



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

1-LITRE PACK



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.

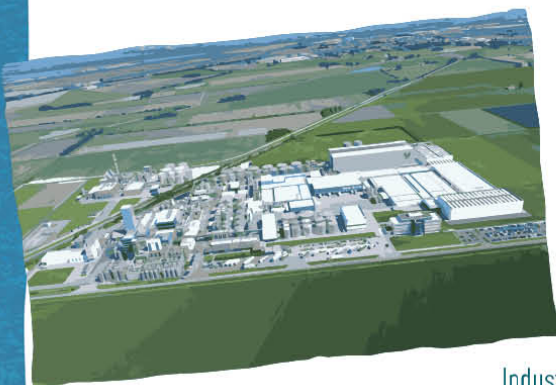
The validity stated is, therefore, subject to ongoing registration and publication on www.environdec.com. The present environmental declaration has been redacted in compliance with ISO 14025:2006.

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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 rice 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
ADDRESS	VIA GARDIZZA, 9B, 43017 CONSELICE RA
VAT NO.	02403240399
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** rice grows. Here we cultivate a project that is very dear to us: getting everyone to taste the goodness of true Italian rice and many other plant-based products grown and processed in Italy. Indeed, the rice 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

This Environmental Product Declaration is for **a plant-based rice beverage with vitamins and calcium**, packaged in composite materials of paper and polyethylene in a 1-litre format.

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



- ▶ IT IS AN IDEAL PRODUCT FOR EVERYONE AND PERFECT FOR ANY TIME OF 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	209 kJ 50 kcal	261 kJ 62 kcal	3%
FAT	1.3 g	1.6 g	2%
of which			1%
saturated fatty acids	0.2 g	0.2 g	-
monounsaturated fatty acids	0.4 g	0.5 g	-
polyunsaturated fatty acids	0.7 g	0.9 g	-
CARBOHYDRATES	9.2 g	12 g	4%
of which sugars	4.3 g	5.4 g	6%
FIBRE	0.3 g	0.4 g	-
PROTEIN	0.1 g	0.1 g	0%
SALT	0.12 g	0.15 g	2%
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, rice (12.5%), sunflower seed oil, calcium carbonate, plant fibre, stabiliser: gellan gum, sea salt, vitamins (D, B12).



5. THE PRODUCTION PROCESS

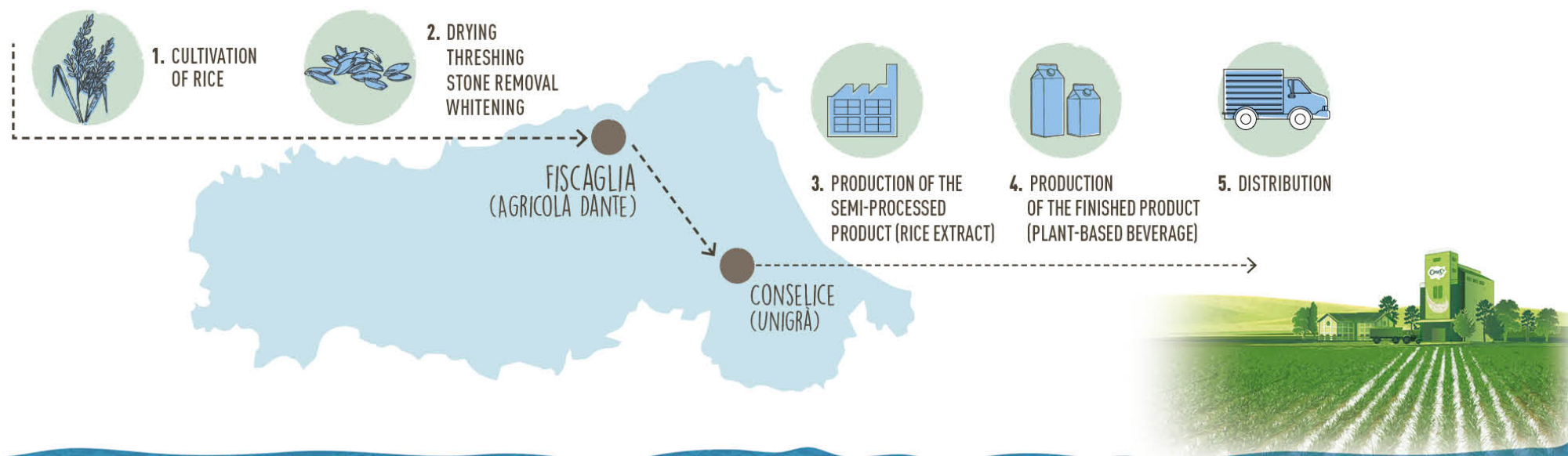
The rice used to produce the plant-based drink is cultivated by the Azienda Agricola Immobiliare Dante S.p.A., in the farmlands in the district of Codigoro (Ferrara). The farm grows the crop under water, which is an essential element for defending the seeds and young plants from low night temperatures. The rice matures between September and October and the last drainage takes place two weeks before harvesting, which is done by modern combine harvesters, fitted with tracks to prevent them from sinking into the typical muddy ground of the rice fields.

The threshing operation produces paddy rice which is dried to eliminate the excess humidity from within. This phase, which in the past was carried out in farmyards, by exploiting the heat of the sun, lasted two or three days, whereas now it is performed by innovative equipment, cutting the drying time down to a few hours. The rice, therefore, keeps better in the silos and storehouses until it is processed.

To obtain a perfect product, the paddy rice undergoes a multi-step treatment: threshing of the rice to separate the grain from the husk; elimination of the so-called green grain, i.e. the small, immature grains; transition through a machine called a destoner which removes stones

and pebbles from the rice; whitening of the rice through a whitener machine with a roller to polish the grains until they turn white; elimination of the rice germ, the so-called brewer's rice (i.e. the broken rice that is less than half the size of a grain) and the half-grain (i.e. rice that is the same size or bigger than half a grain). These treatment steps are carried out at the facility of our supplier, located in Codigoro, near the farmlands.

The processed rice is delivered to the Unigrà facility in Conselice for production of the semi-processed product. The first stage is milling, during which water and enzymes are added, converting the starch into dextrin. The water is then drained off from the rice base by a decanter which separates the rice base from the fibrous part. The fibrous part (okara) is collected and then it is shipped for technical uses (energy production). The rice base continues along the production process, undergoing homogenisation. Before this treatment, sunflower seed oil is added. The final treatment is cooling, before the semi-processed product is sent to the UHT facility, where it is heated to make it suitable for preservation at room temperature. The beverage is now packaged and sent to the distribution platform.

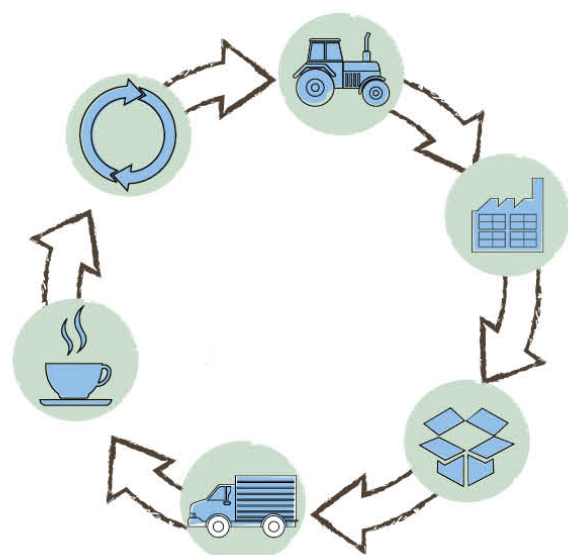


6. METHOD

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 of the International EPD® System", 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.

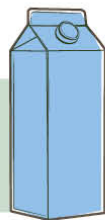


The LCA method makes it possible to assess the impacts from all the product's life cycle phases, thus providing a comprehensive overview of the environmental performance of the product throughout its entire life cycle ("from the cradle to the grave"). The analysis was done in four steps:

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 9.1.1.1; 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 1.04 kg/l, the impacts per litre can be calculated with the appropriate conversion.

Description	Material	Weight for Final Unit	UM
Brik	Ink	0,161	g
	Paper	24,65	g
	Plastic	6,05	g
	Aluminum	1,54	g
Cap	Cap - HDPE	1,05	g
	Threaded Component - HDPE	1,95	g
Cardboard	Cardboard	13,90	g
	Ink	0,0695	g
	Cardboard	0,435	g
Interlayer Pad	Cardboard	0,513	g
Stretch Film	LLDPE	0,513	g
Angular	Cardboard	0,831	g
Pallet	Wood	4,70	g



7. SYSTEM BOUNDARIES

The system boundaries being studied include the entire production chain of the plant-based rice 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 AND FIRST PROCESSING OF THE RAW MATERIAL:

Production and consumption of energy input

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 BY THE COMPANY'S SUPPLIERS

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 (santisers/detergents)

4. TRANSPORTATION OF WASTE TO DISPOSAL FACILITIES

5. TRANSPORTATION OF THE OKARA TO THE END CUSTOMER (DESTINATION BIOGAS FACILITY)

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 rice is carried out by a single farm, whose farmlands are in the district of Codigoro and Jolanda di Savoia, 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. In the calculation of the emissions in air attributable to the cultivation phase, the methane emissions generated by the anaerobic decomposition of the organic fertilisers used in the field during the period submersion of the rice have been counted.

- **PROCESSING OF RAW MATERIAL** - The company uses a supplier in the district of Codigoro to perform the initial processing (drying, threshing, destoning and whitening). The supplier, which took part in the data collection, shared the primary data with Unigrà on consumptions associated with the processing carried out in its facility. The semi-processed and finished product are produced in the Unigrà facility in Conselice (Ravenna). 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 rice 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

PLANT-BASED REFERENCE BEVERAGE SOLD IN 1-LITRE FORMAT

The table shows the consumption of energy resources and material, consumption of water and waste production. Since 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	7,26E-01	1,46E-01	7,54E-01	3,18E-03	2,84E-02	1,49E-01	1,88E-04	1,81E+00
	USED AS RAW MATERIALS	MJ	1,95E-01	1,05E-02	6,95E-01	8,00E-04	8,56E-03	5,73E-02	2,93E-05	9,66E-01
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	9,21E-01	1,57E-01	1,45E+00	3,98E-03	3,69E-02	2,07E-01	2,17E-04	2,77E+00
PRIMARY ENERGY RESOURCES - NON-RENEWABLE	NOT USED AS RAW MATERIALS	MJ	3,81E+00	1,81E-01	3,50E-01	9,78E-01	1,96E+00	1,93E+00	1,41E-03	9,21E+00
	USED AS RAW MATERIALS	MJ	5,50E-03	0,00E+00	1,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,05E+00
	TOTAL OF RENEWABLE ENERGY RESOURCES	MJ	3,82E+00	1,81E-01	1,39E+00	9,78E-01	1,96E+00	1,93E+00	1,41E-03	1,03E+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	7,95E-01	3,20E-03	6,55E-03	1,32E-02	1,80E-03	1,34E-02	8,73E-06	8,33E-01

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	1,66E-05	7,41E-07	3,54E-06	2,93E-07	1,37E-05	4,34E-06	9,97E-09	3,91E-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	4,56E-02	0,00E+00	0,00E+00	1,99E-03	0,00E+00	0,00E+00	2,51E-02	7,27E-02
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



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	3,38E-01	2,22E-02	8,28E-02	6,88E-02	1,31E-01	1,47E-01	6,18E-03	7,95E-01
	BIOGENIC	KG CO2 EQ	1,33E-01	8,80E-05	1,19E-03	1,39E-05	3,99E-05	2,99E-04	4,33E-03	1,39E-01
	USO AND TRANSFORMATION OF SOIL	KG CO2 EQ	4,33E-04	7,00E-03	6,82E-04	3,44E-06	4,78E-05	1,53E-05	4,86E-08	8,18E-03
	TOTAL	KG CO2 EQ	4,71E-01	2,93E-02	8,46E-02	6,88E-02	1,31E-01	1,47E-01	1,05E-02	9,43E-01
ACIDIFICATION		KG SO2 EQ	2,47E-03	1,32E-04	3,85E-04	1,29E-04	5,97E-04	5,37E-04	2,44E-06	4,25E-03
EUTHROPICATION		KG P04 - EQ	1,72E-03	7,91E-05	1,75E-04	1,04E-04	1,19E-04	1,55E-04	1,37E-05	2,37E-03
PHOTOCHEMICAL OXIDATION		KG NMVOC	6,35E-03	7,37E-05	3,09E-04	3,98E-03	7,20E-04	3,23E-04	3,51E-06	1,18E-02
DEPLETION OF RESOURCES - ELEMENTS		KG SB EQ	1,09E-05	6,89E-07	7,18E-06	6,58E-08	3,60E-06	2,10E-07	8,73E-10	2,26E-05
DEPLETION OF RESOURCES - FOSSIL FUELS		MJ	3,80E+00	1,81E-01	1,39E+00	9,78E-01	1,96E+00	1,93E+00	1,41E-03	1,02E+01
WATER SCARCITY FOOTPRINT		M3 EQ	3,44E+01	3,64E-02	3,84E-02	2,85E-01	5,67E-03	2,46E-02	2,81E-05	3,48E+01
OZONE DEPLETION		KG CFC - 11 EQ	3,91E-08	1,90E-09	6,25E-09	1,19E-08	2,41E-08	1,77E-08	2,29E-11	1,01E-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	3,79E-01	0,00E+00	3,46E-02	6,37E-07	0,00E+00	0,00E+00	0,00E+00	4,13E-01

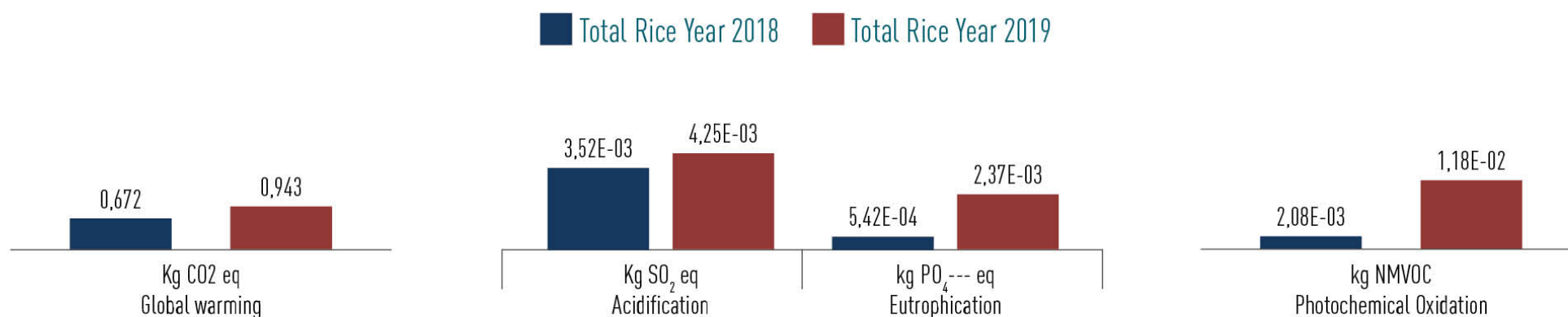


10. ENVIRONMENTAL PERFORMANCE COMPARISON 2017-2018

The following graph compares the impacts calculated with the 2019 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 all the categories there is an increase of the impacts due to the inclusion in this report of the methane emissions generated by the rice cultivation, not included in the previous report.

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



The Global Warming indicator shows a 40% increase. This increase is attributable to the accounting of biogenic methane emissions generated in the rice submergence phase, not accounted in 2018.

Both the impact categories show an increase compared to the previous year. The Eutrophication indicator is attributable to the increase in the use of fertilizers and therefore in the water emissions. The Acidification indicator is attributable to the core phase (methane and electric energy consumption).

In 2018, the Rice plant-based Beverage, 1lt, showed:

- For Acidification, an impact lower by 17%
- For Eutrophication, an impact lower by 77%

The photochemical oxidation category show an increase in the impact attributable to type of the source from which derive the electric energy consumed in the core phase. The 85% of the electric energy the company uses comes from the combustion of biomasses.

The Rice plant-based Beverage, 1lt, in 2018 showed an impact lower by 82%,

11. 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.

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.

12. 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 X No

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



14. CONTACTS

Riferimenti Unigrà Srl:

Responsabile EPD: Dr Marcello Valenti

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



15. MAIN BIBLIOGRAPHIC REFERENCES

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Unigrà S.r.l. Via Gardizza, 9/b - 48017 Conselice (RA) Italy
Tel. +39 0545 989511 - Fax +39 85061 - info@unigra.it - www.unigra.it