Statement TW16/00281CFP



CARBON

**FOOTPRINT** 

Sustainability Services

# **Product Carbon Footprint Verification Statement**

The Inventory of Product Carbon Footprint of JOY&HOPE Organic Wheat Flour JOY&HOPE Organic Bran & Germ Powder JOY&HOPE Organic Whole Wheat Flour

which is calculated by

## JOY & HOPE WORKSHOP CO.

No.25, Sec. 2, Rulin Rd., Erlin Township, Changhua County 526, Taiwan (R.O.C.)

Based on life cycle assessment verified in accordance with ISO 14064-3:2006 as meeting the requirements of

Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA, 12 Feb. 2010)

Basis of Assessment Cradle-to-Grave

Authorized by



nnis Yang

Chief Operation Officer of Eastern Asia

Date: 28 November 2016

Version1

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SGSC653C



The emission of each product is described as below:

Product Name	JOY&HOPE Organic Wheat Flour JOY&HOPE Organic Bran & Germ Powder JOY&HOPE Organic Whole Wheat Flour									
Verification Unit	Per pack of JOY&HOPE Organic Wheat Flour (22kg per pack) Per pack of JOY&HOPE Organic Wheat Flour (500g per pack) Per pack of NEW ALPINE Organic Wheat Flour (600g per pack) Per pack of JOY&HOPE Organic Bran & Germ Powder (15kg per pack) Per pack of JOY&HOPE Organic Whole Wheat Flour (22kg per pack)									
Functional Unit	Per pack of JOY&HOPE Organic Wheat Flour Per pack of JOY&HOPE Organic Bran & Germ Powder Per pack of JOY&HOPE Organic Whole Wheat Flour									
Model / SKU	Life cycle GHG emissions									
Unit	Verification Unit (Unit: kilograms of CO₂e)						Functional Unit emissions			
Life Cycle Stage	Material	Manufacture	Distribution	Use	Disposal	Total	(Unit:kilograms of CO <sub>2</sub> e)			
JOY&HOPE Organic Wheat Flour (22kg per pack)	0.620	0.093	0.119	0.000	0.009	0.84	0.84			
JOY&HOPE Organic Wheat Flour (500g per pack)	0.722	0.112	0.108	0.000	0.006	0.95	0.95			
NEW ALPINE Organic Wheat Flour (600g per pack)	26.439	4.109	4.937	0.000	0.000	35.49	35.49			
JOY&HOPE Organic Bran & Germ Powder (15kg per pack)	17.620	2.802	1.273	0.000	0.037	21.73	21.73			
JOY&HOPE Organic Whole Wheat Flour (22kg per pack)	26.439	4.226	5.322	0.000	0.000	35.99	35.99			



SGS has been commissioned by Taiwan Green Productivity Foundation, Taichung Office (hereinafter referred to as "TGPF, Taichung Office"), 2F., No. 60, Tianbao St., Taichung City 407, Taiwan (R.O.C.) to conduct the life cycle Greenhouse Gas (hereinafter referred to as "GHG") emissions verification of JOY&HOPE Organic Wheat Flour, JOY&HOPE Organic Bran & Germ Powder and JOY&HOPE Organic Whole Wheat Flour provided by JOY & HOPE WORKSHOP CO., No.25, Sec. 2, Rulin Rd., Erlin Township, Changhua County 526, Taiwan (R.O.C.) in accordance with ISO 14064-3:2006 against the requirements of

Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA, 12 Feb. 2010)

## Roles and responsibilities

The management of JOY & HOPE WORKSHOP CO. is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of the life cycle GHG emissions for product information and the reported life cycle GHG emissions of the product.

It is SGS's responsibility to express an independent GHG verification opinion on the life cycle GHG emissions of the product.

SGS conducted a third party verification of the provided GHG assertion against the principles of Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA), ISO 14064-3:2006, ISO 14040:2006 and ISO 14044:2006 in the period 21 October 2016 to 10 November 2016. The verification was based on the verification scope, objectives and criteria as agreed between TGPF, Taichung Office and SGS.

#### Level of Assurance

The level of assurance agreed is that of reasonable assurance.

#### Scope

TGPF, Taichung Office has commissioned an independent verification by SGS Taiwan of there ported Cradle-to-Grave life cycle GHG emissions associated with the sourcing of raw materials and through manufacture, distribution, use and disposal of the product, to establish conformance with Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA) principles within the scope of the verification as outlined below.

This engagement covers verification of GHG emissions from Cradle-to-Grave life cycle assessment



within the system boundary defined by Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA).

- Title or description of activities: Product carbon footprint verification of the Cradle-to-Grave life cycle GHG emissions of JOY&HOPE Organic Wheat Flour, JOY&HOPE Organic Bran & Germ Powder and JOY&HOPE Organic Whole Wheat Flour.
- Product Category Rule: Edible Plant Mill Products, No. 16-011, 2016.05.27, Ver.2.0, Taiwan
   EPA.
- Functional unit: Per pack of JOY&HOPE Organic Wheat Flour, Per pack of JOY&HOPE
   Organic Bran & Germ Powder and Per pack of JOY&HOPE Organic Whole Wheat Flour
- System boundary: Covers a Cradle-to-Grave assessment of the full life cycle emissions; the system boundary was clearly defined in accordance with ISO 14040:2006 and Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA). All GHG's enlisted on Appendix A of the Guide to Assess the Carbon Footprint of Products and Services (Taiwan EPA).
- Data resources: The primary data collection is from manufacturing and operational control
  phases. The secondary data collection is from Carbon Footprint Calculation Platform,
  Ecoinvent 2.2 · Gabi database 2016 · JEMAI CFP.
- Life cycle assessment tool and index :
  - Life cycle emissions are calculated by Excel and GaBi Compilation 7.3.0.40, DB version 6.115.
  - IPCC 2007 AR4 GWP values are applied in this inventory.
- · Manufacturing location:
  - No.25, Sec. 2, Rulin Rd., Erlin Township, Changhua County 526, Taiwan (R.O.C.)
  - Farm of Wu Wen-Hsiung: No.91-1, Yutian, Yuanli Township, Miaoli County 358, Taiwan (R.O.C.)
  - Farm of Hung Sheng-Yuan: No.117, Tucheng W. Rd., Waipu Dist., Taichung City 438, Taiwan (R.O.C.)
  - Farm of Hung Ting-Kai: 800, Sec. Fangyuan, Fangyuan Township, Changhua County 528, Taiwan (R.O.C.)
  - Farm of Ke Hsiung-Neng: 0264-0000, Sec. Huoyanshan, Yuanli Township, Miaoli County 358, Taiwan (R.O.C.)
  - Farm of Chen Chen-Wang and Chen Wei-Yin: 1050-0000, Second Subsection, Sec.
     Mazumiao, Guiren Dist., Tainan City 711, Taiwan (R.O.C.)
  - Farm of Tseng Kuo-Chi: No.6, Difen, Dungfeng Vil., Yuli Township, Hualien County 981,
     Taiwan (R.O.C.)



- Types of GHGs included: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, Substances controlled by the Montreal Protocol,
   HFCs, PFCs, Fluorinated ethers, Perfluoropolyethers, Hydrocarbons compounds.
- GHG information for the following production period was verified: 01 July 2015 to 30 June 2016.
- Intended use of the verification statement: Private.

## Objective

The purpose of this verification exercise is, by review of objective evidence, to independently review:

- Whether the life cycle GHG emissions of the product are as declared by the organization's GHG assertion.
- The data reported is accurate, complete, consistent, transparent and free of material error or omission.

#### Criteria

Criteria against which the verification assessment is undertaken is the principles of Guide to Assess the Carbon Footprint of Products and Services(Taiwan EPA).

## Materiality

The materiality required of the verification was considered by SGS to 5%, based on the needs of the intended user of the GHG Assertion.

#### Conclusion

JOY & HOPE WORKSHOP CO. provided the GHG assertion based on the requirements of Guide to Assess the Carbon Footprint of Products and Services(Taiwan EPA). The data had been verified by SGS to a reasonable level of assurance, consistent with the agreed verification scope, objectives and criteria.

The GHG emission of each product is described as below:

	JOY&HOPE Organic Wheat Flour				
Product Name	JOY&HOPE Organic Bran & Germ Powder				
	JOY&HOPE Organic Whole Wheat Flour				
Verification Unit	Per pack of JOY&HOPE Organic Wheat Flour (22kg per pack)				
	Per pack of JOY&HOPE Organic Wheat Flour (500g per pack)				
	Per pack of NEW ALPINE Organic Wheat Flour (600g per pack)				
	Per pack of JOY&HOPE Organic Bran & Germ Powder (15kg per pack)				
	Per pack of JOY&HOPE Organic Whole Wheat Flour (22kg per pack)				
Functional Unit	Per pack of JOY&HOPE Organic Wheat Flour				
	Per pack of JOY&HOPE Organic Bran & Germ Powder				
	Per pack of JOY&HOPE Organic Whole Wheat Flour				



Model / SKU	Life cycle GHG emissions							
Unit Life Cycle Stage	Ve	Functional Unit emissions						
	Material	Manufacture	Distribution	Use	Disposal	Total	(Unit:kilograms of CO <sub>2</sub> e)	
JOY&HOPE Organic Wheat Flour (22kg per pack)	0.620	0.093	0.119	0.000	0.009	0.84	0.84	
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SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting the life cycle GHG emissions of product information and the control in place to mitigate these risks. Our examination included assessment and a test of evidence relevant to the amounts and disclosures in relation to the reported life cycle GHG emissions of the product.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a reasonable level of assurance that the life cycle GHG emissions per JOY&HOPE Organic Wheat Flour, JOY&HOPE Organic Bran & Germ Powder and JOY&HOPE Organic Whole Wheat Flour are fairly stated.

We conducted our verification with regard to the GHG assertion of JOY & HOPE WORKSHOP CO., which included assessment of the company GHG information system, monitoring and reporting protocol. This assessment included the collection of evidence that support the reported data and verification of whether the provisions of the protocol reference were consistently and appropriately applied.

In SGS's opinion, the presented GHG assertion:

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with Guide to Assess the Carbon Footprint of Products and Services(Taiwan EPA)in relation to GHG quantification, monitoring and reporting.

#### Confidentiality



The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

#### Avoidance of Conflict of Interest

The reports and attachments are completely complied with the standards and procedures that related-authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

#### **Verifier Group**

Above statements coincide with auditing process with fairness and impartiality, and aim at the emission of clients.

Kein Heich

Lead Verifier:

This statement shall be interpreted with the GHG assertion of JOY & HOPE WORKSHOP CO. as a whole. This result shall be valid for a maximum period of two years, after which the GHG emission shall be re-assessed.

Note: This Statement is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Green Gas Verification Services available at http://www.sgs.com/terms\_and\_conditions.htm. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting Carbon Footprint Assertion may be consulted at JOY & HOPE WORKSHOP CO., No.25, Sec. 2, Rulin Rd., Erlin Township, Changhua County 526, Taiwan (R.O.C.).This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.