



## The Carbon Footprint of Just BARE® Boneless Skinless Chicken Breasts

### Life Cycle Assessment Summary Report *Published June 30<sup>th</sup>, 2010*



Gold'n Plump Poultry – the company behind Just BARE® - was one of 62 companies that measured greenhouse gas (GHG) emissions for products and supply chains by road testing a new global standard that is part of the Greenhouse Gas Protocol Initiative. The most popular packaged Just BARE product, boneless skinless chicken breasts, was examined as part of this road test. This is the summary report as provided to the commissioning entity of that study, World Resources Institute (WRI). This report is very similar but not identical to the data provided to support the Carbon Trust certification.

 **INTRODUCTION**

This Greenhouse Gas (GHG) inventory of packaged Just BARE® Boneless Skinless Chicken Breasts was conducted by Gold'n Plump Poultry, the company behind Just BARE, as a critical component of the company's sustainability strategy. The carbon footprint study, along with a detailed life cycle assessment, provides benchmarks of quantitative measurement by which materials and processes can be improved upon so to reduce the overall environmental impact of our products. This analysis examined everything—from feed procurement and material acquisition; to processing production, distribution and retail; and finally through consumer use and disposal phases.

While the carbon footprint of packaged Just BARE Boneless Skinless Chicken Breasts is unique, its processes and supply chains are representative of our entire line of products. Therefore, the conclusions of this study can be interpreted and generally applied to reduce environmental impact and improve efficiency across all of our company's product lines. These objectives, we believe, will contribute to the long-term economic success of our company while enhancing our environmental sustainability.

**Disclaimer:**

The results presented in this report are unique to the assumptions and practices of Gold'n Plump Poultry and are **not intended for comparison** to chicken or meat products produced by other companies. Even for similar products, variables in functional unit, processing, use, end-of-life stage assumptions, and data quality may produce incomparable results. The reader is referred to the detailed report for more information on this study, and the GHG Protocol Product Standard for a glossary and additional insight into the GHG inventory process.



## INVENTORY SUMMARY

TYPE OF INVENTORY	
Final Product Full GHG Inventory (Cradle-to-Grave Emissions)	
General Information	
Parameter	Description
<b>Company Name &amp; Contact Information</b>	<p><i>Study Commissioner</i> Gold'n Plump Poultry Paul Helgeson, Sustainability Manager <a href="mailto:PHelgeson@goldnplump.com">PHelgeson@goldnplump.com</a> (320) 333-9609</p> <p><i>Study Practitioner</i> WSP Environment &amp; Energy Michael Huisenga <a href="mailto:Mike.huisenga@wspgroup.com">Mike.huisenga@wspgroup.com</a> (720) 974-0250</p>
<b>Product Name</b>	Just BARE® Hand-Trimmed Boneless Skinless Chicken Breasts SKU # 59005 <a href="http://www.justbarechicken.com/our_chicken.cfm">http://www.justbarechicken.com/our_chicken.cfm</a>
<b>Product Description</b>	<p>Just BARE Boneless Skinless Chicken Breasts are produced from cage-free, vegetarian-fed chickens with no antibiotics or added growth hormones. The packaged product contains two to three chicken breasts totaling 14 oz of meat – the equivalent of 3.5 (4-oz servings) of chicken.</p> <p>This life cycle GHG inventory considers the cradle-to-grave emissions arising from the production and consumption of packaged Just BARE Boneless Skinless Chicken Breasts sold at retail stores in the United States. Refer to the process map (appendix) for more details on the product life cycle.</p> 
<b>Functional Unit (study basis)</b>	The functional unit for this product is a single 4-oz. serving (.25 lb) of chicken as defined by the USDA.
<b>Temporal Boundary</b>	The default temporal boundary for emission of greenhouse gases is 100 years. Production volumes and energy consumption data were collected over a twelve-month period beginning December 1, 2008 through November 31 <sup>st</sup> , 2009. The product and all of our raw material inputs, including corn and soy feeds, and packaging materials, are generally produced and consumed in approximately one year.
<b>Country/Region of Consumption</b>	This product is produced, distributed to and consumed in the United States of America, except for Alaska and Hawaii.
<b>Inventory Date and Version</b>	2010.V1

## STUDY RESULTS

TOTAL PRODUCT GHG INVENTORY		
Parameter	Value	Unit
Total GHG Inventory	900	gm CO2 eq per 4 oz serving
PERCENT OF LIFE CYCLE STAGE		
Stage Name	Value (Percent of Total CO <sub>2</sub> e)	Comments
Raw Material Acquisition & Preprocessing	50%	This upstream stage includes the agricultural production of animal feed inputs such as corn and soybean meal and their transport to Gold'n Plump Poultry's feed mill. Also included are production and transport of raw materials and consumables used for packaging and manufacturing.
Production	22%	Production of finished packaged products at Gold'n Plump Poultry's facilities. This stage includes the production of feed pellets; hatching of chicks; humane rearing of live birds in barns, transport and slaughter; and processing and packaging of meat into final products.
Distribution & Retail	12%	This includes storage at 3 <sup>rd</sup> party owned warehouses, transport to retail stores, and electricity for refrigerated storage at retail.
Use	9%	Use phase includes domestic refrigeration and cooking of chicken by a mix of four methods: baking, sautéing (on a stovetop), grilling, and microwaving.
Disposal	7%	This phase considers the disposal of product packaging materials and food waste.

## QUALITY ASSESSMENT

QUALITY ASSESSMENT INFORMATION	
<b>Assurance Type</b>	3 <sup>rd</sup> party verification has been performed by The Carbon Trust as part of their certification process for product carbon labeling. Gold'n Plump Poultry, the company behind Just BARE <sup>®</sup> , has received a certification letter from the Carbon Trust for nine products in the Just BARE line, including the boneless skinless breasts.
<b>Assurance Opinion</b>	The Carbon Trust Footprinting Certification Company verifies that: Gold'n Plump Poultry has calculated the rounded product carbon footprints of the listed chicken products sold Business to Consumer and marketed in the listed geographical areas, in accordance with PAS 2050:2008.
<b>Data Quality Assessment</b>	<p>Percent of total GHG emissions derived using the different quantification methods:</p> <ul style="list-style-type: none"> <li>• <b>0%</b> derived from directly measured process-specific GHG emissions.</li> <li>• <b>0%</b> estimated from aggregated directly measured site information.</li> <li>• <b>49%</b> calculated using site and process specific activity data and an emissions factor derived from secondary process data.</li> <li>• <b>0%</b> calculated using site and process specific activity data and an emissions factor derived from input-output data.</li> <li>• <b>51%</b> estimated using only secondary data sources (either process or input-output data).</li> </ul>

## INTERPRETATION OF RESULTS

The results of this product GHG inventory empowers Gold'n Plump Poultry to make informed decisions on where in the life cycle of our products – specifically our packaged Just BARE® Boneless Skinless Chicken Breasts – GHG emission reductions can be made. By understanding the relative impacts of the various operations over which we, as a producer, ultimately have control, we can make targeted efforts and investments into energy efficiency measures, material and process improvements, and product design. For instance, this inventory tells us that our processing operations contribute 22% of the product's GHG emissions, so while large reductions can still be made at our facilities, we will ultimately need to engage others stakeholders in our value chain, such as the farmers that grow our feed and our packaging suppliers, to dramatically reduce the product's footprint.

### NEAR-TERM GOALS:

Our GHG emission reduction efforts are currently focused on:

- **Energy efficiency.** We are working to reduce the energy consumption of our growing barns and chicken processing facilities by applying LEAN and Six Sigma process control methodologies. Our culture of continuous improvement will enable us to continue to drive down the energy intensity of our processes.
- **Reduce packaging material use.** Our packaging is important to the presentation and preservation of our products. However, by minimizing material use and choosing materials that require less energy to produce, have higher recycled material content, and/or are easily recycled, we can reduce the overall impact of our products.

### LONG-TERM GOALS:

In the long term, we envision a large-scale sustainable farming system that may incorporate some of the following elements:

- **Grain and soybean farming.** We will work with farmers in our community to encourage the adoption of low-impact agricultural practices. Through a strategy of stakeholder engagement we will seek solutions that reduce the use of energy intensive synthetic fertilizers and emissions resulting from their application. We will also look to support conservation tillage and other practices that help to ensure a net increase in soil carbon building while minimizing energy consumption by farming equipment.

- **Renewable Energy.** We realize the need to shift to clean renewable sources of energy and have began purchasing RECs (renewable energy credits) for our Just BARE® line of products. We also understand that offsetting is not the same as conservation or on-site generation. Therefore, we are researching renewable energy solutions that could be integrated into our poultry operations.

### CONSUMER ENGAGEMENT:

The use of our product by consumers, which includes the storage, cooking and disposal of uneaten chicken and packaging, results in 16% of the total GHG inventory. This indicates that we can and should engage the consumer in choosing more effective storage techniques that minimize spoilage and energy consumption, suggest low carbon cooking methods, and provide recycling information to further reduce environmental impact.

- **Minimize storage times when possible.** Long-term deep-freeze storage of chicken results in unnecessary energy consumption and may degrade product quality. Likewise, extended storage in domestic refrigerators can also affect taste and increase the risk of spoilage and waste. Short-term refrigerator storage is recommended for highest quality product and lowest energy use.
- **Low carbon cooking.** Cooking appliances vary greatly in energy efficiency. However research shows that stovetop cooking is one of the lowest energy intensity methods available – with natural gas ranges as the best option for low carbon cooking.
- **Recycle product packaging.** Most plastics are petroleum-based. Therefore, recycling plastic containers can reduce demand for crude oil. Just BARE product packaging is made from PET plastic which can be recycled in a limited number of locations. We recommend that consumers check with their local waste management services and participating retailers to see if they accept our packaging. [Since this study was done, the cardboard sleeve has been replaced with a linerless label that effectively reduces the weight per unit by .011 lbs. (or .176 oz).].

## APPENDIX: Detailed Process Map

