nutriopt

USING GFLI Data
Sustainability at your fingertips

IGFA Workshop

trouw nutrition
a Nutreco company

Sustainability challenges

The most pressing sustainability themes in animal production in EU

- Animal Welfare
- Animal health and antibiotic use
- Greenhouse Gas emission (GHG)
- Nitrogen emission
- Deforestation free soy, palm
- Circularity
- Safety feed & food

Retailers have set their targets

Scope 3 reduction targets some large retailers (status Sep 22)

	TESCO	Ahold Delhaize	Carrefour	LIDL
CO2eq reduction targets 2030	35% (in 2035)	15% supply chains (vs 2019)	30% (vs 2019)	75% suppliers 2026 to join SBT*
Net zero target	2050	2050	2040	-

*Science Based Targets initiative to reduce carbon footprint

Food Processors have followed

Scope 3 reduction targets some large food processors (status Sep 22)

	Danish Crown	Vion Food Group	Groupe Lactalis	FrieslandCampina	Nestlé
	Meat	*Meat*	*Dairy*	*Dairy*	*Dairy*
CO2eq reduction target 2030	50%	32% Pork 26% Beef	25% (2025) 50% (2033)	-33% on member dairy farms	50%
Net zero target	2050	2050	2050	2050	2050

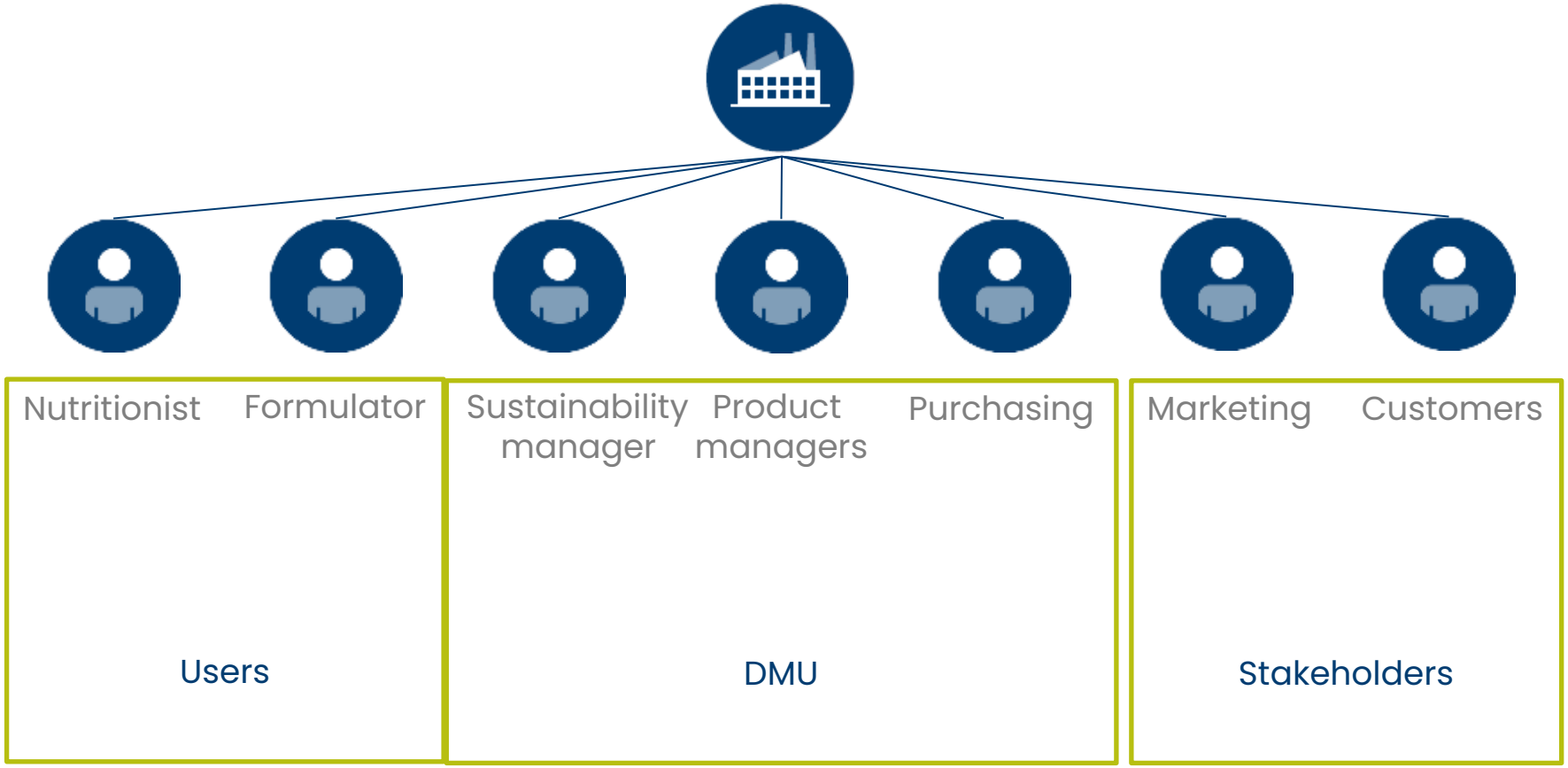
Informing consumers about environmental impact food

Environmental footprint information of feed will be required to calculate the footprint of animal products

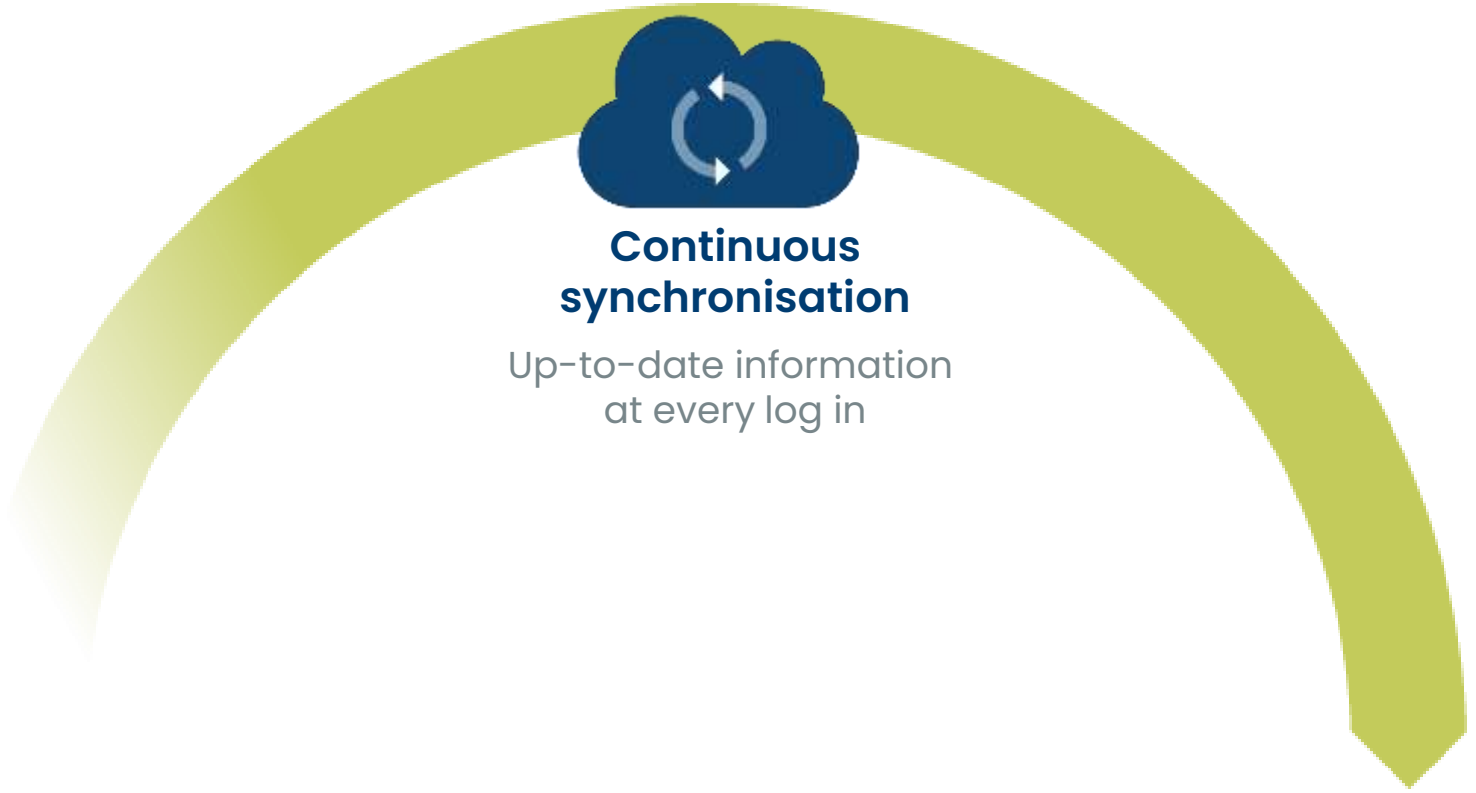
Main customer challenges addressed

1. Future **demand from retailers for Ecological Footprint metrics** to be put on foodstuffs like milk and meat products.
2. Current Farm models in Ireland are using **generic Footprint figures for Compound Feeds.**
3. Compound Feed suppliers will need the most **up to date information on raw materials**
4. Many Feed mills **don't have the resources to use the various Ecological Footprint data bases** available or to work out the Ecological Footprint metrics for feed production.
5. Raw Material imports are not single source so **need to have good data from many regions**
6. Feed mills want to **distinguish themselves in the market** by being sustainable and potentially selling an eco friendly feed.

Target groups



Accredited knowledge to feed mills



Continuous synchronisation

Up-to-date information at every log in

PEFCR

European Feed Guidelines

Nutreco

A team of experts

Lifecycle assessment (LCA) tools

MyFeedPrint

What is in the Feed Environmental Footprint

Feed Ingredient

The environmental impacts of cultivating, harvesting (or extracting), and processing the ingredient.

Inbound Transport

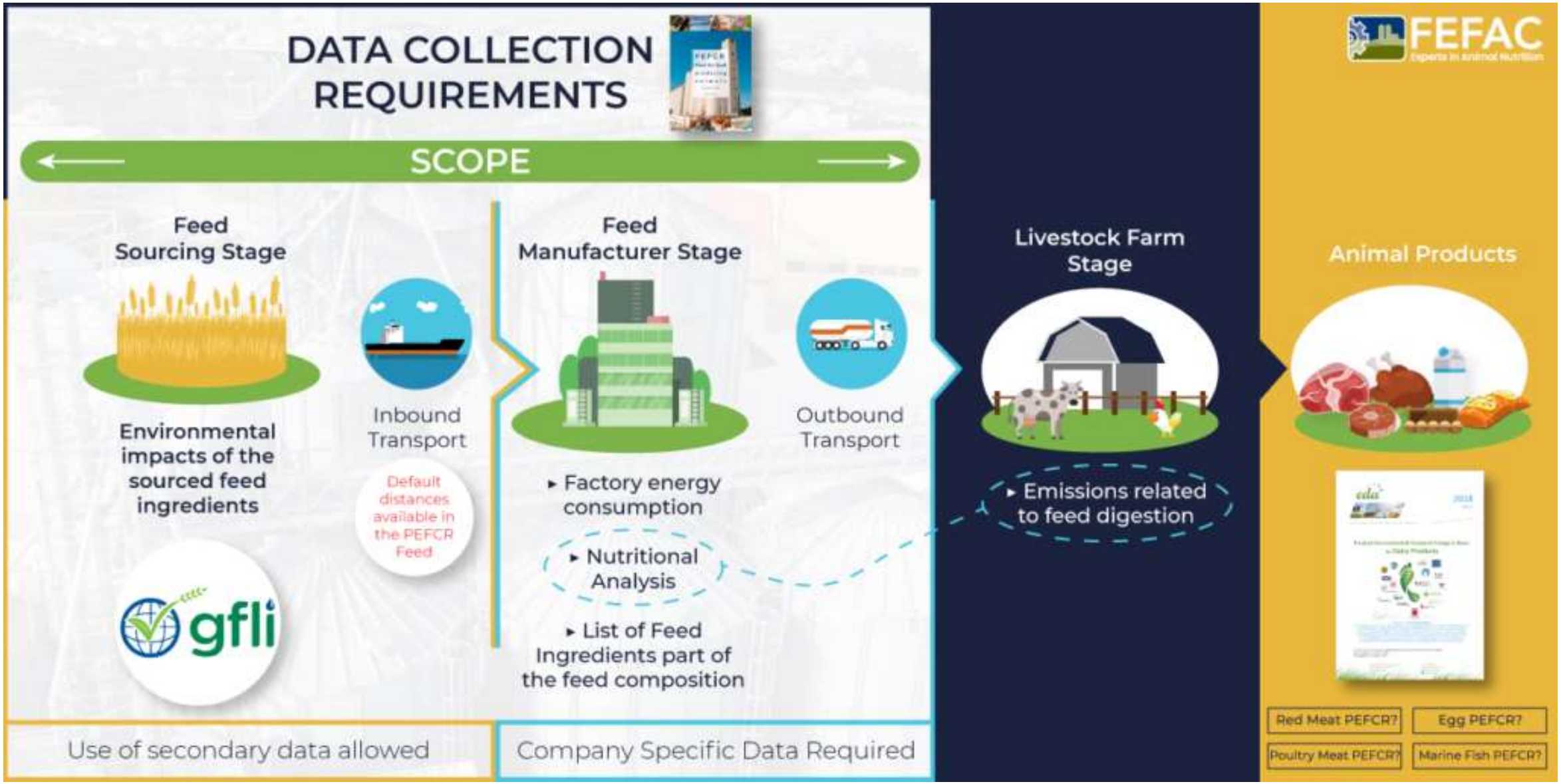
The environmental impacts of the distance traveled and the modes of transportation used to bring the feed ingredient to the feed mill.

Feed Mill

The environmental impacts of the ingredients used in the feed formula along with the source and amount of energy used by the feed mill.

Secondary data from accredited databases	Company specific data or data from accredited databases	Company specific data

Data collection for calculating feed impacts



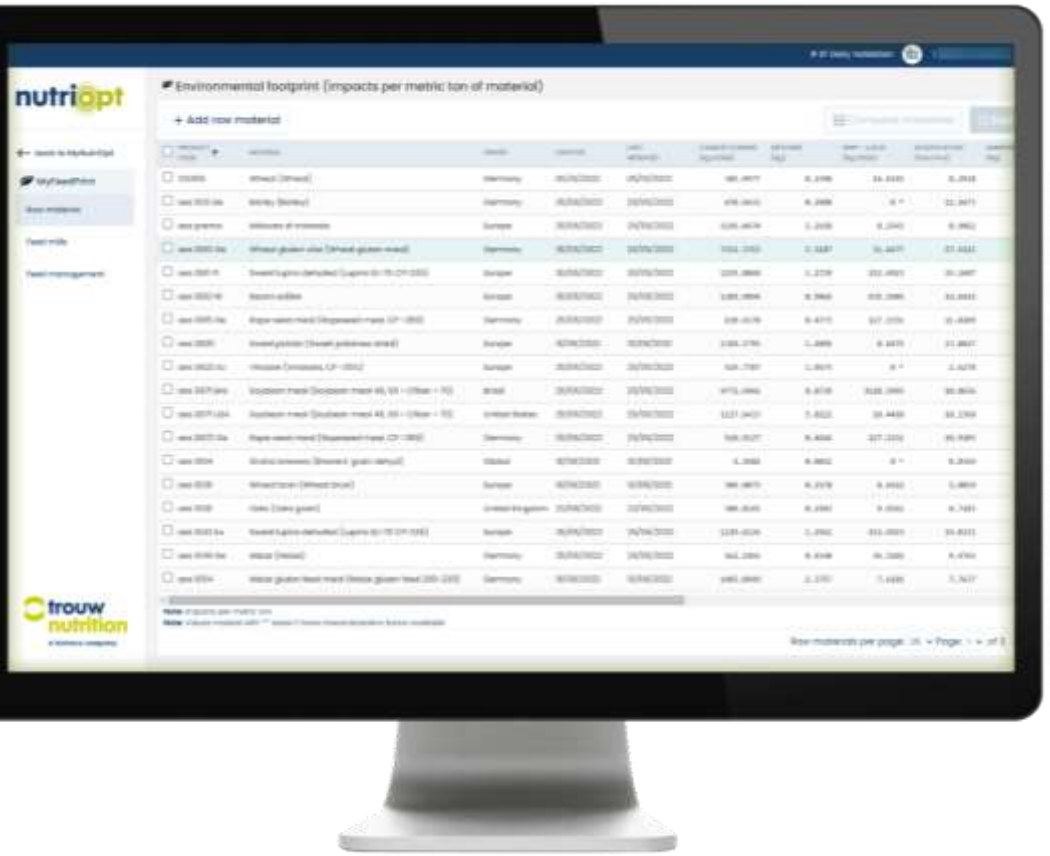
Only quality-assured LCA databases are used as sources for secondary data

(1) GFLI	Global Food LCA Institute Database; specialized database for feed ingredients; accepted by industry and recommended by PEFCR feed standard, open-source (for aggregated LCA data) → **our prioritized go-to data source for secondary LCA data**
(2) Agri-footprint	Specialized and acknowledged international LCA database; accessible via SimaPro license; mainly for agri products but also some additives/ functional ingredients; closely aligned with GFLI (same core developer)
(3) Agribalyse	French database for agri and feed ingredients; some additional datasets available (e.g. some micro ingredients)
(4) Ecoinvent	Established LCA database for different industry sectors, esp. for transport data, minerals, fuels, energy
(5) World Food LCA Database	Few additional but not so commonly used agri ingredients

Why GFLI

- European Commission recommend using the Product Environmental Footprint Category Rules (PEFCR) as the Standard for LCAs
- FEFAC promote the use of data bases which follow PEFCR.
- GFLI has been developed in line with these rules.
- Regular update allow us to have the most up to date LCA s available
- GFLI can develop more regional data to avoid Countrywide general figures.
- GFLI can add in specific footprint data provided it is aligned with PEFCR.

The advantages of using an EF model



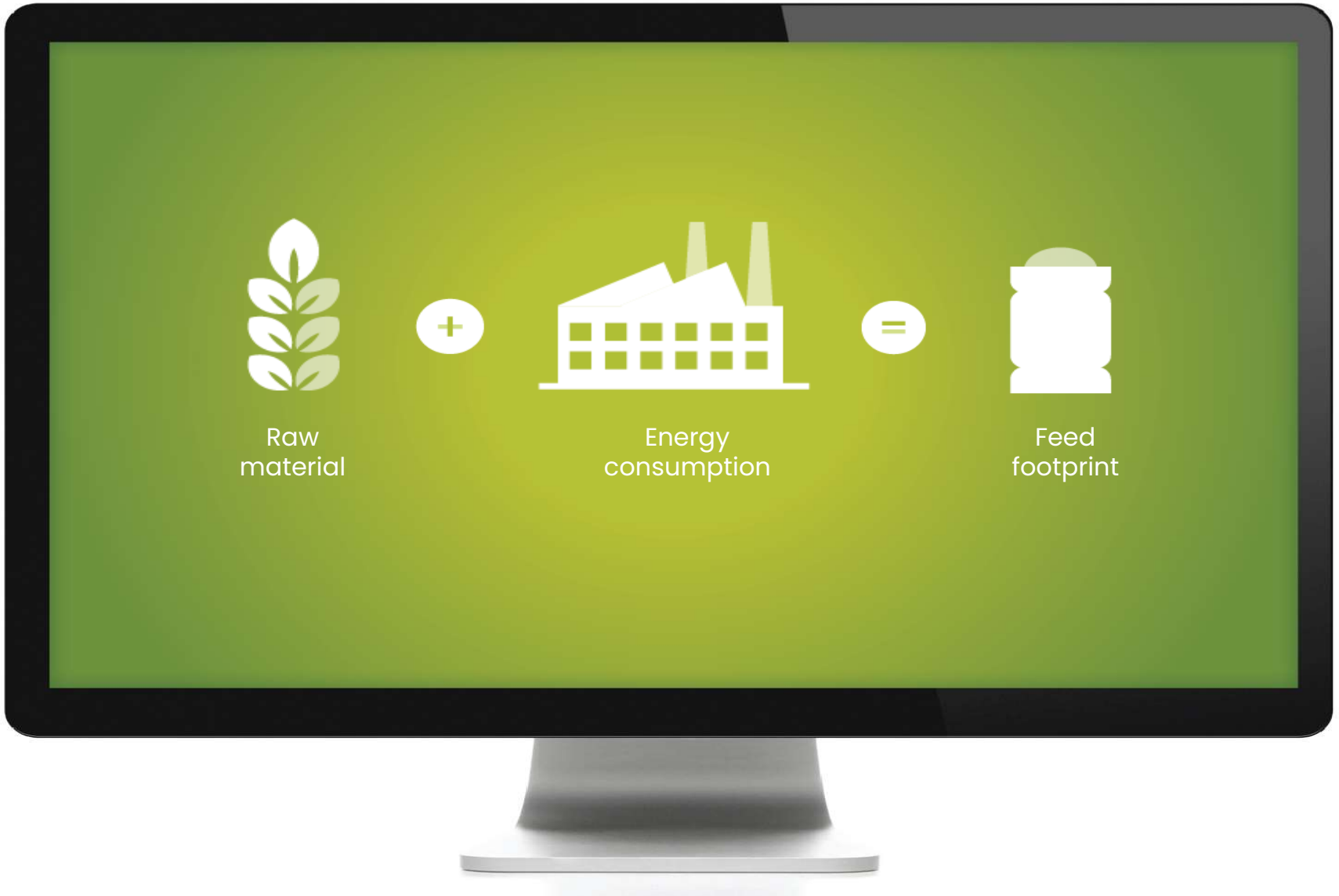
Calculate the overall environmental footprint of the mill

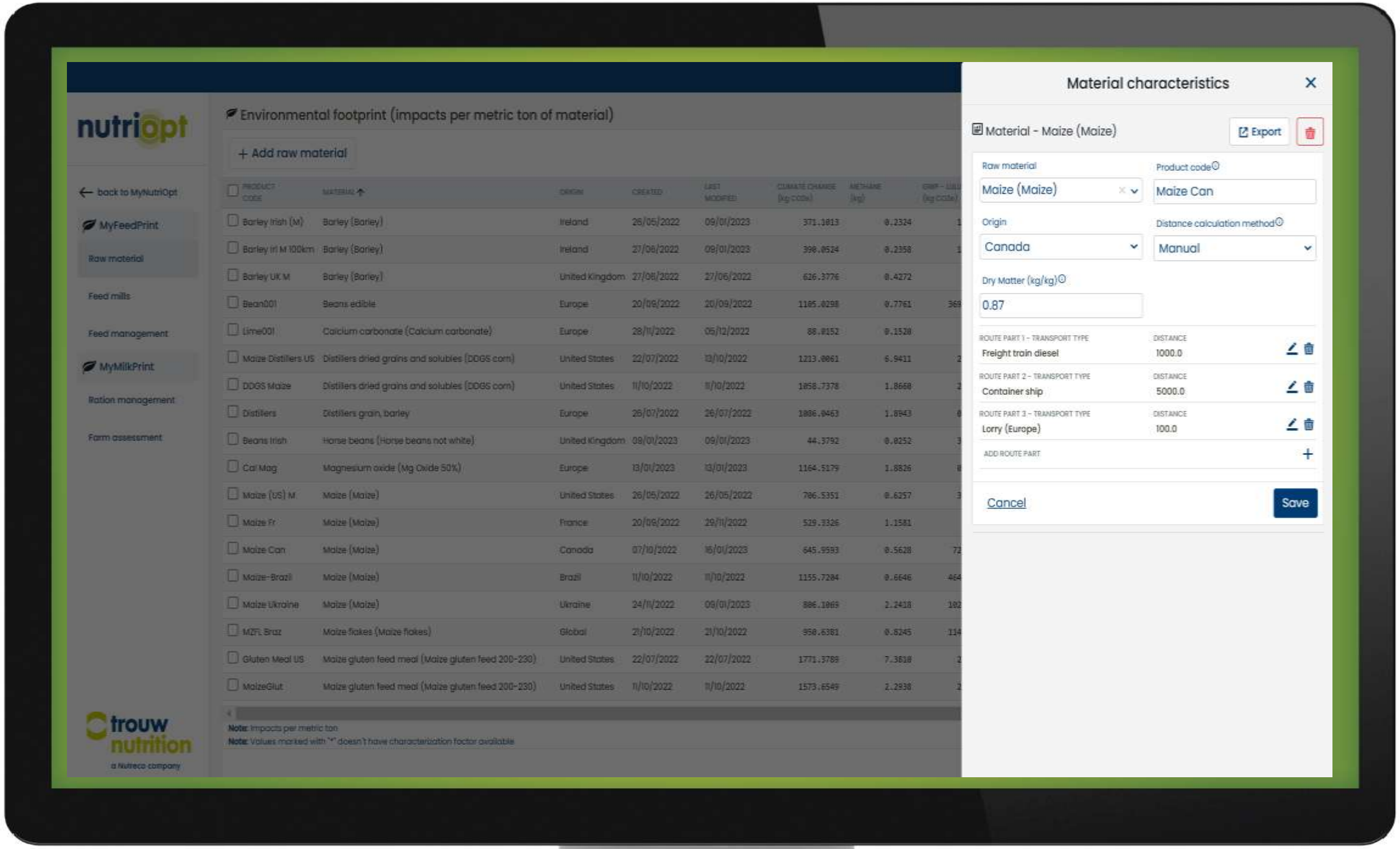
Report a figure per tonne of compound/blend produced

Provide accurate data to farmers and processors when required

Make informed purchasing decisions based on sustainability metrics

Environmental Footprint Model

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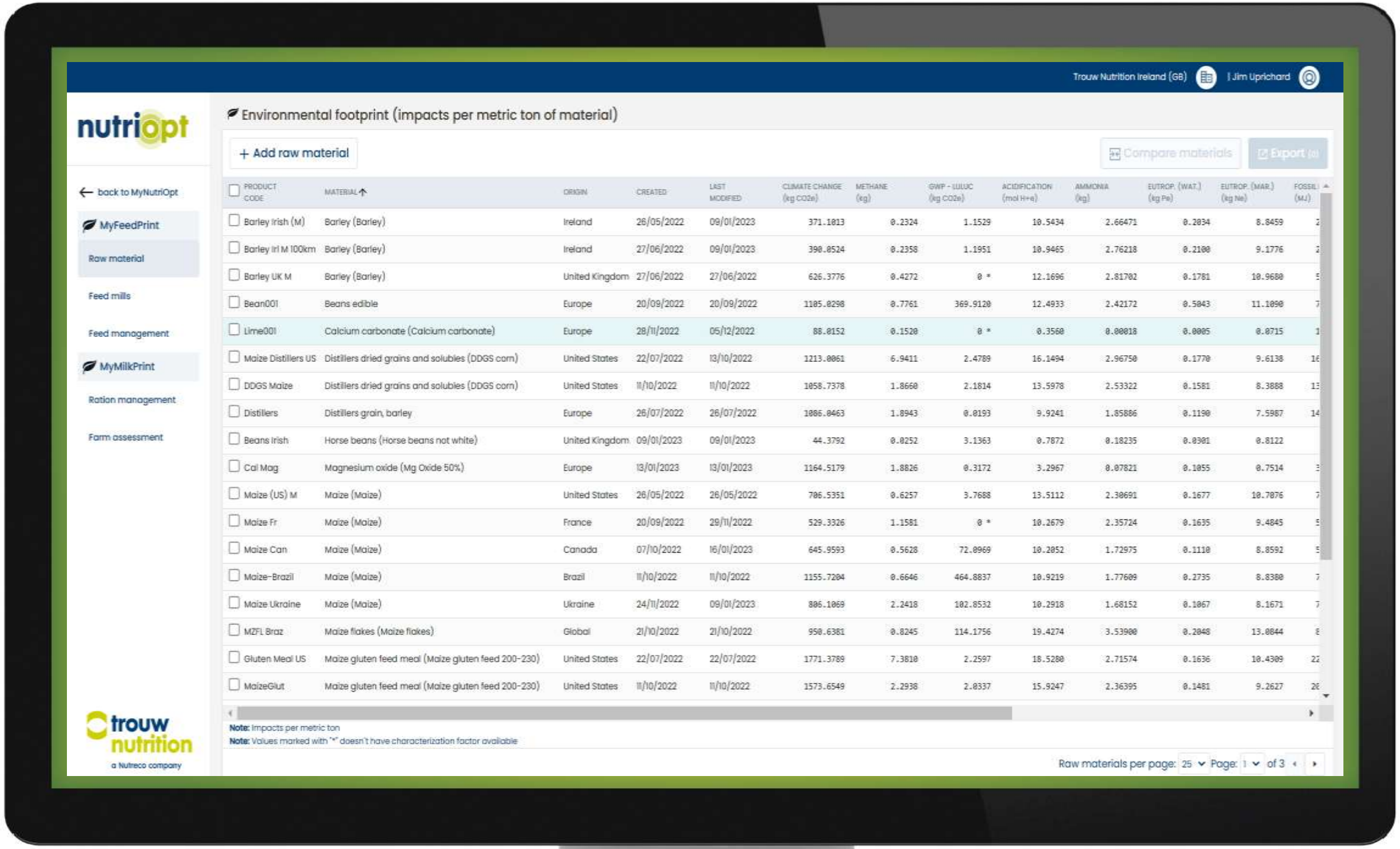
MyFeedPrint
Raw material
Feed mills
Feed management
MyMilkPrint
Ration management
Farm assessment
trouw nutrition
a Nutreco company
Environmental footprint (impacts per metric ton of material)
+ Add raw material
Barley Irish (M) Barley (Barley) Ireland 26/05/2022 09/01/2023 371.1813 0.2324
Barley Irl M 100km Barley (Barley) Ireland 27/06/2022 09/01/2023 398.0524 0.2358
Barley UK M Barley (Barley) United Kingdom 27/06/2022 27/06/2022 626.3776 0.4272
Bean001 Beans edible Europe 20/09/2022 20/09/2022 1185.0298 0.7761
Lime001 Calcium carbonate (Calcium carbonate) Europe 28/11/2022 05/12/2022 88.8152 0.1528
Maize Distillers US Distillers dried grains and solubles (DDGS corn) United States 22/07/2022 13/10/2022 1213.0861 6.9411
DDGS Maize Distillers dried grains and solubles (DDGS corn) United States 11/10/2022 11/10/2022 1858.7378 1.8668
Distillers Distillers grain, barley Europe 26/07/2022 26/07/2022 1886.8463 1.8943
Beans Irish Horse beans (Horse beans not white) United Kingdom 09/01/2023 09/01/2023 44.3792 0.0252
Cal Mag Magnesium oxide (Mg Oxide 50%) Europe 13/01/2023 13/01/2023 1164.5179 1.8826
Maize (US) M Maize (Maize) United States 26/05/2022 26/05/2022 706.5351 0.6257
Maize Fr Maize (Maize) France 20/09/2022 29/11/2022 529.3326 1.1581
Maize Can Maize (Maize) Canada 07/10/2022 16/01/2023 645.9593 0.5628
Maize-Brazil Maize (Maize) Brazil 11/10/2022 11/10/2022 1155.7284 0.6646
Maize Ukraine Maize (Maize) Ukraine 24/11/2022 09/01/2023 886.1969 2.2418
MZFL Braz Maize flakes (Maize flakes) Global 21/10/2022 21/10/2022 958.6381 0.8245
Gluten Meal US Maize gluten feed meal (Maize gluten feed 200-230) United States 22/07/2022 22/07/2022 1771.3789 7.3618
MaizeGlut Maize gluten feed meal (Maize gluten feed 200-230) United States 11/10/2022 11/10/2022 1573.6549 2.2938
Note: Impacts per metric ton
Note: Values marked with "*" doesn't have characterization factor available
Material characteristics
Material - Maize (Maize)
Export
Raw material
Maize (Maize)
Product code
Maize Can
Origin
Canada
Distance calculation method
Manual
Dry Matter (kg/kg)
0.87
ROUTE PART 1 - TRANSPORT TYPE
Freight train diesel
DISTANCE
1000.0
ROUTE PART 2 - TRANSPORT TYPE
Container ship
DISTANCE
5000.0
ROUTE PART 3 - TRANSPORT TYPE
Lorry (Europe)
DISTANCE
100.0
ADD ROUTE PART
Cancel
Save


Trouw Nutrition Ireland (GB)
Jim Uprichard
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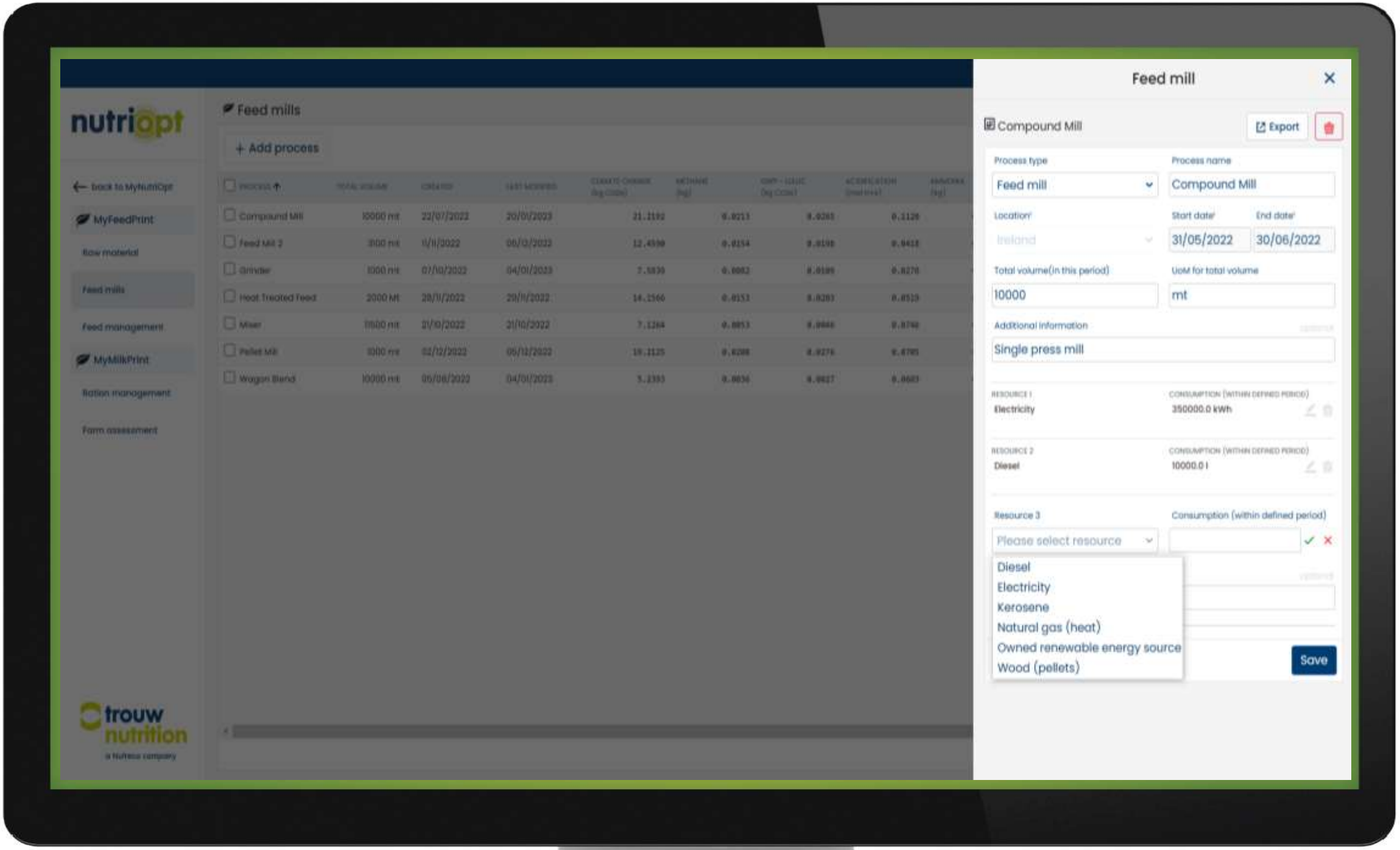
MyFeedPrint
Raw material
Feed mills
Feed management
MyMilkPrint
Ration management
Farm assessment
trouw nutrition
a Nutreco company
Environmental footprint (impacts per metric ton of material)
+ Add raw material
Compare materials
Export (0)
PRODUCT CODE
MATERIAL
ORIGIN
CREATED
LAST MODIFIED
CLIMATE CHANGE (kg CO2e)
METHANE (kg)
GWP - LULUC (kg CO2e)
ACIDIFICATION (mol H+e)
AMMONIA (kg)
EUTROP. (WAT.) (kg Pe)
EUTROP. (MAR.) (kg Ne)
FOSSIL (MJ)
Barley Irish (M) Barley (Barley) Ireland 26/05/2022 09/01/2023 371.1013 0.2324 1.1529 10.5434 2.66471 0.2034 8.8459
Barley Irl M 100km Barley (Barley) Ireland 27/06/2022 09/01/2023 390.0524 0.2358 1.1951 10.9465 2.76218 0.2100 9.1776
Barley UK M Barley (Barley) United Kingdom 27/06/2022 27/06/2022 626.3776 0.4272 0 * 12.1696 2.81702 0.1781 10.9680
Bean001 Beans edible Europe 20/09/2022 20/09/2022 1105.0298 0.7761 369.9120 12.4933 2.42172 0.5043 11.1090
Lime001 Calcium carbonate (Calcium carbonate) Europe 28/11/2022 05/12/2022 88.0152 0.1520 0 * 0.3560 0.00018 0.0005 0.0715
Maize Distillers US Distillers dried grains and solubles (DDGS corn) United States 22/07/2022 13/10/2022 1213.0061 6.9411 2.4789 16.1494 2.96750 0.1770 9.6138
DDGS Maize Distillers dried grains and solubles (DDGS corn) United States 11/10/2022 11/10/2022 1058.7378 1.8660 2.1814 13.5978 2.53322 0.1581 8.3888
Distillers Distillers grain, barley Europe 26/07/2022 26/07/2022 1086.0463 1.8943 0.0193 9.9241 1.85886 0.1190 7.5987
Beans Irish Horse beans (Horse beans not white) United Kingdom 09/01/2023 09/01/2023 44.3792 0.0252 3.1363 0.7872 0.18235 0.0301 0.8122
Cal Mag Magnesium oxide (Mg Oxide 50%) Europe 13/01/2023 13/01/2023 1164.5179 1.8826 0.3172 3.2967 0.07821 0.1055 0.7514
Maize (US) M Maize (Maize) United States 26/05/2022 26/05/2022 706.5351 0.6257 3.7688 13.5112 2.30691 0.1677 10.7076
Maize Fr Maize (Maize) France 20/09/2022 29/11/2022 529.3326 1.1581 0 * 10.2679 2.35724 0.1635 9.4845
Maize Can Maize (Maize) Canada 07/10/2022 16/01/2023 645.9593 0.5628 72.0969 10.2052 1.72975 0.1110 8.8592
Maize-Brazil Maize (Maize) Brazil 11/10/2022 11/10/2022 1155.7204 0.6646 464.8837 10.9219 1.77609 0.2735 8.8380
Maize Ukraine Maize (Maize) Ukraine 24/11/2022 09/01/2023 886.1069 2.2418 102.8532 10.2918 1.68152 0.1067 8.1671
MZFL Braz Maize flakes (Maize flakes) Global 21/10/2022 21/10/2022 950.6381 0.8245 114.1756 19.4274 3.53900 0.2048 13.0844
Gluten Meal US Maize gluten feed meal (Maize gluten feed 200-230) United States 22/07/2022 22/07/2022 1771.3789 7.3810 2.2597 18.5280 2.71574 0.1636 10.4309
MaizeGlut Maize gluten feed meal (Maize gluten feed 200-230) United States 11/10/2022 11/10/2022 1573.6549 2.2938 2.0337 15.9247 2.36395 0.1481 9.2627
Note: Impacts per metric ton
Note: Values marked with "*" doesn't have characterization factor available
Raw materials per page: 25 Page: 1 of 3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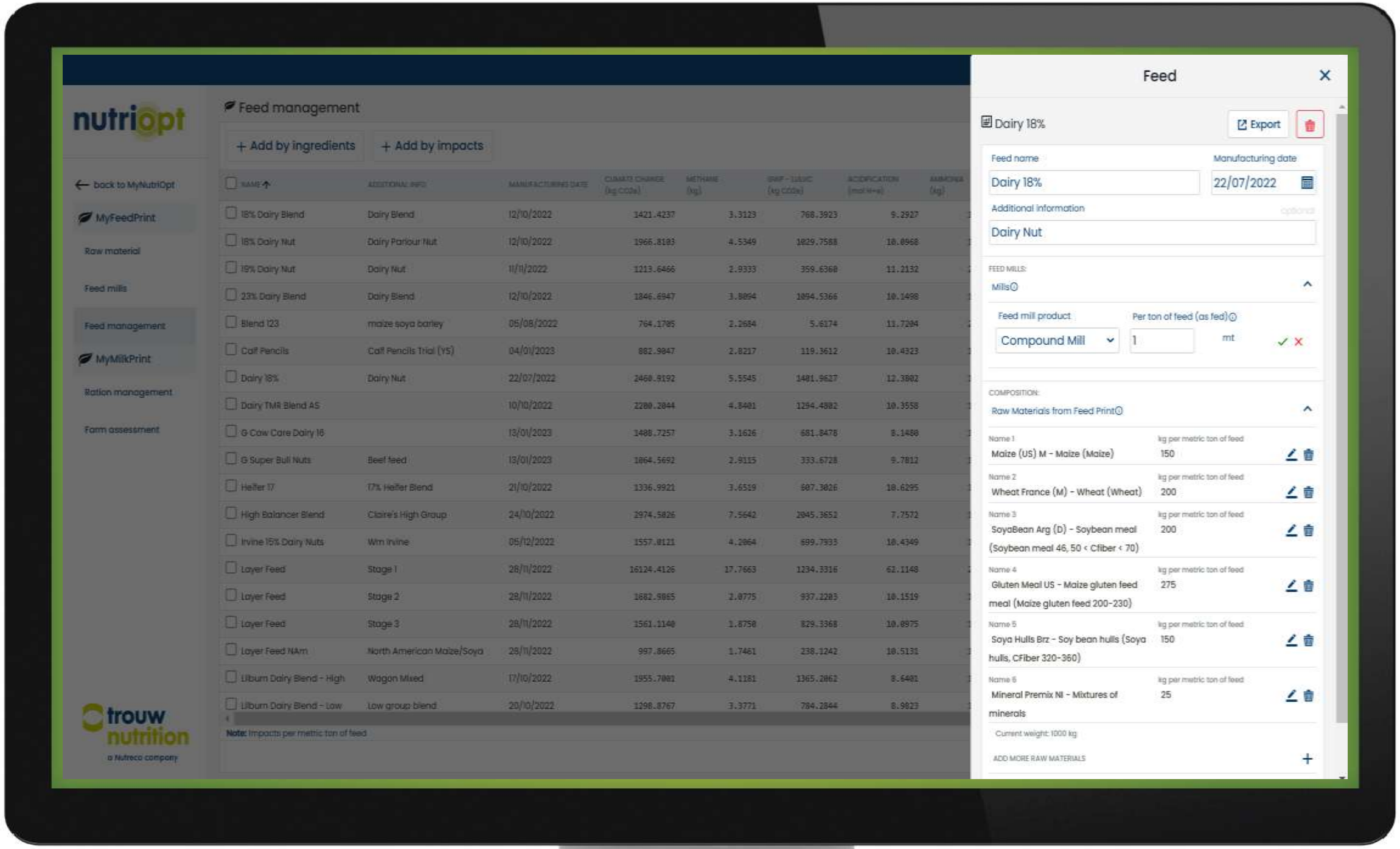
Feed mills
+ Add process
Back to MyNutriOpt
MyFeedPrint
Raw material
Feed mills
Feed management
MyMilkPrint
Ration management
Farm assessment
trouw nutrition
a Nutreco company
Feed mill
Compound Mill
Export
Process type
Feed mill
Process name
Compound Mill
Location*
Ireland
Start date*
31/05/2022
End date*
30/06/2022
Total volume(in this period)
10000
UoM for total volume
mt
Additional information
Single press mill
RESOURCE 1
Electricity
CONSUMPTION (WITHIN DEFINED PERIOD)
350000.0 kWh
RESOURCE 2
Diesel
CONSUMPTION (WITHIN DEFINED PERIOD)
10000.0 l
Resource 3
Consumption (within defined period)
Please select resource
Diesel
Electricity
Kerosene
Natural gas (heat)
Owned renewable energy source
Wood (pellets)
Save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MyFeedPrint
Raw material
Feed mills
Feed management
MyMilkPrint
Ration management
Farm assessment
trouw nutrition
a Nutreco company
Feed management
+ Add by ingredients
+ Add by impacts
NAME
ADDITIONAL INFO
MANUFACTURING DATE
CLIMATE CHANGE (kg CO2e)
METHANE (kg)
WATER USE (kg CO2e)
ACIDIFICATION (mol H+e)
AMMONIA (kg)
18% Dairy Blend | Dairy Blend | 12/10/2022 | 1421.4237 | 3.3123 | 768.3923 | 9.2927
18% Dairy Nut | Dairy Parlour Nut | 12/10/2022 | 1966.8183 | 4.5349 | 1029.7588 | 10.8968
18% Dairy Nut | Dairy Nut | 11/11/2022 | 1213.6466 | 2.9333 | 359.6368 | 11.2132
23% Dairy Blend | Dairy Blend | 12/10/2022 | 1846.6947 | 3.8894 | 1094.5366 | 10.1498
Blend 123 | maize soya barley | 05/08/2022 | 764.1785 | 2.2684 | 5.6174 | 11.7294
Calf Pencils | Calf Pencils Trial (YS) | 04/01/2023 | 882.9847 | 2.8217 | 119.3612 | 10.4323
Dairy 18% | Dairy Nut | 22/07/2022 | 2460.9192 | 5.5545 | 1401.9627 | 12.3802
Dairy TMR Blend AS | | 10/10/2022 | 2280.2844 | 4.8401 | 1294.4882 | 10.3558
G Cow Care Dairy 16 | | 13/01/2023 | 1488.7257 | 3.1626 | 681.8478 | 8.1488
G Super Bull Nuts | Beef feed | 13/01/2023 | 1864.5692 | 2.9115 | 333.6728 | 9.7812
Heifer 17 | 17% Heifer Blend | 21/10/2022 | 1336.9921 | 3.6519 | 607.3026 | 10.6295
High Balancer Blend | Claire's High Group | 24/10/2022 | 2974.5826 | 7.5642 | 2045.3652 | 7.7572
Irvine 16% Dairy Nuts | Wm Irvine | 05/12/2022 | 1557.8121 | 4.2864 | 699.7933 | 10.4349
Layer Feed | Stage 1 | 28/11/2022 | 16124.4126 | 17.7663 | 1234.3316 | 62.1148
Layer Feed | Stage 2 | 28/11/2022 | 1682.9865 | 2.8775 | 937.2283 | 10.1519
Layer Feed | Stage 3 | 28/11/2022 | 1561.1148 | 1.8758 | 829.3368 | 10.8975
Layer Feed NAm | North American Maize/Soya | 28/11/2022 | 997.8665 | 1.7461 | 238.1242 | 10.5131
Lilburn Dairy Blend - High | Wagon Mixed | 17/10/2022 | 1955.7081 | 4.1181 | 1365.2862 | 8.6481
Lilburn Dairy Blend - Low | Low group blend | 20/10/2022 | 1298.8767 | 3.3771 | 784.2844 | 8.9823
Note: Impacts per metric ton of feed
Feed
Dairy 18%
Export
Feed name
Dairy 18%
Manufacturing date
22/07/2022
Additional information
optional
Dairy Nut
FEED MILLS:
Mills
Feed mill product
Per ton of feed (as fed)
Compound Mill
1
mt
COMPOSITION:
Raw Materials from Feed Print
Name 1
Maize (US) M - Maize (Maize)
kg per metric ton of feed
150
Name 2
Wheat France (M) - Wheat (Wheat)
200
Name 3
SoyaBean Arg (D) - Soybean meal (Soybean meal 46, 50 < Cfiber < 70)
200
Name 4
Gluten Meal US - Maize gluten feed meal (Maize gluten feed 200-230)
275
Name 5
Soya Hulls Brz - Soy bean hulls (Soya hulls, CFiber 320-360)
150
Name 6
Mineral Premix NI - Mixtures of minerals
25
Current weight: 1000 kg
ADD MORE RAW MATERIALS

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Thanks
For listening

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