



ENVIRONMENTAL DECLARATION OF THE PRODUCT PLANT-BASED SOY BEVERAGE WITH VITAMINS AND CALCIUM

0.5-LITRE AND 1-LITRE PACKS



REFERENCE PCR

2019:10 Prepared and preserved vegetable and fruit products, including juice - CPC 213 e 214 - version 1.01, valid until 2023-09-25.

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GEOGRAPHIC REFERENCE

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PROGRAM

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The EPD should provide updated information and may require to be updated if the condition changes.

The validity stated is, therefore, subject to ongoing registration and publication on www.environdec.com. The present environmental declaration has been redacted in compliance with ISO 14025:2006.

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1. THE COMPANY AND THE ORASI BRAND



Unigrà is a leading agri-food company in Italy and one of the key players in Europe in the transformation and sales of vegetable oils and fats, margarine and semi-processed products for the confectionery industry. Founded in 1972 by Luciano Martini, over the years the company has developed its mission to produce top quality primary ingredients, semi-finished and finished products for all the channels in the sector:

Industrial, Artisanal, Retail and Ho.Re.Ca., meeting all the market demands and supplying continually evolving products with stringent quality standards and cutting-edge technology.

UNIGRÀ'S SUCCESS IS BASED ON CLEAR IDEAS:

- constant search for the best raw materials and top quality,
- continual investments in cutting-edge production technology,
- focus on market and customer requirements, resolve and determination to achieve increasingly ambitious results.

The company has also taken strategic action in the farming sector, resulting in the **OraSi** Project in 2015, which stemmed from the passion for agriculture of the CEO, Luciano Martini, and the vision of his son, Gian Maria, the company's Managing Director. Their idea was to bring a product to the consumer's table with a proprietary supply chain, fully controlled by Unigrà,

from the field to the table. The soy of the **OraSi** products is grown in the Agricola Dante Farm of Massa Fiscaglia, in the countryside in the province of Ferrara. The processing and packaging phases take place at the **Unigrà** production plant in Conselice (RA).

The launch of the new **OraSi** brand in the consumer channel is therefore part of **Unigrà's** business development plan, supporting the process of entrance into this highly strategic channel with products that are totally Italian, controlled and certified, No GMO, lactose-free, gluten-free, milk protein-free, with only natural flavourings.

The company's focus on the environment and the desire to provide its consumers with transparency has led the organisation to quantify the environmental impact of its vegetable-based beverages, based on the voluntary certification scheme for EPD products, the Environmental Product Declaration.

COMPANY	UNIGRÀ SRL
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WEBSITE	HTTP://ORASIVEGETALE.IT/
INFORMATION ON ENVIRONMENTAL MANAGEMENT SYSTEM	UNI EN ISO 14001 CERTIFICATION FROM 18/04/2007 CERTIFYING BODY BUREAU VERITAS



2. OUR MISSION: EXCELLENCE, TRANSPARENCY, PROXIMITY

In the province of **Ferrara**, in the heart of **Emilia Romagna**, the **Agricola Dante** farm occupies a total of 1,500 hectares (about 3,700 acres), the green landscape in which **OraSi** soy grows. Here we cultivate a project that is very dear to us: getting everyone to taste the goodness of true Italian soy and many other plant-based products grown and processed in Italy. Indeed, the soy in our beverages grows exclusively in the fields of the **Agricola Dante** farm and is processed in **Unigrà**'s production facilities in the province of Ravenna, very close to the fields where it is cultivated. All of it takes place with total transparency: the **OraSi** products come from a 100% Italian production chain, controlled and certified by certification bodies and guaranteed No GMO. Excellence, transparency, locally-produced: three outstanding reasons you can trust **OraSi**.

3. OUR VISION, INSPIRED BY SUSTAINABILITY

We believe in sustainability, in the duty of maintaining a good equilibrium with the system that our activity is part of and in the need to promote an economy based on knowledge and innovation.

Therefore, we have written down **8 key points** on which our commitment and our strategy for sustainability are founded:

1. TO OPERATE IN COMPLIANCE WITH THE ENVIRONMENTAL LAWS AND REGULATIONS CURRENTLY IN FORCE AND WITH ANY OTHER REQUIREMENTS VOLUNTARILY ADHERED TO
2. TO PREVENT POLLUTION THROUGH THE EMPOWERMENT AND INVOLVEMENT OF OUR EMPLOYEES AS WELL AS OUR SUPPLIERS
3. TO PURSUE CONTINUOUS IMPROVEMENT OF ENVIRONMENTAL PERFORMANCE BY IDENTIFYING, UPDATING AND PERIODIC EVALUATION OF ENVIRONMENTAL ASPECTS
4. TO OPTIMISE THE USE OF NATURAL RESOURCES WITH PARTICULAR FOCUS ON WATER
5. TO LIMIT CO₂ EMISSIONS
6. TO CONTRIBUTE TO THE PRODUCTION OF "GREEN" ELECTRICITY ALSO BY THE USE OF RENEWABLE SOURCES
7. TO AIM FOR EXCELLENCE BY CLOSELY MONITORING THE PRODUCTION AND CONSUMPTION OF ELECTRICITY
8. TO ENCOURAGE SELECTIVE WASTE COLLECTION



4. THE PRODUCT

The focus of this Environmental Product Declaration is **the plant-based soy beverage with vitamins and calcium; the plant-based, vanilla-flavoured soy beverage with vitamins and calcium; the plant-based, sugar-free soy beverage with vitamins and calcium**. The beverages are packaged in composite materials of paper and polyethylene in a **0.5-litre and 1-litre** format and are characterised by the same production and packaging process.

THE ORASÌ PLANT-BASED SOY BEVERAGE IS AN "ALL-PLANT PLEASURE" THAT COMES FROM ITALIAN SOY GROWN AND PROCESSED IN EMILIA ROMAGNA, CAREFULLY SELECTED, CONTROLLED AND CERTIFIED FOR ITS PRODUCTION CHAIN TRACEABILITY.



- ▶ IT IS A PRODUCT SUITABLE FOR EVERYONE, TO BE CONSUMED ANY TIME OF THE DAY: AT BREAKFAST, AS A SNACK OR FOR A LIGHT AND TASTY PAUSE.
- ▶ IT CAN BE USED FOR MAKING ALL CAFÉ-STYLE BEVERAGES, FROM CAPPUCCINO TO HOT AND COLD COFFEE-BASED DRINKS.

AVERAGE VALUES	PER 100 ml PRODUCT	PER PORTION 125 ml (1 glass)	%RI PER PORTION (125 ml)
ENERGY	203 kJ 48 kcal	254 kJ 60 kcal	3%
FAT	2.3 g	2.9 g	4%
of which			
saturated fatty acids	0.6 g	0.8 g	4%
monounsaturated fatty acids	0.7 g	0.9 g	-
polyunsaturated fatty acids	1 g	1.2 g	-
CARBOHYDRATES	3.5 g	4.4 g	2%
of which sugars	3.3 g	4.1 g	5%
FIBRE	0.3 g	0.4 g	-
PROTEIN	3.3 g	4.1 g	8%
SALT	0.13 g	0.16 g	3%
VITAMIN D	0.75 µg	0.94 µg	-
VITAMIN B ₁₂	0.38 µg	0.48 µg	-
CALCIUM	120 mg	150 mg	-

RI: Reference Intake for an average adult (8400 kJ / 2000 kcal), Reg. (EU) No. 1169/2011

INGREDIENTS: water, hulled soy beans (16%), cane sugar, calcium carbonate, plant fibre, stabiliser: gellan gum, sea salt, natural flavouring, vitamins (D, B12).

The sugar value is not included in the nutritional table for the plant-based, sugar-free soy beverage with vitamins and calcium.



5. THE PRODUCTION PROCESS

The **OraSi** plant-based soy beverage is produced from hulled, non-GMO soy beans, grown exclusively in the Emilia Romagna region. If the moisture of the harvest is lower than 14%, the beans are transferred directly from the field to the **Unigrà** production plant, where all the phases take place that lead to the creation of the finished product. When the moisture is above 14%, the raw material is first subjected to a drying process. The soy that reaches the **Unigrà** production plant is hulled and the subsequent phases are dedicated to the production of the semi-processed product through wet-milling with 90°C water.

The right degree of milling breaks up a greater number of cells, releasing the substances in them, without affecting the successful outcome of the step to separate the fibre from the liquid part. The material that results from the milling phase is in fact sent to a double treatment in decanter, separating the liquid base of the soy from the fibrous part (okara). The soy base continues along the production process, undergoing direct heat treatment

with steam, which serves to further inactivate the enzymes that otherwise would lead to deterioration of the product.

The product produced in this way is homogenised at a temperature of about 35°C and then, cooled to 4°C to limit the degradation processes. Before storing, pending the transition to the UHT treatment department, the protein standardisation (formulation) phase takes place during which the appropriate amount of drinking water is added.

The soy-based, semi-processed product is mixed with other ingredients, such as water, plant fibre and natural flavourings before undergoing ultra-heat treatment (UHT). The ultra-heat treatment (UHT), followed by homogenisation, consists of heating the product for a few seconds to a temperature over 135°C which makes it suitable for preservation at room temperature. Lastly, the beverage is aseptically packaged and sent to the distribution platform.

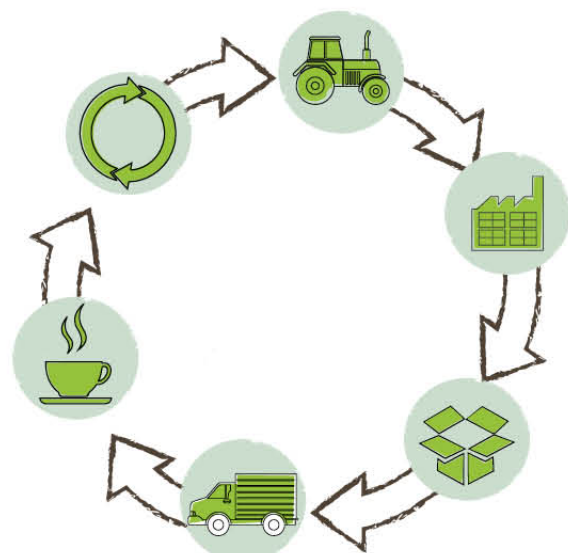


6. METHOD

The method used for the calculation is the one for Life Cycle Assessment (LCA) which is regulated by the ISO 14040 series international standards and allows the environmental impact of a product or service to be determined in terms of consumption of resources and releases into the environment throughout the product's life cycle.

The following were taken into consideration for the study:

- the requirements included in the International EPD System in the document "General Programme Instructions for the International EPD®" – version 3.01; to be able to extrapolate a certifiable environmental declaration that conforms to these rules.
- the requirements of the Product Category Rules (PCR) 2019:10 Prepared and preserved vegetable and fruit products, including juice - CPC 213 e 214 - version 1.01, valid until 2023-09-25.



The LCA method makes it possible to assess the impacts from all the product's life cycle phases, thus providing a comprehensive overview of the environmental performance of the product throughout its entire life cycle ("from the cradle to the grave"). The analysis was done in four steps:

1. **DEFINITION OF THE GOAL AND FIELD OF APPLICATION.**
2. **INVENTORY ANALYSIS.**
3. **IMPACT ASSESSMENT.**
4. **INTERPRETATION OF RESULTS.**

The software used to process the data is SimaPro 9.0.0.29; the databases used are the latest versions of Ecoinvent and Agri-footprint.

The functional unit adopted in this EPD is 1 kilo of plant-based beverage and the packaging (primary, secondary and tertiary) of the finished product. The weight of the packaging is not included in the kilo of the product.



The product density is 1.015 kg/l, the impacts per litre can be calculated with the appropriate conversion.

Description	Material	1 lt Format		0,5 lt Format	
		Weight for Final Unit	UM	Weight for Final Unit	UM
Brik	Ink	0,161 g	0,1 g		
	Paper	24,65 g	15,72 g		
	Plastic	6,05 g	3,34 g		
	Aluminum	1,54 g	0,997 g		
Cap	Cap - HDPE	1,05 g	1,05 g		
	Threaded Component - HDPE	1,95 g	1,95 g		
Cardboard	Cardboard	13,90 g	11,9 g		
	Ink	0,0695 g	0,593 g		
Interlayer Pad	Cardboard	0,435 g	0,241 g		
Stretch Film	LLDPE	0,513 g	0,285 g		
Angular	Cardboard	0,831 g	0,462 g		
Pallet	Wood	4,70 g	2,61 g		



7. SYSTEM BOUNDARIES

The system boundaries being studied include the entire production chain of the plant-based soy beverage, where it is possible to distinguish the three levels **UPSTREAM, CORE AND DOWNSTREAM.**

UPSTREAM PROCESS



1. PRODUCTION OF RAW MATERIALS

Production and transportation of the farm input
Air and water emissions
Production and consumption of energy/water input

2. DRYING OF THE SOY

3. PRODUCTION OF PACKAGING MATERIALS:

Primary
Secondary
Tertiary

4. PRODUCTION OF SEMI-PROCESSED PRODUCT

Production and consumption of energy/water input
Air and water emissions

CORE PROCESS



1. TRANSPORTATION OF THE RAW MATERIALS FROM THE FIELD TO THE COMPANY

2. TRANSPORTATION OF THE INGREDIENTS/ADDITIVES/ ANCILLARY MATERIALS/ PRIMARY PACKAGING

from the suppliers to the company

3. PRODUCTION OF THE FINISHED PRODUCT:

Production and consumption of energy/water input
Production of ingredients
Production and waste management
Wastewater management
Emissions into water
Production and consumption of ancillary materials (sanitisers/detergents)

4. TRANSPORTATION OF WASTE TO DISPOSAL FACILITIES

5. TRANSPORTATION OF THE OKARA/SEED COAT TO THE END CUSTOMER

DOWNSTREAM PROCESS



1. TRANSPORTATION OF THE PLANT-BASED BEVERAGE TO THE DISTRIBUTION PLATFORMS AND TRANSIT POINTS

2. REFRIGERATION OF THE PRODUCT AT THE CONSUMER LOCATION

3 END-OF-LIFE OF PRIMARY PACKAGING



8. MAIN THEORIES ADOPTED AND QUALITY OF THE DATA

Based on the definitions of the GPI 3.01, the data can be specific data, selected generic data or proxy data. An analysis of the quality has been implemented, based on the temporal, geographic and technological representation for the year 2019, considered as good.

The “proxy” data does not exceed 10% out of each impact category.

The control on the entire supply chain and the relations of trust with the suppliers have allowed primary data to be collected at every phase (upstream, core and downstream).

The main theories adopted and considerations on the quality of the data are given in points.

- **CULTIVATION** - The cultivation of the soy of the first and second harvest (considered separately in the study) is carried out by a single farm, whose farmlands are in the district of Fiscaglia and Jolanda di Savoia, all in the province of Ferrara. The data for the yield and consumption of agricultural and energy inputs are for the year 2019 and have been made available through the logbook and the company's purchase invoices.

- **PROCESSING OF RAW MATERIALS** - Once the raw material has been purchased, the company produces the semi-processed and finished product at the facility in Conselice (Ravenna). In the course of 2019 the soy has undergone a process of drying. The data, all relative to the year 2019, have been gathered at the farm and all the allocations (mass criteria) have been made to bring them to the single functional unit.

- **PACKAGING** - The data relating to the packaging has been detected by means of weighing in the field (primary packaging) and on the technical data sheets of the suppliers of the packaging material.

- **DISTRIBUTION** - The transport from the sales outlets to the final consumers have not been included in the distribution phase because it is impossible to create a solid theory on the method used. The Italian market is considered, since it represents the highest percentage of the total sales.

- **END-OF-LIFE** - As envisaged in the PCR, the end-of-life is calculated for the primary packaging. The end-of-life scenario elaborated refers to the average Italian packaging materials management reported in the latest ISPRA report (Urban Waste Report, ISPRA, 2020). The data used for the end-of-life are considered as generic.

The **CORINE** classification, suggested by PCR, was used for **Land Use**.

The use of agricultural land for soy cultivation is classified as follows:

- Level 1 => 2 Agricultural areas; Level 2 => 21 Arable land; Level 3 => 212 Permanently irrigated land

The use of the land for the extraction phase of the product and to produce the finished product is classified as follows:

- Level 1 => 1 Artificial surfaces; Level 2 => 12 Industrial, commercial and transport units; Level 3 => 121 Industrial or commercial units



9. ENVIRONMENTAL PERFORMANCE (A)

PLANT-BASED SOY BEVERAGE SOLD IN 1-LITRE FORMAT

The environmental performance shown in this paragraph refer to the references: plant-based soy beverage with vitamins and calcium; The table shows the consumption of energy resources and material, consumption of water and waste production. Ince along the life-cycle of the products secondary materials and fuels are not used, they are not shown.

The functional unit to which the resources consumption and impacts are referred is 1 Kg of Plant Based Drink.

PARAMETER		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
PRIMARY ENERGY RESOURCES - RENEWABLE	NOT USED AS RAW MATERIALS	MJ	1,60E-01	3,18E-01	7,54E-01	2,67E-03	2,56E-02	1,49E-01	1,88E-04	1,41E+00
	USED AS RAW MATERIALS	MJ	1,12E-01	1,30E-02	6,95E-01	6,74E-04	7,73E-03	5,73E-02	2,93E-05	8,85E-01
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,71E-01	3,31E-01	1,45E+00	3,34E-03	3,34E-02	2,07E-01	2,17E-04	2,29E+00
PRIMARY ENERGY RESOURCES - NON-RENEWABLE	NOT USED AS RAW MATERIALS	MJ	2,78E+00	2,46E-01	3,50E-01	9,81E-01	1,77E+00	1,93E+00	1,41E-03	8,06E+00
	USED AS RAW MATERIALS	MJ	1,78E-02	0,00E+00	1,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E+00
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,80E+00	2,46E-01	1,39E+00	9,81E-01	1,77E+00	1,93E+00	1,41E-03	9,12E+00
SECONDARY MATERIALS		KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS NON-RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FRESH WATER CONSUMPTION		M3	2,03E-01	6,25E-03	6,55E-03	1,25E-02	1,62E-03	1,34E-02	8,73E-06	2,43E-01

9. ENVIRONMENTAL PERFORMANCE (A)

The waste generated along the life-cycle of the products are shown in the following table

WASTE CATEGORY	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NON DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RADIO-ACTIVE WASTE	KG	1,02E-05	1,20E-06	3,54E-06	2,81E-07	1,23E-05	4,34E-06	9,97E-09	3,19E-05

The indicators related to the outward flows from the system shown in the following table

OUTWARD STREAM	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
REUSABLE COMPONENTS	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MATERIAL FOR RECYCLING - OKARA	KG	2,37E-01	0,00E+00	0,00E+00	2,00E-03	0,00E+00	0,00E+00	2,51E-02	2,64E-01
MATERIALS FOR ENERGETIC RECOVERY	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - ELECTRICITY	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - THERMAL	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00



9. ENVIRONMENTAL PERFORMANCE (A)

The environmental impact related to the production of 1kg of Plant Based Beverage are shown in the following table

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
GLOBAL WARMING	FOSSIL	KG CO2 EQ	2,56E-01	2,82E-02	8,28E-02	6,90E-02	1,18E-01	1,47E-01	6,18E-03	7,07E-01
	BIOGENIC	KG CO2 EQ	2,89E-04	5,15E-04	1,19E-03	1,26E-05	3,61E-05	2,99E-04	4,33E-03	6,67E-03
	USO AND TRANSFORMATION OF SOIL	KG CO2 EQ	1,41E-04	8,86E-03	6,82E-04	3,13E-06	4,32E-05	1,53E-05	4,86E-08	9,74E-03
	TOTAL	KG CO2 EQ	2,56E-01	3,75E-02	8,46E-02	6,90E-02	1,18E-01	1,47E-01	1,05E-02	7,23E-01
ACIDIFICATION		KG SO2 EQ	1,33E-03	2,06E-04	3,85E-04	1,28E-04	5,40E-04	5,37E-04	2,44E-06	3,13E-03
EUTHROPICATION		KG P04 - EQ	1,45E-03	1,21E-04	1,75E-04	1,03E-04	1,08E-04	1,55E-04	1,37E-05	2,13E-03
PHOTOCHEMICAL OXIDATION		KG NMVOC	5,74E-03	1,33E-04	3,09E-04	4,00E-03	6,51E-04	3,23E-04	3,51E-06	1,12E-22
DEPLETION OF RESOURCES - ELEMENTS		KG SB EQ	7,33E-06	8,94E-07	7,18E-06	6,67E-08	3,25E-06	2,10E-07	8,73E-10	1,89E-05
DEPLETION OF RESOURCES - FOSSIL FUELS		MJ	2,80E+00	2,46E-01	1,39E+00	9,81E-01	1,77E+00	1,93E+00	1,41E-03	9,12E+00
WATER SCARCITY FOOTPRINT		M3 EQ	8,68E+00	1,04E-01	3,84E-02	2,55E-01	5,12E-03	2,46E-02	2,81E-05	9,11E+00
OZONE DEPLETION		KG CFC - 11 EQ	2,88E-08	2,65E-09	6,25E-09	1,20E-08	2,18E-08	1,77E-08	2,29E-11	8,92E-08

An Additional environmental information requested by PCR is about the indicator shown in the wfollowing table. The functional unit is the reference: 1kg of Plant Based Beverage.

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
LAND USE		M2A	1,22E+00	0,00E+00	3,46E-02	6,37E-07	0,00E+00	0,00E+00	0,00E+00	1,25E+00

10. ENVIRONMENTAL PERFORMANCE (B)

PLANT-BASED SOY BEVERAGE SOLD IN 0.5-LITRE FORMAT

The environmental performance reported in this paragraph refer to the reference plant-based soy beverage with vitamins and calcium sold in 0,5 lt format. The table shows the consumption of energy resources and material, consumption of water and waste production. Ince along the life-cycle of the products secondary materials and fuels are not used, they are not shown.

The functional unit to which the resources consumption and impacts are referred is 1 Kg of Plant Based Drink, sold in 0,5 lt format.

PARAMETER		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
PRIMARY ENERGY RESOURCES - RENEWABLE	NOT USED AS RAW MATERIALS	MJ	1,60E-01	3,18E-01	1,49E+00	2,67E-03	1,25E-02	1,49E-01	2,43E-04	2,13E+00
	USED AS RAW MATERIALS	MJ	1,12E-01	1,30E-02	1,50E+00	6,74E-04	3,78E-03	5,73E-02	3,81E-05	1,68E+00
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,71E-01	3,31E-01	2,99E+00	3,34E-03	1,63E-02	2,07E-01	2,81E-04	3,82E+00
PRIMARY ENERGY RESOURCES - NON-RENEWABLE	NOT USED AS RAW MATERIALS	MJ	2,80E+00	2,46E-01	2,89E-01	9,81E-01	8,68E-01	1,93E+00	1,86E-03	7,11E+00
	USED AS RAW MATERIALS	MJ	1,78E-02	0,00E+00	1,48E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,50E+00
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,81E+00	2,46E-01	1,77E+00	9,81E-01	8,68E-01	1,93E+00	1,86E-03	8,61E+00
SECONDARY MATERIALS		KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS NON-RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FRESH WATER CONSUMPTION		M3	2,03E-01	6,25E-03	9,75E-03	1,25E-02	7,95E-04	1,34E-02	1,16E-05	2,46E-01

10. ENVIRONMENTAL PERFORMANCE (B)

The waste generated along the life-cycle of the products are shown in the following table

WASTE CATEGORY	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NON DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RADIO-ACTIVE WASTE	KG	1,02E-05	1,20E-06	5,01E-06	2,81E-07	6,05E-06	4,34E-06	1,30E-08	2,71E-05

The indicators related to the outward flows from the system shown in the following table

OUTWARD STREAM	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
REUSABLE COMPONENTS	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MATERIAL FOR RECYCLING - OKARA	KG	2,37E-01	0,00E+00	0,00E+00	2,00E-03	0,00E+00	0,00E+00	3,26E-02	2,71E-01
MATERIALS FOR ENERGETIC RECOVERY	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - ELECTRICITY	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - THERMAL	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00



10. ENVIRONMENTAL PERFORMANCE (B)

In tabella vengono riportati gli impatti ambientali riferiti alla produzione di 1 Kg di bevanda vegetale.

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
GLOBAL WARMING	FOSSIL	KG CO2 EQ	2,56E-01	3,70E-02	1,03E-01	6,90E-02	5,78E-02	1,47E-01	8,66E-03	6,78E-01
	BIOGENIC	KG CO2 EQ	2,89E-04	5,15E-04	1,07E-03	1,26E-05	1,76E-05	2,99E-04	5,51E-03	7,71E-03
	USO AND TRANSFORMATION OF SOIL	KG CO2 EQ	8,50E-07	5,95E-05	7,06E-06	1,16E-08	1,20E-07	5,72E-08	8,73E-11	6,76E-05
	TOTAL	KG CO2 EQ	2,56E-01	3,75E-02	1,04E-01	6,90E-02	5,78E-02	1,47E-01	1,42E-02	6,86E-01
ACIDIFICATION		KG SO2 EQ	1,33E-03	2,06E-04	4,94E-04	1,28E-04	2,64E-04	5,37E-04	3,21E-06	2,97E-03
EUTHROPICATION		KG P04 - EQ	1,45E-03	1,21E-04	2,38E-04	1,03E-04	5,25E-05	1,55E-04	1,82E-05	2,14E-03
PHOTOCHEMICAL OXIDATION		KG NMVOC	5,75E-03	1,33E-04	4,16E-04	4,00E-03	3,18E-04	3,23E-04	4,61E-06	1,09E-02
DEPLETION OF RESOURCES - ELEMENTS		KG SB EQ	7,33E-06	8,94E-07	9,26E-06	6,67E-08	1,59E-06	2,10E-07	1,15E-09	1,94E-05
DEPLETION OF RESOURCES - FOSSIL FUELS		MJ	2,80E+00	2,46E-01	1,77E+00	9,81E-01	8,68E-01	1,93E+00	1,86E-03	8,59E+00
WATER SCARCITY FOOTPRINT		M3 EQ	8,68E+00	1,04E-01	4,92E-02	2,55E-01	2,51E-03	2,46E-02	3,73E-05	9,12E+00
OZONE DEPLETION		KG CFC - 11 EQ	2,89E-08	2,65E-09	7,41E-09	1,20E-08	1,07E-08	1,77E-08	3,01E-11	7,93E-08

Un'informazione ambientale aggiuntiva richiesta dalla PCR riguarda l'indicatore in tabella. Il riferimento è l'unità funzionale: 1 kg di bevanda vegetale.

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
LAND USE		M2A	1,22E+00	0,00E+00	6,89E-02	6,37E-07	0,00E+00	0,00E+00	0,00E+00	1,28E+00

11. ENVIRONMENTAL PERFORMANCE (C)

PLANT-BASED SUGAR FREE SOY BEVERAGE SOLD IN 1-LITRE

The environmental performance shown in this paragraph refer to the references: plant-based soy beverage with vitamins and calcium; The table shows the consumption of energy resources and material, consumption of water and waste production. Ince along the life-cycle of the products secondary materials and fuels are not used, they are not shown.

The functional unit to which the resources consumption and impacts are referred is 1 Kg of Plant Based Drink.

PARAMETER		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
PRIMARY ENERGY RESOURCES - RENEWABLE	NOT USED AS RAW MATERIALS	MJ	1,50E-01	1,76E-01	7,54E-01	3,41E-03	4,14E-02	1,49E-01	1,88E-04	1,27E+00
	USED AS RAW MATERIALS	MJ	1,05E-01	1,26E-02	6,95E-01	8,56E-04	1,25E-02	5,73E-02	2,93E-05	8,83E-01
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,56E-01	1,89E-01	1,45E+00	4,26E-03	5,39E-02	2,07E-01	2,17E-04	2,16E+00
PRIMARY ENERGY RESOURCES - NON-RENEWABLE	NOT USED AS RAW MATERIALS	MJ	2,64E+00	2,25E-01	3,50E-01	1,09E+00	2,87E+00	1,93E+00	1,41E-03	9,09E+00
	USED AS RAW MATERIALS	MJ	1,68E-02	0,00E+00	1,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E+00
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,65E+00	2,25E-01	1,39E+00	1,09E+00	2,87E+00	1,93E+00	1,41E-03	1,02E+01
SECONDARY MATERIALS		KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS NON-RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FRESH WATER CONSUMPTION		M3	1,91E-01	4,18E-03	6,55E-03	1,46E-02	2,62E-03	1,34E-02	8,73E-06	2,33E-01

11. ENVIRONMENTAL PERFORMANCE (C)

The waste generated along the life-cycle of the products are shown in the following table

WASTE CATEGORY	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NON DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RADIO-ACTIVE WASTE	KG	9,60E-06	1,03E-06	3,54E-06	3,07E-07	2,00E-05	4,34E-06	9,97E-09	3,88E-05

The indicators related to the outward flows from the system shown in the following table

OUTWARD STREAM	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
REUSABLE COMPONENTS	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MATERIAL FOR RECYCLING - OKARA	KG	2,23E-01	0,00E+00	0,00E+00	2,22E-03	0,00E+00	0,00E+00	2,51E-02	2,51E-01
MATERIALS FOR ENERGETIC RECOVERY	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - ELECTRICITY	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - THERMAL	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00



11. ENVIRONMENTAL PERFORMANCE (C)

The environmental impact related to the production of 1kg of Plant Based Beverage are shown in the following table

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
GLOBAL WARMING	FOSSIL	KG CO2 EQ	2,41E-01	2,68E-02	8,28E-02	7,64E-02	1,91E-01	1,47E-01	6,18E-03	7,71E-01
	BIOGENIC	KG CO2 EQ	2,72E-04	2,34E-04	1,19E-03	1,52E-05	5,82E-05	2,99E-04	4,33E-03	6,40E-03
	USO AND TRANSFORMATION OF SOIL	KG CO2 EQ	1,33E-04	7,82E-03	6,82E-04	3,71E-06	6,93E-05	1,53E-05	4,86E-08	8,72E-03
	TOTAL	KG CO2 EQ	2,42E-01	3,48E-02	8,46E-02	7,65E-02	1,91E-01	1,47E-01	1,05E-02	7,86E-01
ACIDIFICATION		KG SO2 EQ	1,26E-03	1,70E-04	3,85E-04	1,42E-04	8,71E-04	5,37E-04	2,44E-06	3,36E-03
EUTHROPICATION		KG P04 - EQ	1,37E-03	1,02E-04	1,75E-04	1,15E-04	1,73E-04	1,55E-04	1,37E-05	2,10E-03
PHOTOCHEMICAL OXIDATION		KG NMVOC	5,42E-03	9,23E-05	3,09E-04	4,43E-03	1,05E-03	3,23E-04	3,51E-06	1,16E-02
DEPLETION OF RESOURCES - ELEMENTS		KG SB EQ	6,91E-06	8,14E-07	7,18E-06	6,90E-08	5,25E-06	2,10E-07	8,73E-10	2,04E-05
DEPLETION OF RESOURCES - FOSSIL FUELS		MJ	2,64E+00	2,25E-01	1,39E+00	1,09E+00	2,87E+00	1,93E+00	1,41E-03	1,01E+01
WATER SCARCITY FOOTPRINT		M3 EQ	8,18E+00	4,70E-02	3,84E-02	3,11E-01	8,27E-03	2,46E-02	2,81E-05	8,61E+00
OZONE DEPLETION		KG CFC - 11 EQ	2,72E-08	2,42E-09	6,25E-09	1,33E-08	3,52E-08	1,77E-08	2,29E-11	1,02E-07

An Additional environmental information requested by PCR is about the indicator shown in the wfollowing table. The functional unit is the reference: 1kg of Plant Based Beverage.

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
LAND USE		M2A	1,15E+00	0,00E+00	3,46E-02	6,37E-07	0,00E+00	0,00E+00	0,00E+00	1,18E+00

12. ENVIRONMENTAL PERFORMANCE (D)

PLANT-BASED VANILLA FLAVOUR SOY BEVERAGE SOLD IN 1-LITRE FORMAT

The environmental performance shown in this paragraph refer to the references: plant-based soy beverage with vitamins and calcium; The table shows the consumption of energy resources and material, consumption of water and waste production. Ince along the life-cycle of the products secondary materials and fuels are not used, they are not shown.

The functional unit to which the resources consumption and impacts are referred is 1 Kg of Plant Based Drink.

PARAMETER		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
PRIMARY ENERGY RESOURCES - RENEWABLE	NOT USED AS RAW MATERIALS	MJ	1,34E-01	5,49E-01	7,54E-01	3,33E-03	2,84E-02	1,49E-01	1,88E-04	1,62E+00
	USED AS RAW MATERIALS	MJ	9,41E-02	1,42E-02	6,95E-01	8,43E-04	8,57E-03	5,73E-02	2,93E-05	8,70E-01
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,28E-01	5,63E-01	1,45E+00	4,18E-03	3,70E-02	2,07E-01	2,17E-04	2,49E+00
PRIMARY ENERGY RESOURCES - NON-RENEWABLE	NOT USED AS RAW MATERIALS	MJ	2,35E+00	2,75E-01	3,50E-01	1,03E+00	1,97E+00	1,93E+00	1,41E-03	7,91E+00
	USED AS RAW MATERIALS	MJ	1,50E-02	0,00E+00	1,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E+00
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	2,37E+00	2,75E-01	1,39E+00	1,03E+00	1,97E+00	1,93E+00	1,41E-03	8,97E+00
SECONDARY MATERIALS		KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SECONDARY FUELS NON-RENEWABLE		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FRESH WATER CONSUMPTION		M3	1,71E-01	7,98E-03	6,55E-03	1,38E-02	1,80E-03	1,34E-02	8,73E-06	2,14E-01

12. ENVIRONMENTAL PERFORMANCE (D)

The waste generated along the life-cycle of the products are shown in the following table

WASTE CATEGORY	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NON DANGEROUS WASTE	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RADIO-ACTIVE WASTE	KG	8,57E-06	1,35E-06	3,54E-06	3,39E-07	1,37E-05	4,34E-06	9,97E-09	3,19E-05

The indicators related to the outward flows from the system shown in the following table

OUTWARD STREAM	UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
		CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
REUSABLE COMPONENTS	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MATERIAL FOR RECYCLING - OKARA	KG	1,88E-01	0,00E+00	0,00E+00	2,10E-03	0,00E+00	0,00E+00	2,51E-02	2,15E-01
MATERIALS FOR ENERGETIC RECOVERY	KG	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - ELECTRICITY	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ENERGY EXPORTED - THERMAL	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00



12. ENVIRONMENTAL PERFORMANCE (D)

The environmental impact related to the production of 1kg of Plant Based Beverage are shown in the following table

IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
GLOBAL WARMING	FOSSIL	KG CO2 EQ	2,15E-01	3,13E-02	8,28E-02	7,28E-02	1,31E-01	1,47E-01	6,18E-03	6,86E-01
	BIOGENIC	KG CO2 EQ	2,43E-04	9,14E-04	1,19E-03	1,45E-05	3,99E-05	2,99E-04	4,33E-03	7,03E-03
	USO AND TRANSFORMATION OF SOIL	KG CO2 EQ	1,18E-04	1,23E-02	6,82E-04	3,68E-06	4,76E-05	1,53E-05	4,86E-08	1,32E-02
	TOTAL	KG CO2 EQ	2,16E-01	4,45E-02	8,46E-02	7,28E-02	1,31E-01	1,47E-01	1,05E-02	7,06E-01
ACIDIFICATION		KG SO2 EQ	1,12E-03	2,50E-04	3,85E-04	1,37E-04	5,98E-04	5,37E-04	2,44E-06	3,03E-03
EUTHROPICATION		KG P04 - EQ	1,22E-03	1,45E-04	1,75E-04	1,09E-04	1,19E-04	1,55E-04	1,37E-05	1,94E-03
PHOTOCHEMICAL OXIDATION		KG NMVOC	4,83E-03	2,04E-04	3,09E-04	4,20E-03	7,21E-04	3,23E-04	3,51E-06	1,06E-02
DEPLETION OF RESOURCES - ELEMENTS		KG SB EQ	6,17E-06	1,03E-06	7,18E-06	7,78E-08	3,61E-06	2,10E-07	8,73E-10	1,83E-05
DEPLETION OF RESOURCES - FOSSIL FUELS		MJ	2,35E+00	2,75E-01	1,39E+00	1,03E+00	1,97E+00	1,93E+00	1,41E-03	8,95E+00
WATER SCARCITY FOOTPRINT		M3 EQ	7,30E+00	1,27E-01	3,84E-02	2,95E-01	5,68E-03	2,46E-02	2,81E-05	7,80E+00
OZONE DEPLETION		KG CFC - 11 EQ	2,43E-08	2,99E-09	6,25E-09	1,26E-08	2,42E-08	1,77E-08	2,29E-11	8,80E-08

An Additional environmental information requested by PCR is about the indicator shown in the wfollowing table. The functional unit is the reference: 1kg of Plant Based Beverage.

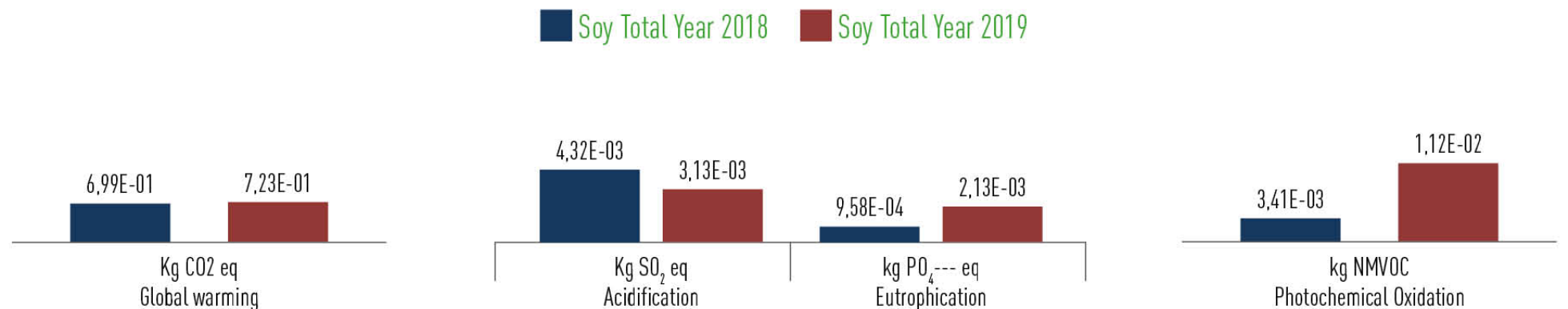
IMPACT CATEGORY		UNIT	UPSTREAM PROCESS			CORE PROCESS	DOWNSTREAM PROCESS			TOTAL
			CULTIVATION AND PRODUCTION OF SEMI-PROCESSED MATERIAL	INGREDIENTS PRODUCTION	PACKAGING PRODUCTION	PROCESS	DISTRIBUTION	USE PHASE	END-OF-LIFE	
LAND USE		M2A	1,03E+00	0,00E+00	3,46E-02	6,37E-07	0,00E+00	0,00E+00	0,00E+00	1,06E+00

13. ENVIRONMENTAL PERFORMANCE COMPARISON 2018-2019 (A)

PLANT-BASED REFERENCE BEVERAGE SOLD IN 1-LITRE FORMAT

The following graph compares the impacts calculated with the 2018 data and those obtained during the updating of the study. The differences found are greater than 10% for all the impact categories considered in the analysis, with the exception of global warming.

SOY 1 KG - COMPARISON OF IMPACTS YEAR 2018 AND YEAR 2019



Compared to previous year, the impact of global warming is 4% greater.

That is attributable to a greater impact associated with the delivery phase.

Compared to previous year, the impact of Acidification is lower due to a reduction of core phase impacts. The only change is related to energy consumption, hence, such reduction is attributable to the modelization of electric energy.

Compared to previous year, the impact of Eutrophication is greater. Such result is attributable to an increase of fertilizers involved in the cultivation process..

In 2018, the plant based soy beverage, 1 lt format, showed:

- For acidification, a greater impact by 38%
- For Eutrophication, a lower impact by 55%

Photochemical Oxidation shows a greater impact due to modelization of electric energy.

The 85% of the electric energy the company uses comes from the combustion of biomasses.

This caused a reduction of the "global Warming" impact and an increase of the impact of "Photochemical Oxidation".

In 2018, the plant based soy beverage, 1lt format, showed:

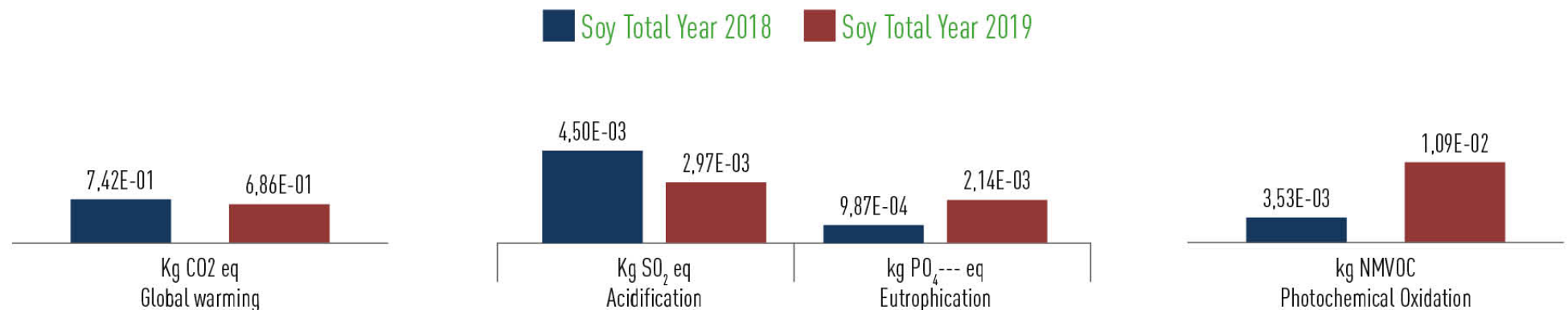
- For Photochemical Oxidation, a lower impact by 69%.

14. ENVIRONMENTAL PERFORMANCE COMPARISON 2018-2019 (B)

PLANT-BASED REFERENCE BEVERAGE SOLD IN 0.5-LITRE FORMAT

The following graph compares the impacts calculated with the 2018 data and those obtained during the updating of the study. The differences found are equal to or greater than 10% for all the impact categories considered in the analysis. For Acidification and global warming, records show a reduction of the impacts, while for eutrophication and photochemical oxidation, records show an increase.

SOY 1 KG - COMPARISON OF IMPACTS YEAR 2018 AND YEAR 2019



Compared to previous year, the impact of global warming is 8% lower attributable to a lower impact associated with the core phase due to the modelization of electric energy, and to the delivery phase.

In 2019 the average delivery distance of the product has increased.

Compared to previous year, the impact of Acidification is lower due to a reduction of core phase impacts. The only change is related to energy consumption, hence, such reduction is attributable to the modelization of electric energy.

Compared to previous year, the impact of Eutrophication is greater. Such result is attributable to an increase of fertilizers involved in the cultivation process..

In 2018, the plant based soy beverage, 1 lt format, showed:

- For acidification, a greater impact by 52%
- For Eutrophication, a lower impact by 54%

Photochemical Oxidation shows a greater impact due to modelization of electric energy.

The 85% of the electric energy the company uses comes from the combustion of biomasses.

This caused a reduction of the "global Warming" impact and an increase of the impact of "Photochemical Oxidation".

In 2018, the plant based soy beverage, 1lt format, showed:

- For Photochemical Oxidation, a lower impact by 68%.

15. CHANGES COMPARED TO THE PREVIOUS VERSION OF THE EPD

Field of application of the certificate – No changes.

Geographic scope of application – No changes.

Agricultural phase – Updated the data included in the study according to the evidence provided by the farm.

Drying phase – Addition of drying phase of the soy.

Production phase of the semi-finished product and of the plant-based beverage – Updated the data included in the study according to the evidence provided by Unigrà.

Packaging production phase – Updated the packaging weight.

Distribution phase – Updated the distances.

Packaging end-of-life phase – No changes. The data disclosed by ISPRA are considered.

16. GLOSSARY OF MAIN TERMS

GLOBAL WARMING POTENTIAL

Phenomenon for which the infrared rays emitted by the earth's surface following being heated by solar energy are absorbed by molecules present in the atmosphere and re-emitted in the form of heat, resulting in a global warming of the atmosphere itself.

PHOTOCHEMICAL OZONE CREATION POTENTIAL

Production of compounds which, due to light, create an oxidation reaction causing the production of ozone in the troposphere.

ACIDIFICATION POTENTIAL

Phenomenon in which atmospheric precipitations have a lower than normal pH.

EUTROPHICATION POTENTIAL

Concentration of nutrients in water courses which causes an imbalance in the aquatic ecosystems due to excessive development because of the lack of nutritional limitations.

WATER SCARCITY

Effects on water availability.

DEPLETION OF ABIOTIC RESOURCES – ELEMENTS

Depletion of abiotic natural resources, non renewable, such as minerals and metals.

DEPLETION OF ABIOTIC RESOURCES – FOSSIL FUEL

Depletion of abiotic natural resources, non renewable, for energetic use such as methane, carbon and oil.

REDUCTION OF OZONE LAYER (KG OF CFC-II EQ)

Phenomenon caused by the interaction with chlorine oxides contained in gas like chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC) and hydrofluoro carbon (HFC), used in the equipment, sprays or in the thermal insulation construction.

13. INFORMATION ABOUT THE PROGRAMME AND MANDATORY DECLARATIONS

The document was developed according to the international EPD® system. The programme operator is EPD International AB, Box 210 60, SE-100 31 Stoccolma, Svezia.
E-mail: info@environdec.com

This environmental declaration has a 5 years validity and is yearly revised.

The environmental declarations published in the same product category, but from different programmes, may not be comparable. For further information about this declaration, please refer to the site www.environdec.com

The EPD holder has exclusive propriety and responsibility over the present EPD.

The EPD described herein was prepared in accordance with PCR 2019:10 Prepared and preserved vegetable and fruit products, including juice - CPC 213 e 214 - version 1.01, valid until 2023-09-25.

Reference Product Category Rules (PCR): PCR 2019:10 Prepared and preserved vegetable and fruit products, including juice – CPC 213 e 214 – version 1.01, valid until 2023-09-25.

Period of validity EPD: valid until 22/03/2026

PCR review conducted by: Technical Committee of the International EPD® System.

E-mail: info@environdec.com

Independent verification of the declaration and data in accordance with ISO 14025: 2006

☐ Internal ☒ External

Third Party Verifier: Ugo Pretato (EPD Individual Verifier)

Bureau Veritas Italia acted as contract manager

The data follow-up procedure during the validity of the present EPD involves a third party verifier: ☐ Yes ☒ No

Contacts: Marcello Valenti – EPD Manager – marcello.valenti@unigra.it



18. CONTACTS

Riferimenti Unigrà Srl:

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E-mail: marcello.valenti@unigra.it

La presente EPD, e il relativo studio LCA, è stata elaborata con la collaborazione ed il supporto di Alimenta Srl - www.alimentaonline.it



16. MAIN BIBLIOGRAPHIC REFERENCES

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