HortiFootprint Calculator

User manual

HortiFootprint Calculator

MPS driven by sustainability

LETS GROW .COM

Unique partnership for impact
The HortiFootprint Calculator was developed by MPS and LetsGrow.com, bringing together world-leading expertise in sustainability and data analysis for the horticulture sector.

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Introduction

The HortiFootprint Calculator enables you to calculate the environmental impact of your ornamental products over their entire life cycle. This tool performs a Life Cycle Analysis (LCA) for each product in one calculation.

The HortiFootprint Calculator is the result of a collaboration between LetsGrow.com, KoolPlanet and MPS. The calculation is produced as follows:

- **Input:** You enter all the necessary data to calculate the environmental impact of your products via the MPS record-keeping environment.
- **Impact calculation:** The environmental impact calculation takes place in SimaPro. This software works with a FloriPEFCR-compliant model and uses the EF 3.0 database.
- **Output:** You can see the environmental impact of your products and production processes on the LetsGrow dashboard.
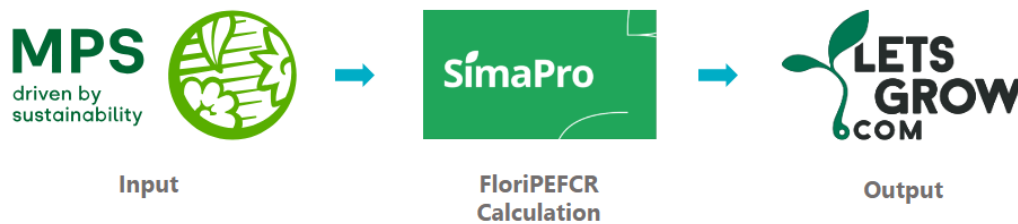

Figure 1: Overview of the HortiFootprint Calculator process

To produce the environmental impact calculation, you need to keep records in the MPS record-keeping environment. The calculation is based on the data logged for the MPS-ABC qualification. It is therefore important to keep accurate crop records. In addition to that, other data is also needed for the calculation, namely substrate, starting material, pots, other materials and packaging; see figure 2.

FloriPEFCR is a product calculation. Crops need to have products linked to them, which requires additional information. Products can be linked to crops over different years. One product can be linked to each crop.
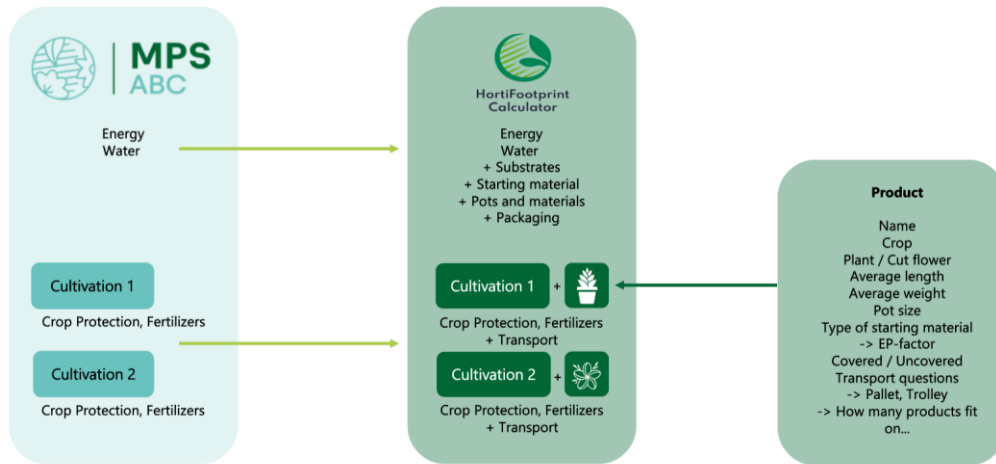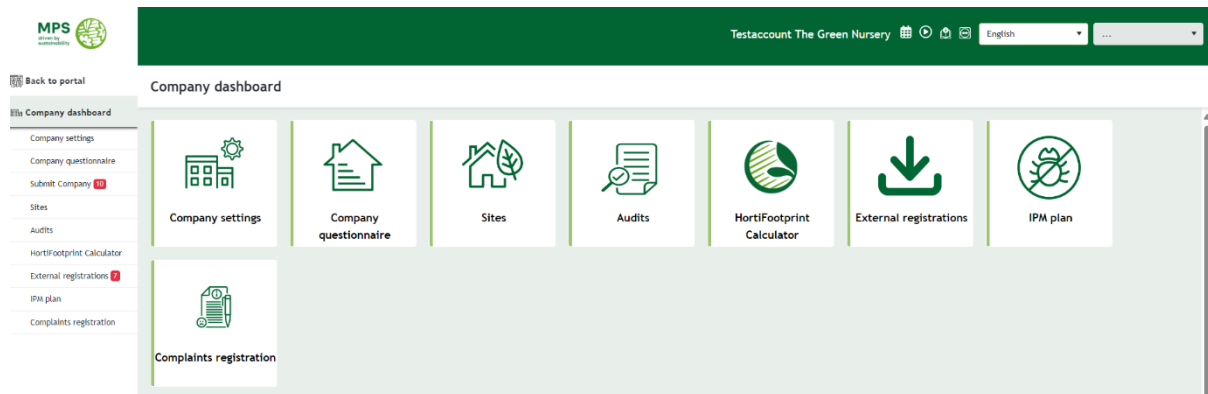
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Figure 2: *Overview of data logging in the HortiFootprint Calculator*

HortiFootprint Calculator – input in record-keeping environment

After you have purchased the HortiFootprint Calculator, it will appear in your record-keeping environment. You can open the HortiFootprint Calculator on your company dashboard.
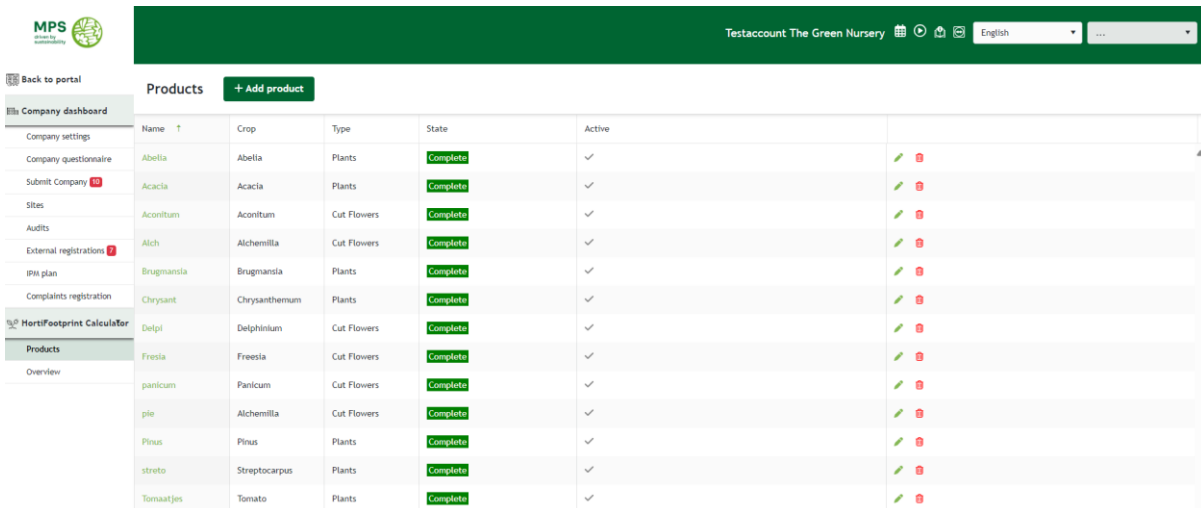

Products

To produce an environmental impact calculation, there must be a product linked to each of your crops. You can see the products that have already been created in the following overview. Products can apply to more than one year. The following columns are displayed:

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- **Name:** Here you will see the names of the products you have created.
- **Crop**: Here you will find the crops associated with the products.
- **Type**: This indicates whether the product is a pot plant or cut flower.
- **State**: This indicates whether all the data necessary for a product has been entered.
- **Active**: This column indicates whether the product is active in a calculation.
- **Edit/delete**: You can edit or delete a product in the last column.

Note: If you edit or delete a product that has already been used in an HFC form, this will affect the calculation.

To create a new product, click on **+ Add product**. You can create up to five cut flowers and five pot plants.

Add product

When you click on **+ Add product**, the following screen will open. You will be asked for the following details:

- **Name:** Give the product you are adding a product-specific name.
- **Crop**: Here you can select an associated crop that is already in your cultivation plan.
- **Type**: Under Type, specify whether the product is a plant or a cut flower. Next, some questions that are specific to plants or cut flowers will appear.

Plants	Cut flowers
Average height: Enter the average height of the product in centimetres.	**Average height**: Enter the average height of the product in centimetres.
Average weight: Enter the average weight of the pot plant including the pot in grams.	**Average weight**: Enter the average weight of the cut flower in grams.
Pot size: Enter the size of the product's pot in centimetres.	
Type of starting material: Here you can choose between two types of starting material: young plants/seeds or cuttings.	**Type of starting material**: Here you can choose between two types of starting material: young plants/seeds or cuttings.
EP factor: The EP (ExtraPolation) factor is applicable if you buy in young plants and grow them on to finished products. You can calculate the EP factor as follows:	**EP factor**: The EP (ExtraPolation) factor is applicable if you buy in young plants and grow them on to finished products. You can calculate the EP factor as follows:

EP factor = cultivation period of imported young plants (days/weeks/months)/cultivation period from young plant to end of cultivation (days/weeks/months).	*EP factor = cultivation period of imported young plants (days/weeks/months)/cultivation period from young plant to end of cultivation (days/weeks/months).*
Allocation of cultivation area: Enter the percentages of covered and uncovered cultivation. These two fields must add up to 100%.	**Allocation of cultivation area**: Enter the percentages of covered and uncovered cultivation. These two fields must add up to 100%.
Allocation of transport method:	**Allocation of transport method**: State the percentages of products transported in boxes and in buckets.
	Then specify how many stems fit on one Euro pallet and how many stems go into one bucket.
Allocation of trolleys: State the percentages of products transported on auction trolleys and in Danish trolleys. These two fields must add up to 100%.	Allocation of trolleys: State the percentages of products transported on auction trolleys and in Danish trolleys. These two fields must add up to 100%.
Then specify how many pots fit on one Danish trolley and how many pots fit on one auction trolley.	Then specify how many buckets fit on one Danish trolley and how many buckets fit on one auction trolley.

Note: Not sure what type of starting material you have used? The HortiFootprint Calculator uses the following definitions for seed and cuttings:

- **Seed and cuttings**: Seed and cuttings have not yet been through a cultivation phase. A cutting has recently been cut from a plant. Furthermore, nothing has been done to a cutting to make it grow.

Linking a product in the cultivation plan

When you use the HortiFootprint Calculator, you can link products in your crop schedule. You can do this by selecting a site and opening the **Cultivation Plan**. You can then edit a crop by clicking on the crop and clicking ⚙**Edit** on the far right of the overview.

Plots / Greenhouse 1 / Cultivations / **Osteospermum**   ×

+ Area   ⓘ

Present

Description cultivation	Period	Area	MPS-ABC	FSI Environmental / Global GAP	
Osteo	Feb/13/2024 → ...	4,900 m2	4,900 m2		↗ Edit area 📅 End ⚙ ▾

Close

This then takes you to the screen below. Under the heading **Product** there is a list of all the products you can link. When you have chosen a product, you can **Save** your changes.

Plots / Greenhouse 1 / Cultivations / **Osteospermum**   ×

+ Area   ⓘ

Present

Description cultivation	Period	Area	MPS-ABC	FSI Environmental / Global GAP	
Osteo	Feb/13/2024 → ...	4,900 m2	4,900 m2		↗ Edit area 📅 End ⚙ ▾

Description cultivation	Osteo		
Start date	Feb/13/2024 📅		
End date	month/day/year 📅		
Area	4,900		m²
MPS-ABC certified starting material	4,900	m²	100	%
FSI environmental / Global GAP certified starting material		m²	0	%
Product	... ▾		

Cancel 💾 Save

Overview

The overview shows the years for which you have produced a HortiFootprint calculation or the year for which you are currently entering records. In the **Version** column you can see whether a HortiFootprint calculation has been produced with the previous version or with the new HortiFootprint calculation. The **State** column shows whether you have already sent the data to LetsGrow.com for a calculation. In the **Comment** column you can see the date on which you sent the data for a calculation.

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HortiFootprint Calculator

+ Retrieving and entering data

Year ↓	Version	State	Comment
2024	HFC 2.0	Not recorded	-
2024	HFC 2.0	Temporary	-
2023	HFC 2.0	Temporary	The registration must be resent due to changes.
2023	HFC	Temporary	-
2022	HFC 2.0	Confirmed	Send on Aug/22/2024 8:48:46 AM
2022	HFC	Confirmed	Send on Oct/9/2023 2:48:46 PM

Sidebar:
- Back to portal
- Company dashboard
  - Company settings
  - Company questionnaire
  - Submit Company 10
  - Sites
  - Audits
  - External registrations 7
  - IPM plan
  - Complaints registration
- HortiFootprint Calculator
  - Products
  - Overview

Annual records

You can calculate the environmental impact of your products on an annual basis. Click **+ Retrieve and enter data** to open a new year for the HortiFootprint Calculator. You can then open the year for which you want to produce a calculation.

Production data

In the **Production data** overview, you will see the crops for that particular year. The crops have the same names as in the cultivation plan. For each crop, you can see the number of days the crop has been growing. You must link one product to each crop. Do this by clicking on the pencil icon.

A list opens with possible products that you can link to the crop. In Number of products sold, enter the number of products you have sold.

Note: If the product you want to link does not appear in the list of options, it may be that you have not yet created that product.

Note: Do you have multiple crops with the same product? Then you can enter all the numbers of products sold under one crop.

When you have linked a product and entered the numbers sold, the **Production** per square metre per year (m²/year) is displayed.

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Company data

The first tab you can open is the **Company data** tab. The company data is the data at the overall company level, or the main MPS number. The data is therefore not retrieved at the sub-record level.

Greenhouse

Enter the area of your glass and/or plastic greenhouse in square metres (m²).

Energy

Energy is mainly retrieved from your MPS-ABC records. It is allocated to the various products using an allocation key based on the annual surface area of a product. Alternatively, you can manually allocate the total amount of energy to the various products by assigning percentages or absolute amounts.

Besides the values already entered, there are a few additional questions:

- Split the amount of gas used between gas used for the CHP and gas for other uses. This also applies to green gas usage.
- If you use a CHP, enter the percentage of the electricity generated by the CHP that you have used yourself.
- If you use a CHP, enter the percentage of the heat generated by the CHP that you have used yourself.
- For green electricity purchased from the grid, enter the energy mix: solar, wind, hydro, biomass.
- For wood, state how much wood was used for heating and how much for cogeneration.

Note: If there is an energy item missing, you can add it in the record-keeping environment at **Manage**, **Energy meters**, **+ Meter**.

Water

Water usage is retrieved from your MPS-ABC records. Water is allocated to products based on the annual surface area of the product.

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Also state whether your company recirculates water.

Note: If water is missing, you can add it in the record-keeping environment at **Manage**, **Water meters**, **+ Meter**

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Usage during cultivation

In the **Usage** overview, enter all the materials and resources used during cultivation. There is a page for each subject where you can log the data.

Starting material

Enter the number of cuttings used for the products. If you buy in starting material that is transported by air, enter the average distance it travels by air.

Note: If you buy in young plants, don't enter the weight of the young plants, but the number of cuttings your supplier used for your products.

The amount of starting material is automatically allocated between the products based on numbers sold. To manually allocate quantities of starting material to your products, change the allocation method to manual.

Item	Company total	Allocation method	Abelia	Aconitum	Alch	Brugmansia	Chrysant
Starting material	6,000 kg	Automatically, sold products	121.212 kg	509.091 kg	24.242 kg	460.606 kg	2,812.121 kg
Distance by plane for starting material	2,800 km						

Substrates

Enter the substrates you used in the year concerned in kilograms or cubic metres. You can add a substrate by clicking **+Add item**. The quantities of substrates are automatically allocated between the products based on the product weight. If you want to make the allocation manually, you can do so by selecting the manual option.

Note: If you have used a substrate that is not listed, select **Other.**

Fertilizers

Fertilizers are retrieved from your MPS-ABC records. Simply click on **Retrieve data** and your data will be retrieved. Your fertilizer usage is linked to crops and is therefore also automatically allocated between products.

CO2 fertilization

Enter the amount of CO_2 fertilization you used here. You can enter CO_2 fertilization from the CHP, CO_2 from OCAP and CO_2 from a tank. The amount of CO_2 fertilization is automatically allocated between the products based on the product surface area. If you want to make the allocation manually, you can do so by selecting the manual option.

CPA

Crop protection agents (CPA) are retrieved from your MPS-ABC records. Simply click on **Retrieve data** and your data will be retrieved. Your usage of crop protection agents is linked to crops and is therefore also automatically allocated between products. The active ingredients in the crop protection agents you use are automatically divided into three categories: fungicide, herbicide and insecticide.

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Potting material

Under **Potting material** you can enter the specifications of the pots in which the plants are sold. Different potting materials can be added by clicking on **+ Add item**. You can obtain the information on the potting material from your supplier.

Materials are automatically allocated between the various products based on sales data. To do this allocation manually, select the manual option under Allocation method.

Note: If you have used a material that is not listed, Select **Other.**

Other materials

Under Other materials, you can enter the specifications of the materials used during cultivation, such as protective films, materials used to guide the plant and growing pots. Different materials can be recorded by clicking on **+ Add item**.

Materials are automatically allocated between the various products based on sales data. To do this allocation manually, select the manual option under Allocation method.

Note: If you have used a material that is not listed, Select **Other.**

Note: Do you reuse any of the materials you use during cultivation? Then divide the amount of materials by the number of times they are reused.

Transport

In the transport/distribution overview, you can record material usage and transport data for after the cultivation phase.

Packaging

In this overview, you can record your primary packaging. Standard values are calculated for secondary and tertiary packaging. Examples of primary, secondary and tertiary packaging are shown in figure 3.

- **Primary packaging**: Also known as consumer packaging, such as sleeves, the pots the plants are planted in, and cards.

  Note: Decorative plant pots made of materials such as ceramic are not included in this calculation. You don't have to log these decorative pots.

- **Secondary packaging**: Also known as transport packaging, such as boxes, trays and buckets in which multiple products are combined. You don't have to log secondary packaging.

- **Tertiary packaging**: Packaging for loading and shipping, such as auction trolleys, Danish trolleys, pallets and plastic film around the trolleys. You don't have to log tertiary packaging.
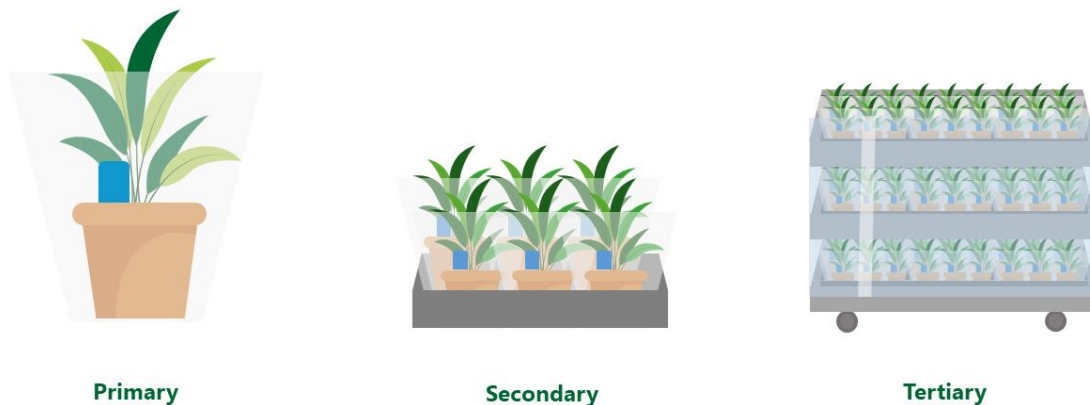

Primary   Secondary   Tertiary

Figure 3: Examples of primary, secondary and tertiary packaging

You can obtain information on the type of packaging material from your supplier. In addition, plastics have identification codes. You can identify the type of plastic by the code (see Figure 4).

PET   HDPE   PVC   LDPE   PP   PS   Other

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Figure 4: Plastic identification codes

Note: If you have used a material that is not listed, Select **Other.**

Transport

Transport must be entered separately for each product. This relates to transportation from the nursery to the auction or wholesaler. You can enter the distance from the nursery to the auction or wholesaler separately for each means of transport.

If you have a product that is transported to multiple sites, you can enter the average distance for each means of transport. For example:

>*You have sold a total of 90,000 units of product A.*

>*30,000 units of product A travel a distance of 58 km by truck and*

>*60,000 units of product A travel a distance of 300 km by truck.*
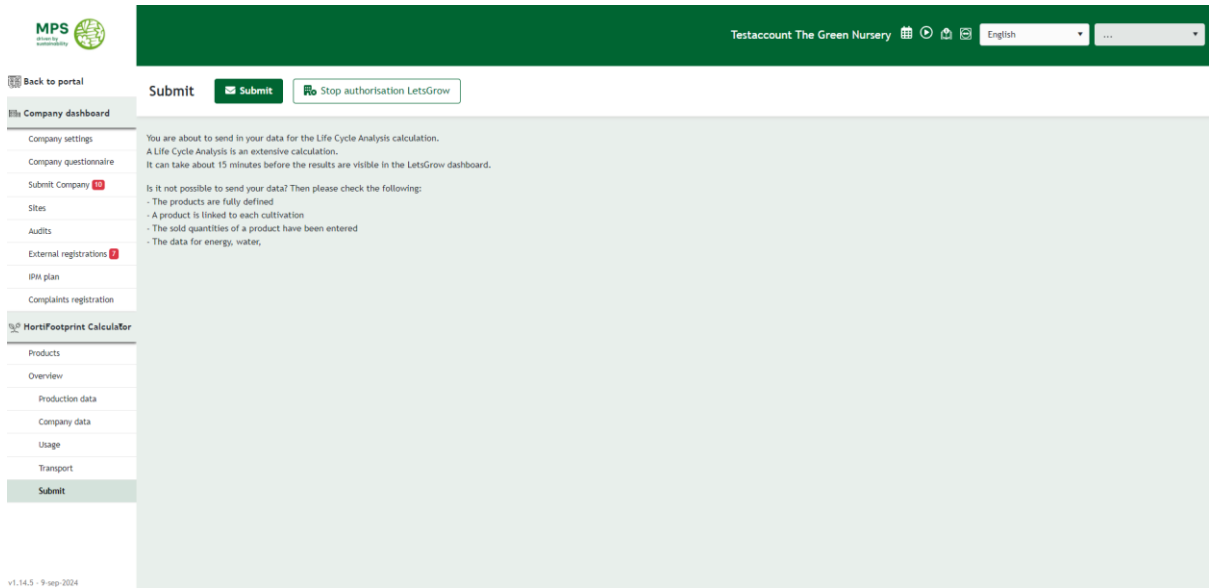
Product A	Share of total product A	Distance by truck
90,000 units	100%	
30,000 units	33%	58 km
60,000 units	66%	300 km
Average distance		**219 km**

>*Average distance = 0.33 x 58 km + 0.66 x 300 km = 219 km*

Note: Have you been using the previous version of the HortiFootprint Calculator? Note that you are no longer asked to enter transport in company totals (number of tonnes.kilometre).

Submit

Once you have completed all the fields, you can submit your data. To submit the data, you must consent to your data being processed by LetsGrow.com. You can do this by clicking on **Authorise LetsGrow.** Then you can **Submit** your data.
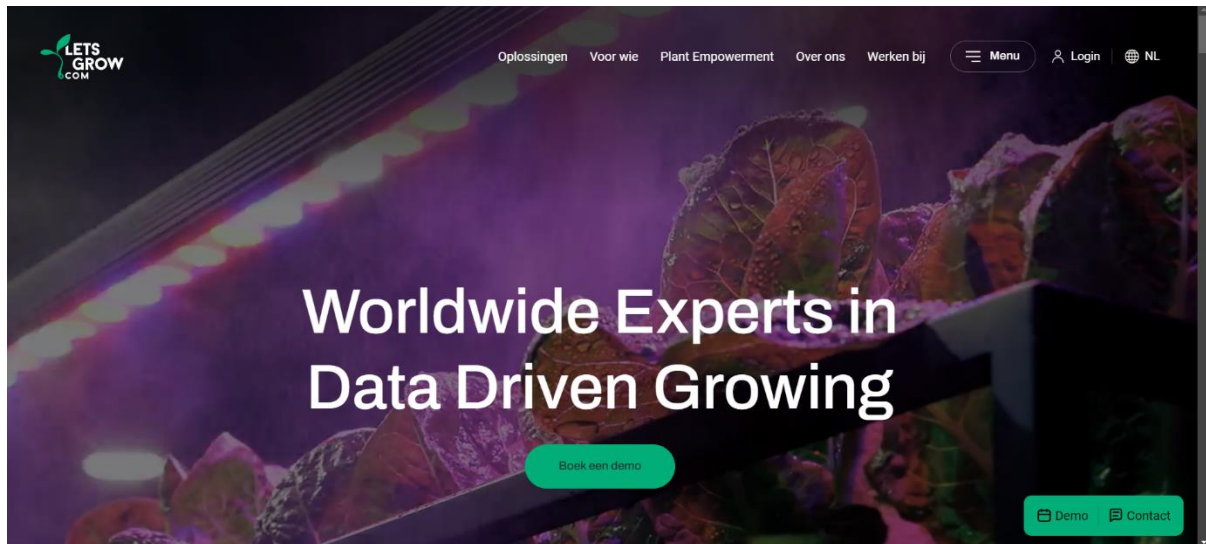
The environmental impact calculation is a detailed calculation. It may take about 15 minutes for the results to appear on the LetsGrow.com dashboard.

HortiFootprint Calculator | Output on LetsGrow.com dashboard

When the calculation is completed, you can view the results at www.letsgrow.com.

Log in to the LetsGrow.com dashboard by clicking on **Login**. You have already received the login details for the LetsGrow.com dashboard by email.

Once you are logged into the dashboard, you can view the results of your environmental impact calculation by clicking on the HortiFootprint Calculator logo in the left menu bar.

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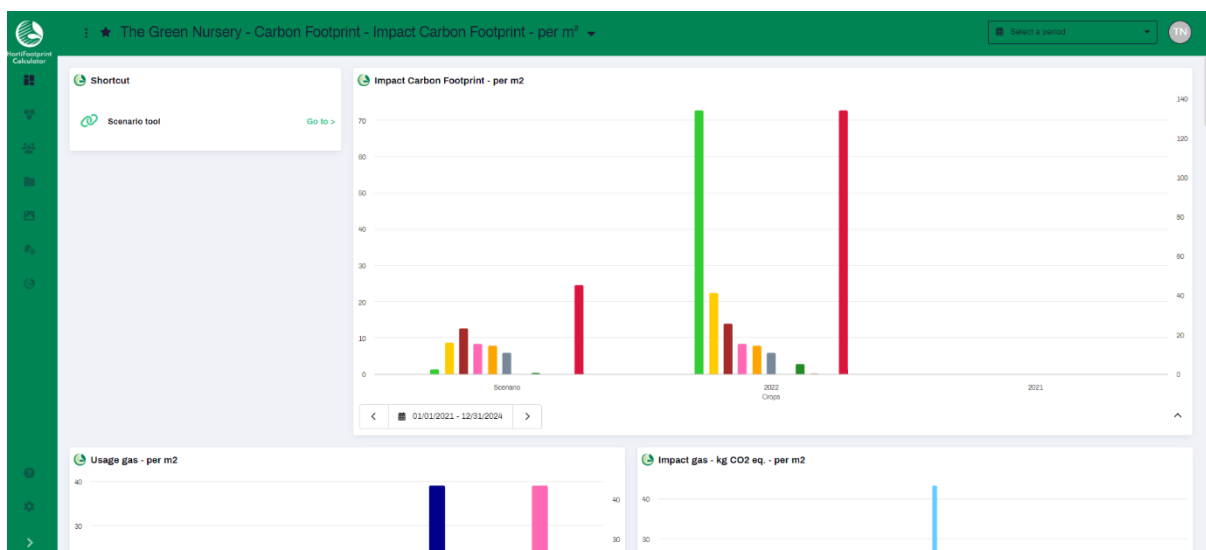
The results are displayed when the HortiFootprint Calculator module opens. The results default to the impact category Climate Change in kg CO_2 eq. The X-axis shows the products in the years concerned. The **All** option is selected at top right, which means that the environmental impact of your total production is shown in kg CO_2 eq. If you hover over the products with the mouse, you can see what contributes to each product's environmental impact.
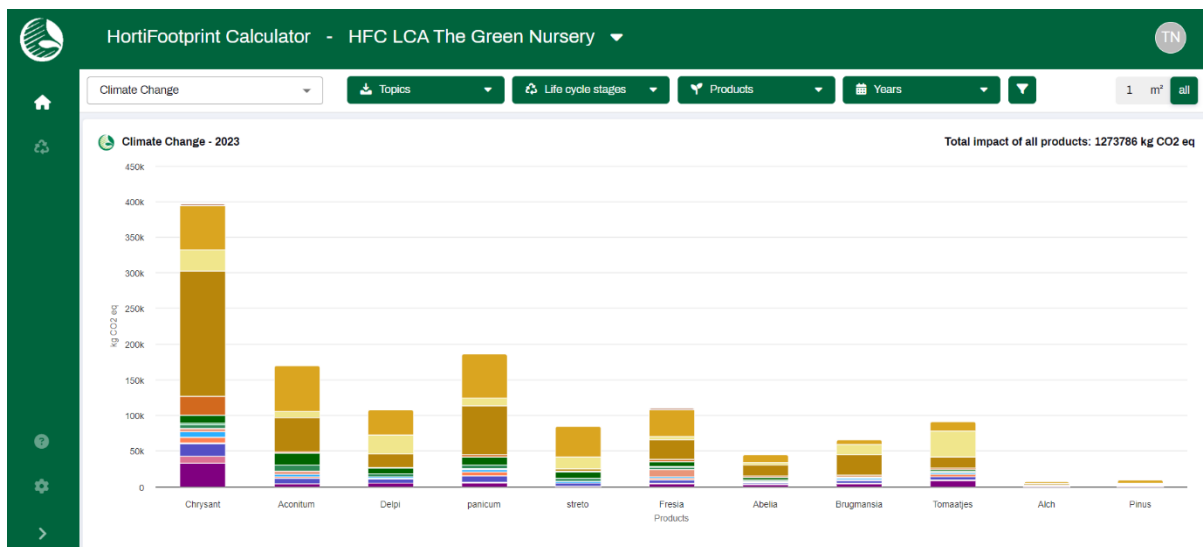

The graphs are interactive, so you can configure them as required. Below we explain the display options from left to right.

- **Impact category**: In this list you can choose one of the 16 impact categories for which you want to view the environmental impact. The Climate Change, or CO_2-impact, category is the default setting.
- **Topics**: These are the subcategories of Life Cycle stages. In other words, topics together form a Life Cycle stage. In this list you can choose the topics whose environmental impact you want to view. For example, you can make comparisons in the topic **Substrates**.
- **Life Cycle stages**: In this list you can choose the Life Cycle stages whose environmental impact you want to view. For example, to compare the distribution of products, you can choose to only display the life cycle stage Distribution.
- **Products**: In this list you can choose the products whose environmental impact you want to view.
- **Years**: If you have produced an environmental impact calculation for multiple years, you can choose which years you want to display the results for.

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- **Filter**: Click on the Filter icon to configure the graph in a particular way. We discuss the possible display options in the next chapter.
- **1, m², all**: Here you can choose whether you want to view the environmental impact of one product, the products per m² or a product's total production.

Graph configuration
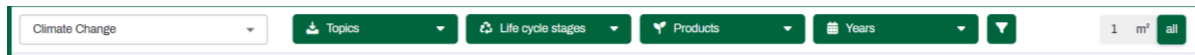
Click on the Filter icon to configure the graph in a particular way. You are then taken to the screen below.

- **Impact category (vertical axis)**: Here you can choose the impact category you want to view.
- **Horizontal axis:** On the horizontal axis you can choose whether you want to view the products, the topics or the Life Cycle Stages.
- **Detail**: Here you can choose the configuration of the bars in the graph. You can specify no details at all or have the bars structured by Topic, Life Cycle stage or Product.
- **Graph type**: Here you can indicate whether you want to see all the results in one graph or results in individual graphs.

Table view

In addition to the display in graph form, you can also display the results in a table. Open Table view by clicking on the recycle icon in the left menu bar.

The table shows the results in the sixteen impact categories and the eight Life Cycle stages. The table is displayed in the unit defined by FloriPEFCR: one pot plant or one cut flower.

Table view gives you the following options:

- **Year**: Here you can select the year you want to display.
- **Product**: Select the product whose environmental impact you want to view.

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