



MANUAL

USER MANUAL FOR DENTRO



AGROFORESTRY
VLAANDEREN

DENTRO User Guide

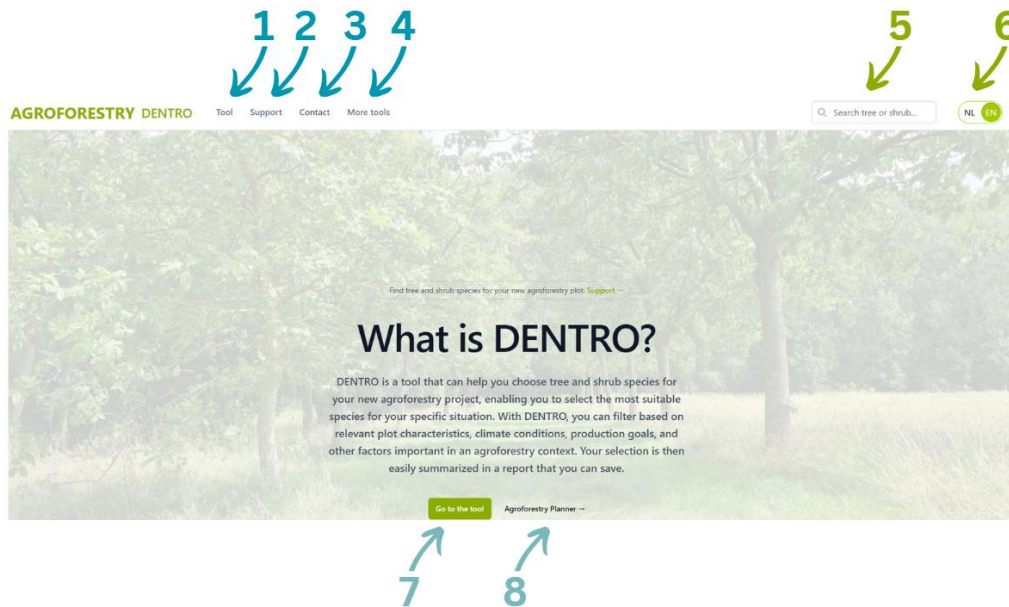
DENTRO is designed to help you choose suitable tree and shrub species for an agroforestry system, based on the characteristics of your plot and your specific preferences. DENTRO works with filters (parameters) that you can set yourself. You can collect the results in a report that you can later download and use during the planning phase of your agroforestry project, for example during consultations with the local tree nursery and/or agroforestry experts. This guide provides a step-by-step plan to use DENTRO optimally.

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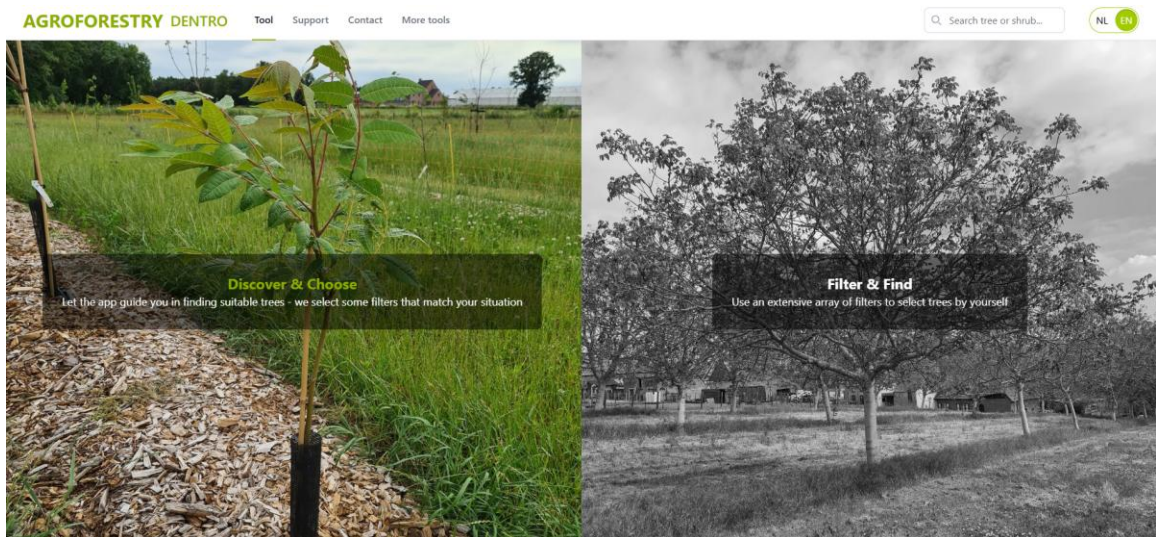
Home page

On the home page, there are different options to choose from. Below, all options are explained. If you would like to go directly to the tool, simply click on option [1] or [7].



1. Here you go directly to the tool.
2. Here you will find the support page with the user guide and demo video.
3. Here you will find the contact page.
4. Here you will find additional tree selection tools.
5. Here you can enter a tree or shrub species and retrieve information about it.
6. Here you can change the language to Dutch or English.
7. Click the green button to access the tool.
8. Click here if you want to return to the Agroforestry Planner.

Tool: Make a choice



DENTRO offers two options: for beginners (**Discover & Choose**) and for advanced users (**Filter & Find**). Click the left option, **Discover & Choose**, to be guided in finding suitable tree species; basic filters are already selected for you. If you click the right option, **Filter & Find**, you will see an extensive set of filters that allow you to select tree species more precisely.

Discover & Choose (for beginners)

Step 1: Choose an initial selection parameter

After clicking **Discover & Choose**, you will see a green box at the top center of your screen with several options. These are filters you can click.

👉 Action: Click the option most relevant to your situation, such as “fruit.” New options will appear. Continue selecting one option at a time until the green selection box is completed.

The screenshot shows a selection screen titled 'Which main goal do you have for your agroforestry plot?'. It features five image-based options: 'Fruit' (a tree with red fruit), 'Nuts' (a tree with green nuts), 'Timber' (a close-up of wood grain), 'Coppice and biomass' (a pile of wood chips), and 'No preference' (a field with a tree). Below the options, there is a section labeled 'Your choices:' with a table structure. The table has two columns: 'Name' and 'Cultivar'. Under 'Name', there are two checkboxes: one for 'Abies alba (European silver fir)' and one for 'Abies amabilis (Pacific silver fir)'. A 'Go to list (0)' button is located in the top right corner of the selection area.

Name	Cultivar
<input type="checkbox"/> Abies alba (European silver fir)	
<input type="checkbox"/> Abies amabilis (Pacific silver fir)	

Step 2: Select species & Go to your list

The suitable species that remain are listed below the green bar.

To do: Select the species you find interesting by checking them (a green check mark appears). You can also select all species at once. Once you have selected all species, click the green button “Go to your list” (option [3] in the figure below)

The screenshot shows the AGROFORESTRY DENTRO interface. At the top, there is a navigation bar with 'AGROFORESTRY DENTRO', 'Tool', 'Support', 'Contact', and 'More tools'. A search bar contains 'Search tree or shrub...'. Language options 'NL' and 'EN' are visible. A green box above the table states: 'Based on your choices, we recommend these species. Your choices: Fruit / Tree / No preference / No preference / Loamy soil / Moist soil / I don't know'. Below this is a table with columns: Name, Cultivar, Habit t₁, Loamy soil t₁, and Moist soil t₁. A green bar at the top right contains a button 'Go to list (4)'. Three blue arrows point to specific elements: arrow 1 points to the first checkbox, arrow 2 points to the 'Go to list (4)' button, and arrow 3 points to the 'Go to list (4)' button.

Name	Cultivar	Habit t ₁	Loamy soil t ₁	Moist soil t ₁
<input type="checkbox"/> Amelanchier lamarckii (Apple serviceberry)		Tree	5	5
<input type="checkbox"/> Broussonetia papyrifera (Paper mulberry)		Tree	5	5
<input type="checkbox"/> Ceratonia siliqua (Carob)		Tree	5	5
<input checked="" type="checkbox"/> Cydonia oblonga (Quince)		Tree	5	5
<input checked="" type="checkbox"/> Elaeagnus umbellata (Autumn olive)		Tree	5	4
<input type="checkbox"/> Juniperus drupacea (Syrjan juniper)		Tree	5	5
<input type="checkbox"/> Juniperus excelsa (Greician juniper)		Tree	5	5
<input checked="" type="checkbox"/> Malus domestica (Apple)		Tree	5	5
<input type="checkbox"/> Mespilus germanica (Medlar)		Tree	4	5
<input type="checkbox"/> Morus spp. (Mulberry)		Tree	4	4
<input type="checkbox"/> Olea europaea (Olive)		Tree	5	4
<input type="checkbox"/> Prunus armeniaca (Apricot)		Tree	5	5
<input checked="" type="checkbox"/> Prunus avium (Sweet cherry)		Tree	5	5

Step 3: Modify list or Generate report

On the final page, you see a summary of your simulation in DENTRO.

To do: Want to adjust your species list? Click the grey button Modify list to return to your list and add or remove species. Once satisfied, click the green button **Generate report**. A pop-up will appear, allowing you to print or save the document as a PDF.

The screenshot shows the AGROFORESTRY DENTRO interface. At the top, there is a navigation bar with 'AGROFORESTRY DENTRO', 'Tool', 'Support', 'Contact', and 'More tools'. A search bar contains 'Search tree or shrub...'. Language options 'NL' and 'EN' are visible. Below the navigation bar, it says '4 Species selected'. There are two buttons: a grey 'Edit list' button and a green 'Generate report' button. Two blue arrows point to these buttons: arrow 1 points to 'Edit list' and arrow 2 points to 'Generate report'. Below this is a section titled 'Summary simulation DENTRO'. It states: 'You have just completed a simulation in DENTRO. In this summary report, you will find an overview of all the tree species you selected based on the filters, or parameters you chose. For each selected tree species, additional points of attention are provided, such as common diseases, relevant legislation, or considerations for the further application of specific species. This gives you a clear and practical document that you can use for evaluation with a tree grower and for further planning. You can also save this report as a PDF, making it easy to consult or share later.' Below this text is a table with columns: Name, Cultivar, Habit t₁, Loamy soil t₁, and Moist soil t₁.

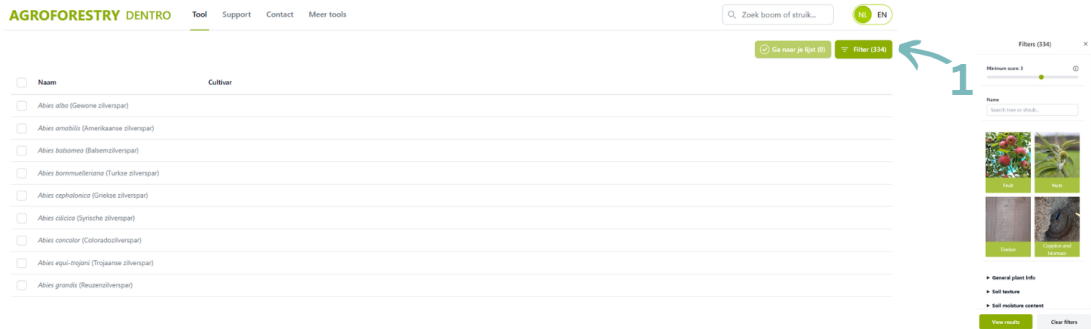
Name	Cultivar	Habit t ₁	Loamy soil t ₁	Moist soil t ₁
Cydonia oblonga (Quince)		Tree	5	5
Elaeagnus umbellata (Autumn olive)		Tree	5	4
Malus domestica (Apple)		Tree	5	5
Prunus avium (Sweet cherry)		Tree	5	5

Filter & Find (for advanced users)

Step 1: Open the filter menu

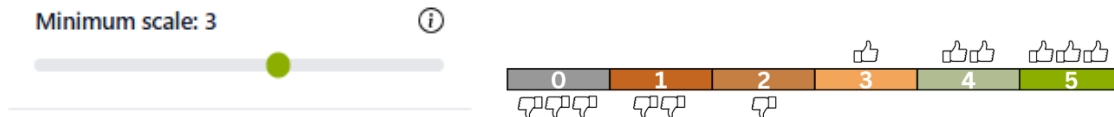
After clicking on **Filter & Find**, you will see a new screen.

👉 **To do:** Click the green button Filter to open the filter menu – it will appear as a pop-up. Here you will see various parameters (scroll down) that you can click.



Step 2: Determine how strict your selection is

At the top of the filter menu, you see a slider ranging from 0 to 5. The legend goes from 0 (Unsuitable) to 5 (Very suitable). This allows you to determine how strictly you want to select species.

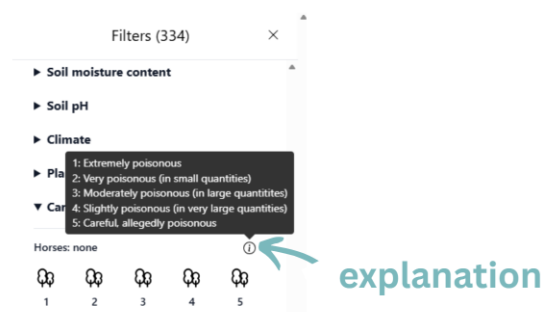


👉 **To do:** Slide left to include less suitable species. Slide right to see only species that score positively. The lower the value, the more species you will see; the higher the value, the fewer and more specific the suggested species.

Step 3: Choose filters relevant to your project

Clicking on a filter will reveal more options. For example, under “Warning, toxic to,” you will find horses, sheep, cattle, and toxic plant parts. For these three animal categories, a special scoring system (1–5) is available, viewable via the information (i) button. Some filters use this special scoring system, so always check the info button.

For toxic plant parts, you can simply click the selection box, and the score will be based on the general scale.



Optional

Want to look up a specific species? Enter its name in the search field.



Step 4: Select species & Go to your list

Based on your filters, a list of species will appear.

👉 **To do:** Select the species relevant to your project. For more information, see step 2 at **Discover & Choose** (page 2).

Step 5: Modify list or Generate report

On the final page, you see a summary of your DENTRO simulation.

👉 **To do:** Modify your list or generate a report. For more information, see step 2 at **Discover & Choose** (page 2).

Tips for use

- You can run DENTRO several times with different filters to compare scenarios.
- Save reports so you can refer to earlier selections.
- Watch the demo video for additional explanation.
- Read the disclaimer carefully.

Sources

- Reubens, B., Van Daele, S., Bracke, J., Pardon, P., Rahahleh, J., & Carton, S. (2024). DENTRO Tree Matrix: dataset behind DENTRO - a Tree Species Selection Guide for Agroforestry (Version 1) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.10889583>
- Klimaatbomen dataset van Ellen Desie (KULeuven)
- [Boomsoortenselectie: waarmee rekening houden? - Agroforestry](#)
- [Boomsoortenkeuze rekening houdend met klimaatverandering - Agroforestry](#)
- <https://www.ecopedia.be/klimaat-en-natuurbeheer/welke-boomsoorten-herkomsten-voor-een-klimaatonzekere>
- <https://www.ecopedia.be/boomloket/klimaatbomen-het-hangt-de-lucht>
- <https://www.ecopedia.be/klimaat-en-natuurbeheer/welke-boomsoorten-herkomsten-voor-een-klimaatonzekere>

Further reading

- [Boomsoortenkeuzetools: hoe gebruik ik deze? - Agroforestry](#)
- [Themavideo 'Boomsoortenkeuze en klimaatverandering' - Agroforestry](#)