Earth sure Meat Environmental Product Declarations

Earth sure Meat-2006

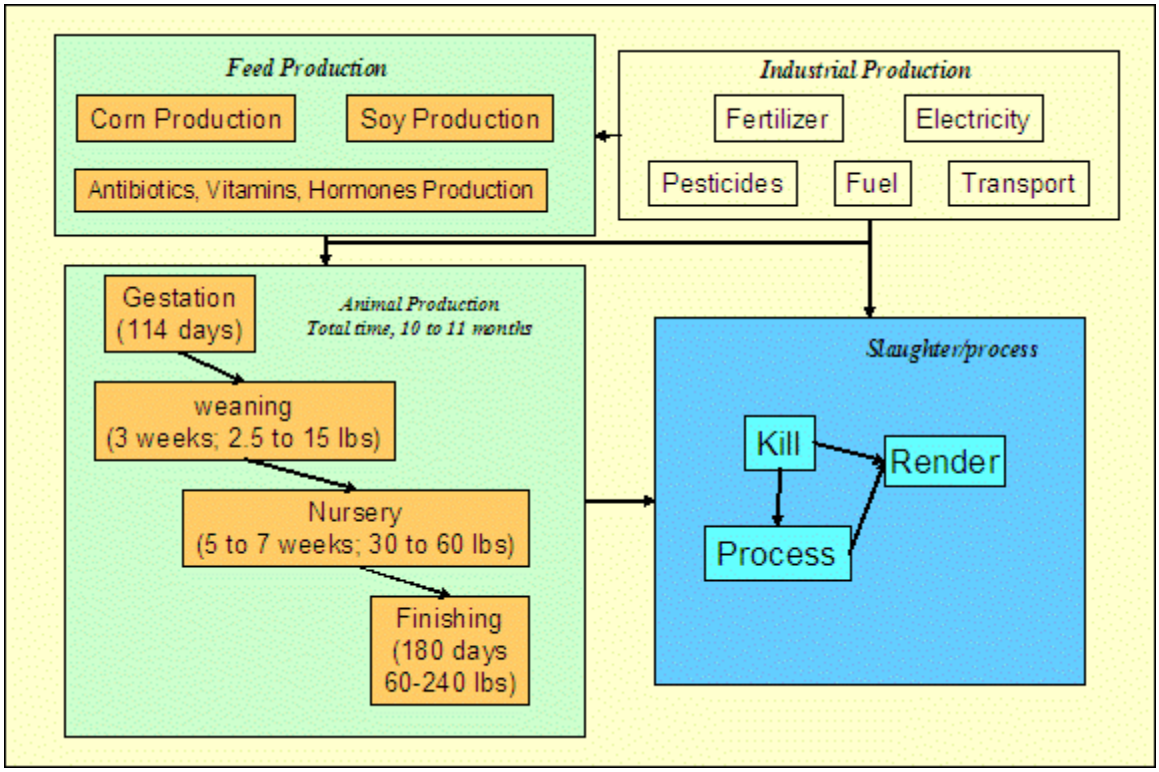
Meat products with the Earth sure label come from farms where the farmers have learned about the environmental impacts of farming, and have developed environmental management systems to improve their environmental performance every year.

After at least a year in the program, farmers provide information about how they farm, and that information is used by IERE to calculate the environmental impact associated with that farm's product. IERE also calculates the average environmental impact of the product in the United States, so consumers can see how this product compares to the national average. Products bear the Earth sure logo and consumers can get to the information about the particular farm by checking online.

Information about how a farm is managed and its environmental impacts are published here on the Earth sure website, for consumers to see. The calculations are performed using a technique called Life Cycle Assessment (LCA). This is a science-based method of calculating the environmental performance of products and services over their life cycle. The outcome is called an ecoprofile. IERE tracks and calculates these environmental impacts.

- Climate Change
- Stratospheric Ozone Depletion
- Acidification
- Eutrophication
- Photochemical Smog
- Aquatic Toxicity
- Fossil Fuel Depletion
- Mineral Resource depletion
- Water Use
- Antibiotic Use
- Soil losses
- Hormone Used
- Gene Modified Organisms

Earth sure Environmental Product Declarations follow the ISO standard for Life Cycle Assessment (the ISO 14040 series). The first product LCA we have completed is one for pork production. This is the basis of the product category rule for meat. The analysis covers the lifecycle of the pig plus the production of the feed and other materials and the environmental impacts of processing. The figure below shows the scope of the analysis.



The table below shows the decisions that were made about the product category rule and what parts of the relevant international standards the decisions respond to.

If you have questions about LCA, you can read up on it at www.lcacenter.org. And if you want to know more about the Earthsure program, you can contact us at staff@iere.org.

Required Point for ISO 14040/44/25	**Default**
The intended application 14040: 5.2.1.1; 14044:4.2.2	Type III Environmental Product Declarations
The reasons for carrying out the study 14040:5.2.1.1; 14044:4.2.2	To support the EPD; to learn more about environmental impacts of the product; to improve environmental performance
The intended audience, i.e. to whom the results of the study are intended to be communicated 14040: 5.2.1.1; 14044:4.2.2; 14025:9.1	Business customers and consumers
Whether the results are intended to be used in comparative assertions intended to be disclosed to the public. 14040:1.2.1.1; 14044:4.2.2	No comparative assertions are intended
Product system to be studied 14040:5.2.1.2; 14044:4.2.3.1; 14025:6.7.1	Farm-specific meat production
Functions of the product system 14040: 5.2.1.2; 14044:4.2.3.1; 14025:6.7.1	Meat
Functional unit 14040: 5.2.1.2; 14040:5.2.2; 14044:4.2.3.1; 14044:4.2.3.2; 14025:6.7.1	One pound of meat at the processing plant exit gate
System boundary 14040: 5.2.1.2; 14040:5.2.3; 14044:4.2.3.1; 14044: 4.2.3.3.1; 14025:6.7.1	See attached flow chart

Required Point for ISO 14040/44/25	**Default**	
Which life cycle stages are included	Cradle to plate (human waste not included)	
Unit Process Descriptions 14044: 4.2.3.3.2	Needed for each PCR separately; flow chart and information modules	
Allocation procedures 14040: 5.2.1.2; 14040:5.3.4; 14044:4.2.3.1; 14025:6.7.1	All impacts allocated to meat production	
Impact categories selected and methodology of impact assessment, and subsequent interpretation to be used; 14040: 5.2.1.2; 14044:4.2.3.1; 14044:4.2.3.4; 14025:6.7.1	**Impact Category**	**Model**
	Climate Change	IPCC 2007
	Stratospheric Ozone Depletion	Montreal Protocol
	acidification	Hydrogen ion production
	eutrophication	TRACI
	photochemical smog	MIR
	ecotoxicity	USE-tox equivalent
	water resource depletion	Net freshwater use
	mineral resource depletion	Mineral use for reserves<200 years
	fossil fuel depletion	TRACI
	land use/biodiversity	% land farmed
	soil depletion.	Mass of soil lost from site
Units: 14025:6.7.1	Standard International (metric) units per functional unit	
Interpretation 14040: 5.2.1.2; 14044:4.2.3.1	All impacts normalized to US average for the commodity meat	
Types and sources of Data 14044:4.2.3.5	peer reviewed or developed by USDA; US LCI where possible; Ecoinvent where not	
data quality requirements 14040: 5.2.1.2**;** 14044:4.2.3.1; 14044: 4.2.3.6.2; 14025:6.7.1		
age	No data over five years old, unless it can be documented that the unit process has not changed	
geography	USA	
cutoff values	95% of mass & energy; all known toxicity issues	
technology coverage	described in unit process descriptions	
precision:	Addressed statistically	
industry coverage	Calculated based on mass or number estimates of total industry	
representativeness	one year's production (year disclosed)	
uncertainty of the information	Ranges estimated by primary data source	
Additional Environmental Information 14025:6.7.1	Farm environmental policy; significant environmental aspects; annual goals; performance to goals;	
Materials and Substances to be declared 14025:6.7.1	Use of GMOs; Use of Antibiotics; Use of hormones	
Content and format of the label 14025:6.7.1	See below	

Required Point for ISO 14040/44/25	Default
Assumption: 14040: 5.2.1.2; 14044:4.2.3.1	We assume that ecotoxicity in general covers human toxicity; no human toxicity indicators are included
Value Choices: 14044:4.2.3.1	Since the by-products of meat production are of relatively low value, we are assuming that all the impact of growing transporting and processing the animals can be allocated to the meat.
Limitations 14040: 5.2.1.2; 14044:4.2.3.1; 14044:4.2.3.1	Applicable only to particular farm's production for time of validity
Period of validity of the label 14025:6.7.1	one year
Initial data quality requirements 14040:5.2.1.2; 14044:4.2.3.1	see above
Type of critical review, if any 14040:5.2.1.2; 14044:4.2.3.1; 14044: 4.2.3.8; 14025:5.7	At least three member review for PCR; led by LCA expert, including at least one industry expert
Type and format of the report required for the study 14040:5.2.1.2; 14044:4.2.3.1; 14025:6.7.1	Must conform to PCR Instructions
Content of the Label ISO 14025:7.2.1	
identification and description of the organization making the declaration;	Producer
description of product	meat at the processing plant
product identification (e.g. model number)	Only meat that bears the earth sure logo.
name of the programme and the programme operator's address and, if relevant, logo and website	Institute for Environmental Research and Education www.iere.org/earthsure/
PCR identification	Meat-2006
date of publication and period of validity	12/2006 through 12/2009
data from LCA, LCI or information modules	LCIA results
additional environmental information	EMS
content declaration covering materials and substances to be declared (e.g. information about productcontent, the including specification of materials and substances that can adversely affect human health and the environment, in all stages of the life cycle)	To the best of our knowledge, this product contains no materials known to substantially damage the envioronment, outside of those noted in the LCA study found at:_____
information on which stages are not considered, if the declaration is not based on an LCA covering all lifecycle stages	life cycle stages beyond the processing plant are not considered because there is no indication that they would be different in commodity versus ecolabeled meat
statement that environmental declarations from different programmes may not be comparable	Ecolabels from other sources may not be comparable to this one
information on where explanatory material may be obtained.	for more information, go to www.earthsure.org/
PCR review, was conducted by:	Barbara Lippiatt, NIST Chair. For contact information, email staff@iere.org
Independent verification of the declaration and data, according to ISO 14025:2006	Internal to IERE