Environmental Product Declaration

In accordance with ISO 14025 for:

Olio Extra Vergine di Oliva Biologico

from

COOPERATIVA AGRICOLA POMONTE

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-05990
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Programme information

Programme:	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com

Product category rules (PCR): *Virgin olive oil and its fractions 2010:07 v. 3.0 (UN CPC 21537)*
PCR review was conducted by: *The Technical Committee of the International EPD® System, info@environdec.com.* Chair of the PCR review*: Adriana del Borghi* Review dates*: 2019-05-20 until 2020-02-10*
Independent third-party verification of the declaration and data, according to ISO 14025:2006: ☐ EPD process certification ☒ EPD verification
Third party verifier: *DNV Business Assurance Italy S.r.l.* *In case of accredited certification bodies:* Accredited by: *Accredia*
Procedure for follow-up of data during EPD validity involves third party verifier: ☒ Yes ☐ No
Product Life Cycle Assessment and document production by: *ICStudio S.r.l.* *Via Vittorio Emanuele, 33 - 50041 Calenzano (FI)* *www.icsconsulting.it*

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable.

Company information

Owner of the EPD:
Cooperativa Agricola Pomonte - 0564 599208
Responsabile del frantoio: Dr. Macchi Angelo
Responsabile commerciale: Fatarella Damiano
Email: info@agripomonte.it Web site: www.agripomonte.it

Description of the organisation:
Cooperativa Agricola Pomonte was born on 23 January 1953 in Pomonte, Grosseto, Tuscany.
The company's growth has been constant from 1960 until now, up to equip the production site with a modern oil mill and a centre for the storage and refrigeration of the wheat.
At the end of the 90s, the sale of foodstuffs began and in 2006 a new shop was inaugurated, full of self-made products. In the same period, an additional store was opened in Scansano and in 2001 another one in S. Caterina (Roccalbegna), which operates in various product sectors including food.
In 2008, the olive oil mill and oil marketing activity were taken by Torcular Company in Manciano and after 3 years a new oil mill was installed.
Over the years, the structure has been modernized, preserving the existing technology and supporting the needs of the market, stakeholders and customers.

The environmental efforts have grown over the years, for example:

- two photovoltaic systems were installed in 2010, providing 345 kW of renewable electricity, and satisfying the needs of the facility (the surplus of energy is sent into the national grid);
- the "stone" of the olives is sold for recycling, obtaining a bio-fuel. Moreover, pomace pit is sold as excellent alternative to pellets;
- short supply chain and "kilometre zero" approach were taken as target to reduce the environmental impact and CO_2 emissions.

Name and location of production site:
Località Pomonte, 58054 Scansano, Grosseto (GR), Italy

Product information

Product name:
"POMONTE" Olio Extra Vergine di Oliva Biologico

Product identification:
Certified by ICEA (Istituto Per La Certificazione Etica Ed Ambientale)

CPC code: UN CPC 21537

Geographical scope: Italy

Product description:
Extra Virgin Olive Oil obtained directly by mechanical process. Cold-pressed and produced with olives from biologic cultivation.

Average nutritional values for 100 ml:
Energy value: 899 kcal
Fat 91.6 g of which saturates 13.8 g
Carbohydrate 0 g of which sugar 0 g
Protein 0 g
Salt 0 g

Variety of olive:
Frantoio, Leccino, Moraiolo

Collection system:
Hand-picking and mechanical harvesting

Collection period:
October-November

Extraction system and filtration:
Continuous cycle cold two fases, unfiltered

Colour and taste:
From intense green to light green, medium fruit taste, light/average bitter taste, light/average feeling of spicy, medium fruity fragrance

Chemical section:
Density 0,916
Acidity 0.18%
Peroxides 5.4 Meq. /kg
Biophenols 706 mg/kg

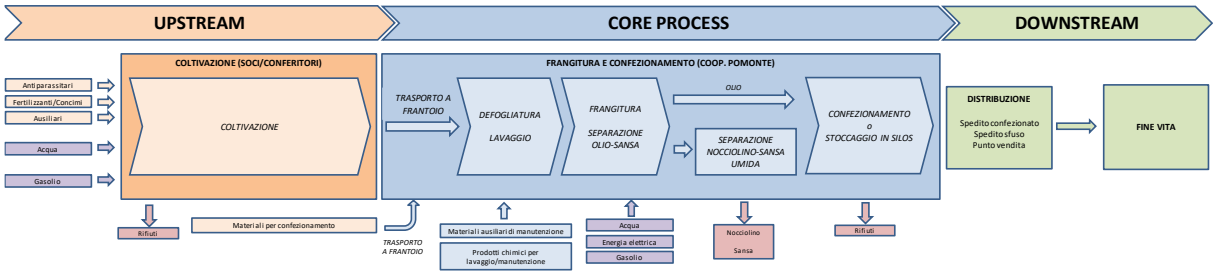
LCA information

Functional unit / declared unit:
1 litre of product, including its packaging

Time representativeness:
Olive oil campaign 2020

Database(s) and LCA software used:
SimaPro 9.1.1.1, database Ecoinvent 3.6

System diagram:



Description of system boundaries:
Cradle to grave

Cut-off rules:
Consumptions and raw materials that generate over 99% of the impacts were considered

Data quality:
Most of data were considered site specific, provided directly from the company management system. Proxy processes have a contribution of less than 10% of the overall impacts, in accordance with the EPD standard.

Allocation:
The allocation of water and energy consumption was carried out according to the mass principle.
As suggested by the PCR, for the co-products production, the allocation was solved with the economic principle.

Content declaration

Product

Materials / chemical substances	Litre	%	Environmental / hazardous properties
Olio Extra Vergine di Oliva Biologico	1	100	-

Packaging

Distribution and consumer packaging:
Glass bottle 50 cl (490 gr with 75% of recycled glass pre-consumer)
Tin 3 litre (250 gr)
Label (0,3 gr)
Cap for bottle (2 gr)
Cap for tin (2 gr)

Environmental performance

The emission factors are consistent with the methodologies available on www.environdec.com

Potential environmental impact of Biologic Olive Oil bottle 50 cl

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Global warming potential (GWP)	Fossil	kg CO_2 eq.	1,97E+00	4,21E-01	2,06E-01	2,60E+00
	Biogenic	kg CO_2 eq.	7,12E-03	9,54E-04	2,30E-05	8,09E-03
	Land use and land transformation	kg CO_2 eq.	9,72E-04	5,20E-04	2,07E-05	1,51E-03
	TOTAL	kg CO_2 eq.	1,98E+00	4,22E-01	2,06E-01	2,61E+00
Acidification potential (AP)		kg SO_2 eq.	6,70E-02	1,84E-03	1,19E-03	7,00E-02
Eutrophication potential (EP)		kg PO_4^{3-} eq.	4,06E-02	6,99E-04	2,09E-04	4,15E-02
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	8,98E-03	1,62E-03	2,04E-03	1,26E-02
Abiotic depletion potential – Elements		kg Sb eq.	5,15E-05	1,00E-05	1,28E-06	6,28E-05
Abiotic depletion potential – Fossil resources		MJ, net calorific value	1,57E+01	7,24E+00	2,85E+00	2,58E+01
Water scarcity potential		m^3 eq.	2,14E+00	5,48E-01	2,69E-03	2,69E+00

Potential environmental impact of Biologic Olive Oil tin 3 litre

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Global warming potential (GWP)	Fossil	kg CO_2 eq.	2,41E+00	4,21E-01	1,05E-01	2,93E+00
	Biogenic	kg CO_2 eq.	3,85E-03	9,54E-04	1,92E-05	4,83E-03
	Land use and land transformation	kg CO_2 eq.	2,03E-03	5,20E-04	1,18E-05	2,56E-03
	TOTAL	kg CO_2 eq.	2,41E+00	4,22E-01	1,05E-01	2,94E+00
Acidification potential (AP)		kg SO_2 eq.	7,41E-02	1,84E-03	6,33E-04	7,66E-02
Eutrophication potential (EP)		kg PO_4^{3-} eq.	4,78E-02	6,99E-04	1,09E-04	4,86E-02
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	1,46E-02	1,62E-03	1,04E-03	1,72E-02
Abiotic depletion potential – Elements		kg Sb eq.	2,28E-03	1,00E-05	6,60E-07	2,29E-03
Abiotic depletion potential – Fossil resources		MJ, net calorific value	2,01E+01	7,24E+00	1,47E+00	2,88E+01
Water scarcity potential		m^3 eq.	3,91E+00	5,48E-01	1,76E-03	4,46E+00

Use of resources Biologic Olive Oil bottle 50 cl

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	1,462	1,690	0,012	3,164
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	1,462	1,690	0,012	3,164
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	16,235	8,196	2,866	27,297
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	16,235	8,196	2,866	27,297
Secondary material		kg	0,735	0	0	0,735
Renewable secondary fuels		MJ, net calorific value	0	0	0	0
Non-renewable secondary fuels		MJ, net calorific value	0	0	0	0
Net use of fresh water		m^3	0,002	0,016	0,010	0,028

Use of resources Biologic Olive Oil tin 3 litre

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	2,176	1,690	0,019	3,886
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	2,176	1,690	0,019	3,886
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	21,733	8,196	1,492	31,422
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	21,733	8,196	1,492	31,422
Secondary material		kg	0	0	0	0
Renewable secondary fuels		MJ, net calorific value	0	0	0	0
Non-renewable secondary fuels		MJ, net calorific value	0	0	0	0
Net use of fresh water		m^3	0,002	0,016	0,010	0,028

Waste production and output flows

Waste production Biologic Olive Oil bottle 50 cl

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Hazardous waste disposed	kg	0,001	0	0	0,001
Non-hazardous waste disposed	kg	0	0,003	0,993	0,996
Radioactive waste disposed	kg	0	0	0	0

Waste production Biologic Olive Oil tin 3 litre

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Hazardous waste disposed	kg	0,001	0	0	0,001
Non-hazardous waste disposed	kg	0	0,003	0,090	0,092
Radioactive waste disposed	kg	0	0	0	0

Output flows Biologic Olive Oil bottle 50 cl

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	0,002	0,767	0,768
Materials for energy recovery	kg	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0
By-products	kg	0	11,399	0	11,399
Land use *	m^2a	70,7239	0,0384	0,00234	70,765
*values calculated for the reference year (average life time of the harvested area equal to 25 years)					

Output flows Biologic Olive Oil tin 3 litre

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Components for reuse	kg	0,001	0	0	0,001
Material for recycling	kg	0	0,003	0,090	0,092
Materials for energy recovery	kg	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0,002	0,063	0,065
By-products	kg	0	11,399	0	11,399
Land use *	m^2a	70,7486	0,0384	0,0025	70,789
*values calculated for the reference year (average life time of the harvested area equal to 25 years)					

References

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