) may be sufficiently hardy in Belgium but they were planted in a sheltered location and will be followed with devoted interest.

Photo 2 – *Rhododendron tsariense*. The genus *Rhododendron* remains a priority collection for the Arboretum.

Spring and summer were exceptionally **dry and hot**, and despite the fact that we watered where and when needed, many collection plants still suffered seriously. A number of plants such as *Liriodendron*, *Metasequoia*, *Cercidiphyllum*, *Nyssa*, *Amelanchier* and x *Chitalpa* dropped their leaves in mid-summer; a sad sight. While others really started languishing. We lost a *Franklinia*, *Idesia* and several *Betula*. On top of that, it can be said that 2022 was the summer of infestations: everything seemed to be eaten or sucked by aphids or other (sucking) insects (probably due to the higher sugar concentrations in the leaves). Yet these extreme conditions provided a good learning experience: a number of species did exceptionally well. Everything from the Mediterranean region, of course, but also, for example, the extremely rare *Fagus hayatae* and even some *Rhododendron* such as *R. suoilenhense*.

One of the major victims of the changing climatic conditions is our native beech, *Fagus sylvatica*, which naturally prefers cooler places and north-facing slopes. Several beeches on the estate are showing signs of deterioration and the **double beech avenue** separating the arboretum from the adjoining Park of Wespelaar had declined significantly in recent years. As more than 40 per cent of the trees were dead or very weak, we requested permission to cut down the avenue. This resulted in an impactful clearing that provided a completely different aspect and ambiance as perceived both from the Park and the Arboretum. We were required to replant with a native species and beech was obviously no longer an option. Some 68 hornbeams (*Carpinus betulus*) of a large size were planted.

In October, we welcomed a visit from Tom CHRISTIAN. Tom is a botanical horticulturist and dendrologist, and one of the UK's leading experts on conifers. We took advantage of his visit to verify and, if necessary, correct our extensive collection of silver firs (*Abies* spp.). Specialist visits like these are always instructive and help improve the quality and labelling of the collection.

Receiving a renewal of the **highest level IV in the ArbNet accreditation program** in 2022, confirmed that Arboretum Wespelaar is also highly regarded on the international stage. This program was created in 2011 to establish and share a widely recognized set of industry standards for the purpose of unifying the arboretum community. Level IV arboreta employ well-qualified tree scientists engaged in publishing, research, management of living tree collections according to the highest standards and taking an active role in supporting tree conservation. Level IV arboreta

are world-renowned tree-focused institutions, and so far, only 39 arboreta worldwide have attained this highest level.

Plant pests and pathogens present a significant risk to global plant health and this threat is ever rising. Sentinel plants within botanic gardens and arboreta, can play a vital role in providing information on future and/or known threats. The fungal pathogen *Sirococcus tsugae* remains a matter of concern. This summer Sophie SCHMITZ of the Walloon Agricultural Research Centre took some samples of *Cedrus* and *Tsuga* species in our collection in the framework of the HARMSTAT project (Phytosanitary status of harmful organisms for plants and plant products). No infestations were found on samples from the Arboretum. This is good news as the survey of 2022 led to several new detections in Belgium (in forest plots as well as in an arboretum). The analysis of leaf samples of our *Sequoiadendron giganteum* confirmed the presence of the pathogenic fungus *Botryosphaeria dothidea*. This is a weakness pathogen which usually penetrates its host through existing injuries. After infection, this fungus can survive as an endophyte without causing any visible damage and only expresses itself when the tree is weakened. On *Sequoiadendron*, the affected branches first display a pale green to yellow colour and then turn brown and dry out. Affected twigs are generally distributed in the whole crown. In severe cases, a browning of the entire crown can occur and the death of the tree (especially when young) is a possible consequence of the disease. Considering the high water needs of *Sequoiadendron*, drought is considered as the major weakening factor which may lead to the emergence of *Botryosphaeria dothidea*. In addition, high temperatures are also conducive to the development of this fungus. Any measure aiming at limiting the stress endured by the trees may limit damage expression. Targeted sampling of our extensive beech collection in search of the nematode *Litylenchus crenatae* was fortunately also negative. This nematode is probably the cause of Beech Leaf Disease (BLD) which threatens beech trees in the USA and Canada.

Photo 3 – *Echinacea purpurea* 'Magnus' and *Hydrangea paniculata* 'Bobo'. Inventory of perennials and *Hydrangea* got a boost thanks to the help of an intern.

Having a perfectly labelled and correctly identified collection is one of the main objectives of the Arboretum. Since 2014 we have significantly increased our efforts and our team continues this **major inventory round** at the Arboretum and the dendrological collections of the surrounding private estates of *Herkenrode,* the *Park of Wespelaar*, the

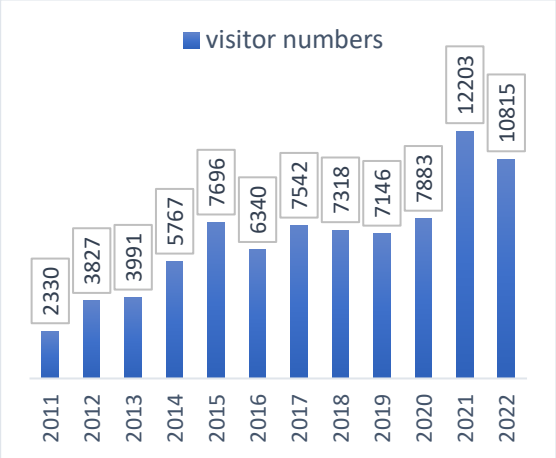
Potager de Wespelaar and *Bosveld*. This important and valuable work continued in 2022 and a total of 146 beds have been thoroughly inventoried. During this inventory, each plant is localised within a certain bed, its health status is assessed, the identity is verified if possible and/or as needed, and the label is placed on a healthy branch clearly visible for our collaborators and visitors. The perennials are also inventoried per bed, but usually this is done in two stages: once in (early) spring in order to identify bulbs and spring flowers and a second time in the summer period when many perennials and grasses are at their peak. The number of flowerbeds inventoried was slightly less this year although we had the valued help of Erwan Le Bec, an enthusiastic intern from France.

No new cultivars were registered in 2022 but detailed observations were collected from a number of specimens in the registration pipeline.

VISITORS

Last year will be remembered by many organisations as the corona-year. The pandemic caused an unprecedented peak in visitor numbers at all nature-related organisations: botanic gardens, arboreta, public parks or nature reserves all experienced a spectacular increase in visitor numbers. Now that the pandemic is finally over and people are allowed to spend their free time as before, the figures are back to normal. Nevertheless, it is clear that Arboretum Wespelaar achieved a good result in 2022, with a total of 10,815 visitors, an increase of more than 37% compared to 2020.

The number of individual visitors reached to 8,339 (vs. 10,417 in 2021) while the number of groups climbed to 91 (vs. 62 in 2021). So, in terms of number of group visits, we are back to pre-coronavirus pandemic levels. Both 2020 (21 groups) and 2021 (62 groups) marked clear lows because of the extensive restrictions in place during the coronavirus pandemic period. A more important indicator, of course, is the number of season tickets sold, and there too, nice results can be presented: 568 season tickets sold in 2022 (vs. 392 in 2020).



The visit of **specialised groups** saw a significant increase in 2022. Colleagues from Belgium (e.g. Arboretum Bokrijk and Hof ter Saksen) and abroad (e.g. Botanical Gardens Utrecht in The Netherlands) came to visit the collections and also specialised dendrological groups such as the KVDV (Royal Flemish Dendrological Society), European Tree Workers, NDV (Dutch Dendrological Society) enjoyed a tailor-made guided tour. Well-known dendrologists also visited, above we already mentioned Tom Christian, but also Richard Moore (Botanical Horticulturist working at the Royal Botanic Gardens, Kew) and Patrick Bellec (Franch plant hunter) honoured us with a visit. On February 6th Natuurpunt organised a bat inventory on the estate.

In 2022 our **website** had 25,345 users (vs. 29,706 in 2021) and 91,726 pageviews (vs. 114,071 in 2021) with a peak in July. Apart from the homepage and "contact and visit" page, the most visited pages in 2022 were the database of woody plants in Arboretum Wespelaar, the BELTREES database page, the page with maps of Arboretum Wespelaar and the database of images linked to the identification keys. It is remarkable that the web pages of the databases are the most frequently consulted pages. This means, on the one hand, that these databases are highly rated by our visitors and, on the other, that the users of the website are really interested people and botanists, dendrologists, horticulturalists, people specialized in (woody) plants.

Our **Facebook** page currently has 3,154 followers (2,988 in 2021). During opening season, new pictures from plants of the collection are added once every week or every two weeks, so that followers can see what is flowering or happening at that time. The pictures are grouped by month. Our top three of most liked albums were the Album "Winter 2022" (719 likes), "April" (498 likes) and "October" (491 likes). The most liked post was one about our opening in spring, accompanied by a drone photograph of the Magnolia Meadow (195 likes). The post where we announced that the Arboretum renewed its ArbNet Level IV accreditation had the second most likes (129 likes). The third most liked post was a new cover photo: a drone photograph of the Artois Pond (119 likes).

Our **Instagram** page currently has 2,030 followers (versus 1,747 in 2021). Every post in 2022 had in between 48 and 304 likes (137 on average). The most popular posts in 2022 were a drone photograph of the Artois Pond in October (304 likes), a selection of autumn pictures in October (276 likes), and a drone photograph of the Magnolia Meadow in spring (243 likes). The most viewed video was the drone video of the dried-out Artois Meadow in August 2022: 981 views. New posts are added once every week or every two weeks, containing a selection of photographs of plants flowering at that time. The scientific name is always mentioned, which is much appreciated by the many followers.

In April 2020, we opened an Arboretum **YouTube** channel. This was especially useful during the lockdown in 2020, when we wanted our visitors to be able to enjoy the flowering Magnolias and Rhododendrons at the Arboretum. We currently do not post much on YouTube and focus more on Facebook and Instagram so our number of followers increased only slightly: 49 followers (versus 44 in 2021). We have 2,972 views in total of all our videos (versus 2,424 in 2021).

Photo 4 – *Meliosma cuneifolia*. More than 48,000 high-definition images (5,579 taxa) are consultable on the Arboretum website

There are now no less than 44 vegetative **identification keys** for selected woody plant genera and species in cultivation in Western Europe, composed by Jan De Langhe, available on our website. Moreover, there are more than 48,000 high-definition images (5,579 taxa) consultable on the website, making this a significant source of information and beauty. The genera *Griselinia, Meliosma, Rhododendron, Salix, Cotoneaster, Rosa, Prunus, Quercus* section *Cyclobalanopsis* and the families Anacardiaceae, Rhamnaceae as well as Gymnosperms received special attention in 2022.

DATABASES

All our collections (woody and perennial plants, propagation, herbarium, bonsai collection, wood samples, cones and fruit, books, journals and reprints) are kept in a database management system which is updated on a daily basis. It is easy to extract and distribute information from this comprehensive database. The catalogue of woody and perennial plants can be downloaded from the Arboretum Wespelaar website and the woody plants information is at the same time available in an on-line searchable database. In 2016 we started linking photos to the individual specimens which can be consulted in the on-line database. The past seven years more than 10,000 pictures were linked. This is an important project which will continue and expand in the years to come.

The woody plant information is also shared – by means of a yearly upload of our data – with two other on-line searchable databases: PLANTCOL for collections in Belgium (not in 2019-2022 because of the retirement of the responsible person at Meise Botanic Garden - but this shortcoming will be fixed with the launch of the new website botanicalcollections.be in 2023) and the PLANTSEARCH database of Botanic Gardens Conservation International (BGCI) which is a global database of living plants with 1,202 contributing institutions. PlantSearch then provides us with a list of **taxa that are included in the IUCN Red List**. We use the most recently published Red Lists received via BGCI to update our list. The update in 2022 resulted in two extra taxa (*Betula megrelica* and *Xanthocyparis vietnamensis*) in the category 'endangered' (39 species with this status in the collection now). In the Arboretum we also added *Taxus chinensis* to the endangered list (but we had already two plants in the private garden of Herkenrode). We lost *Rhododendron pseudociliipes*, *R. forrestii* subsp. *papillatum*, *R. insigne* and *R. sikangense* var. *exquisitum* (category 'vulnerable') but added *Acer negundo* subsp. *mexicanum* and *Rhododendron ririei*.

Photo 5 – *Betula megrelica*. Two wild-origin specimens of this endangered species are thriving at the Arboretum.

In the Arboretum inventory we find one species in the category 'extinct in the wild' (EW): a taxon known to only survive in cultivation or as a naturalized population well outside of its past range (*Franklinia alatamaha*); 15 species in the category 'critically endangered' (CR): a taxon that meets any of the criteria for Critically Endangered and is therefore facing an extremely high risk of extinction in the wild. (for example *Acer pentaphyllum*); 39 species in the category 'endangered' (EN): a taxon that meets any of the criteria for Endangered and is therefore considered to be facing a very high risk of extinction in the wild (for example: *Fitzroya cupressoides*, *Picea martinezii*); 75 species in the category 'vulnerable' (VU): a taxon that meets any of the criteria for Vulnerable and is therefore considered to be facing a high risk of extinction in the wild (for example *Davidia involucrata* var. *vilmoriniana*, *Pseudotsuga sinensis*).

Arboretum Wespelaar is globally the only garden that grows *Ilex brachyphylla*, *Quercus hintoniorum* and *Carpinus faginea* according to BGCI PlantSearch database and there is only one other collection that lists *Magnolia sinostellata* and only two other collections with *Magnolia decidua* and *Carpinus eximia*.

The figures for the entire estate are as follows: one species extinct in the wild (*Franklinia alatamaha* of course)**;** 18 CR-species (*Betula lenta* f. *uber*, *Fraxinus americana* and *Rhododendron amesiae* as taxa outside the arboretum)**;** 44 EN-species (*Abies fraseri*, *Cedrus atlantica*, *Magnolia lotungensis and Rhododendron mallotum* as taxa outside the arboretum); and 101 VU-species. The complete list of endangered species growing at Arboretum Wespelaar is available upon request.

The Arboretum **library** has a steady growth of items and we now have 3,531 accessions, mostly books (2,681) but also journals, maps, reprints, cd's, and DVD's.

EDUCATION

We are often highly recommended for our **guided tours**. It is of course important to keep the botanical and horticultural knowledge of our dedicated guides at a high standard and for that reason a class is organized on a monthly basis. Some of the subjects that we studied in 2022 were evergreen plants, bark, flowering trees and shrubs in March, the new 2022 plantings, Lardizabalaceae, *Clethra*, impact of drought on the collection, autumn colours and botanical nomenclature.

Photo 6 – Preparing our guides for the autumn season.

One of the more effective ways to **share dendrological expertise and horticultural practice** is the organisation of lectures and study days. A good example are the annual winter meetings organised by the Arboretum for the Belgian Dendrological Society. Three interesting topics were covered: the flora of the Pindos Mountains in Greece, the flora of the Olympic National Park in Washington State,

and the dendrological collections of the Netherlands.
Another annually recurring activity is the one we organise for our staff and volunteers. This time, Philippe de Spoelberch gave a talk entitled "Oaks around the world - from California to Hokkaido".

Fourteen **students and six trainees** worked in the Arboretum in 2022 and we wish to thank them for their help and assistance and for bringing new ideas and youthful vivacity to the Arboretum.

INTERNATIONAL COLLABORATION

We are frequently consulted by scientific institutions or botanical collections with regards to the plants we are growing. After evaluation of the request, we share information, observations, seeds, leaf material or cuttings for scientific research.
A total of eleven such international collaborations were set up in 2022 focusing on different plant groups such as *Cedrus, Cotinus, Fagus, Hydrangea, Magnolia, Populus, Styrax, Taxus, Tsuga, Viburnum* and US wild crop relatives (such as *Asimina, Carya, Corylus, Diospyros, Juglans* and *Prunus*). These projects were shared with research institutions in Belgium, Poland and the USA. The subjects were very diverse and included horticulture, propagation techniques, molecular biology and phylogeny, conservation of threatened tree species and surveys for pests and diseases. One of the major outcomes was the publication in 2022 of The Global Conservation Gap Analysis of *Magnolia* and the publication of the Global Gap Analysis of Native *Magnolia* of the US and Canada.

The full list with detailed information is available upon request.

Photo 7 – Arboretum Wespelaar contributed to the The Global Conservation Gap Analysis of *Magnolia* which was published in 2022.

Arboretum Wespelaar remains an active member of The **Maple Society Species Working Group**. Following documents are now available on the Maple Society website: list of accepted species names, list of synonyms, list of hybrid names, and a proposed classification of the genus *Acer*. We also shared the high-definition scans and vegetative identification key with the Maple Society and these are now available on their website.

To accelerate effective conservation of global plant diversity, BGCI is coordinating a suite of **Global Conservation Consortia**, which catalyse groups of institutions and experts to collaboratively develop and implement comprehensive strategies to prevent extinction of priority threatened plant groups. Primary objectives include coordinated in situ and ex situ conservation efforts and dissemination of species recovery knowledge. Eight such consortia have already been established and Arboretum Wespelaar has expressed interest to take an active role in three of them, namely those of the genera *Acer*, *Magnolia* and *Rhododendron*. For the other consortia, we made our contribution by providing specific data on the plants growing in our collection,

more specifically in the genera *Quercus* and *Nothofagus*. In addition, we are active in the cryopreservation working group, especially for the genus *Magnolia*.

Photo 8 – *Rubus* 'Benenden'. The genus *Rubus* was the topic of the 2022 BDB study day.

SERVICES TO THIRD PARTIES

Acquiring, compiling, and sharing dendrological knowledge and expertise is one of the main goals in the mission statement of Foundation Arboretum Wespelaar. One of our important recurring beneficiaries is the **Belgian Dendrological Society** (BDB): the director of the Arboretum is a member of the Board of directors of the society and of the editorial committee of the society's Yearbook; since 2016 he is also publisher of the BDB Yearbook. We organised a successful and well-attended dendrological excursion to some parks in Laeken and the Chinese Pavilion in Brussels for the BDB members.

Arboretum Kalmthout organised a study day on the genus *Rubus* for the members of the BDB and IDS (International Dendrology Society). An article summarising the day's activities and lectures will be published in the 2022 IDS Yearbook.

A member of the Arboretum Wespelaar team provides for the secretariat of the BDB and Arboretum Wespelaar also remains the driving force behind the database of remarkable **Trees of Belgium** (BELTREES). This database contains today 34,767 living measured trees with 2,467 new accessions or updates in 2022. This year we again organized two meetings (region of Flanders, and Wallonia plus Brussels) with several of the most important contributors to the database in order to encourage and increase the number of yearly measurements. In 2017 we also started linking available photos to the BELTREES accessions. In the past six years, 7,409 photos were linked and uploaded. These photos can be accessed on the website of Arboretum Wespelaar.

Another database managed and maintained by the Arboretum Wespelaar team is that of the dendrological collections of the private estate **Hemelrijk** in Essen, the property of the De Belder family. In 2014 we have started with a new inventory round of the Hemelrijk collection of woody plants in order to access the main trees and shrubs in the database and labelled in the field. This effort will continue in the years to come and we feel privileged to help keep this valuable collection up-to-date and well labelled for the future generations.

Two Arboretum Wespelaar staff members continue their function of secretary of the **Belgian Association of Botanical Gardens and Arboreta** (V.B.T.A.). In 2021 V.B.T.A. became active in the DiSSCo consortium – Belgium. The goal of DiSSCo Belgium is to apply best practice management in conservation of both physical and digital collections in order to increase their visibility and usage. DiSSCo Belgium aims to mobilise further the collection holding institutions in Belgium and to have a complete inventory of Natural Heritage Collections. An important result of this project is that several

gardens are now looking for a database management system specifically designed for botanical living collections. Ideally, as many gardens as possible would work with the same IT system in order to enhance and facilitate exchange and efficiency. Currently, different database systems are in use by different gardens (e.g. BG-Base, Iris-BG, MS Access, etc.). The V.B.T.A. organised the successful "botanical garden guide" course again in 2022, and one of the classes and tours took place in Wespelaar. The V.B.T.A. also actively seeks practical solutions in periods of water scarcity together with the various authorities. The idea is that botanic gardens and arboreta can be granted an exception that allows watering rare, exceptional, unique or new plant collections in periods of extreme drought when restrictions are in place.

The Director of the Arboretum is Chairman of the expert committee of **Fondation Franklinia**. A special weekend was organised in Wespelaar for board and expert committee members in October 2022. The aim was to review and update the Foundation's priorities and long-term strategy. The Director is also active in and responsible for the follow-up of the projects sponsored directly by Arboretum Wespelaar, mostly in the field of nature conservation.

The Director is a member of the **Magnolia Society International** (MSI) Board of Directors and he chairs the Research Committee of that organisation. An overview of current *Magnolia* research projects sponsored by MSI was published in the Society's Newsletter.

It is crucial that the Arboretum keeps good and solid contacts with the **local community**. It is therefore with pleasure that we continue to advise the local authority on the management, reconstruction, labelling and plantings of the public park in Haacht, the CPAS of Haacht, or individual trees on the grounds of the municipality. We are also active in the "Forestry Group Wespelaar" and offer advice for cutting, thinning and planting of new woodland.

ARBORETUM DE MARCHE-EN-FAMENNE

In 2018 we were able to purchase an interesting property on some 78 ha in Aye near Marche-en-Famenne. Some 15-20 ha will be developed into an arboretum, while the rest will retain its natural appearance: woodlands, flowering meadows, amphibian pools, marshlands and so on. It goes without saying that this will be a long-term project, especially the arboretum part will need time to grow into a mature entity. In 2022 the following was realised:

- Construction work of the technical building has been completed and, as far as the visitor centre is concerned, this year saw the start of the last phase: finalisation of the interior (painting, acoustics) and purchase of the individual furniture pieces and machines. Opening of the Arboretum for all those who contributed to the success of this first phase is scheduled for May 2023.

Photo 9 – Drone picture of construction site: solar panels, parking lot and technical facilities.

- Thanks to the help of Wespelaar staff and our new on-site employee, nearly 1,000 new woody plants were planted in 2022! This includes both collection plants in the Arboretum area, but mainly involves landscaping plantings around the car park, buildings and green roofs. In addition, large quantities of perennials were planted on the green roof of the visitor centre. This means that major outdoor work took place again this year: creation and improvement of the driveways and pathways, groundworks, lawn seeding and the many plantings already mentioned.

Photo 10 – Grasses and perennials on the green roof of the technical building.

- Due to the different climatic, pedological and geological situation of the new site as compared to Wespelaar, different planting schemes are possible and desirable. One of the genera that do extremely well in Marche is *Crataegus*. After consulting some specialist breeders, we purchased some 80 different specimens, mostly botanical species, in 2022. About 10 were given their final position in the collection but the vast majority, due to their small size, were first planted in the nursery for further growing and follow-up. Besides diversity, specialisation is important for an Arboretum, and Marche will definitely become the place to visit for anyone interested in hawthorns.
- An all-encompassing management plan will be prepared for the various entities of the Marche site. We seek to reconcile collection, mowing, nature and forest management in this beautiful place. This year we tested management by grazing by donkeys. Grazing ensures suppression of undesirable (woody) plants on specific parts of the property. This test proved successful and will be further developed next year.
- Inventory, labelling and database management was handed over to the new employee at Marche. This is an important decision and a significant step but necessary support from the Wespelaar team is of course ensured.

Photo 11 – Summer view on the first collection plants.