



# Transforming brewery waste into sustainable packaging and brand differentiating solutions for the craft beer industry

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## Our Customers: Craft Breweries

The craft movement promises its customers authenticity and a person-to-person connection absent from mass-produced beer. Again and again in our conversations with craft brewers, they expressed a fierce commitment to the brewing process.

**4,296**  
U.S. Craft Breweries

**21%**  
\$ Beer Market Share

## Their Customers: Craft Beer Drinkers

**32%**

Craft beer sales are highest among 21-35 year olds (Millennials)<sup>2</sup>



50% of millennials prefer purchasing from sustainable brands<sup>3</sup>



75% of Americans live within 10 miles of a craft brewery<sup>1</sup>

## Customer Problems:

### 1.) Differentiation

Breweries struggle to convey their brand value in a crowded market.

### 2.) Communication

Breweries fail to effectively share their sustainability commitments with target consumers.

## Validation of the Business Model

### Packaging as Marketing

Paperboard products are vital to brewery branding.

**4.5 mins**  
**vs.**  
**30 secs**

The average amount of time spent reading packaging and choosing a craft beer in-store vs. commercial beer.

### Communication

Craft breweries could capture greater brand value by better communicating their sustainability.

**16%**

Craft breweries that advertise any of their sustainability efforts to consumers.

### Commitment to Sustainability

Craft breweries and their customers both care about sustainability.

**85%**  
**&**  
**61%**

Craft breweries that consider sustainability in their operations & those that believe their consumers care about sustainability.

### Prototypes & Industry Partners

InGrain can make an environmentally improved and functional material.

**480**  
**ft<sup>2</sup>**

The number of InGrain panels created at Forest Products Laboratory, using only recycled fibers and spent grains.

## Packaging: More Profitable Than You'd Think

### 6pack Carriers

Average Amount Paid per Unit

**\$0.50**

InGrain Cost per Unit

**\$0.27**

Contribution Margin

**46%**

**TAM**  
Paperboard Packaging  
**\$100 B**

**SAM**  
U.S. Craft Beer  
**\$138 M**

**SOM**  
Sustainability Focused Craft  
**\$116 M**

**SAM**  
U.S. Craft Beer  
**\$13.4 M**

**SOM**  
Sustainability Focused Craft  
**\$11.3 M**

### Coasters

Average Amount Paid per Unit

**\$0.07**

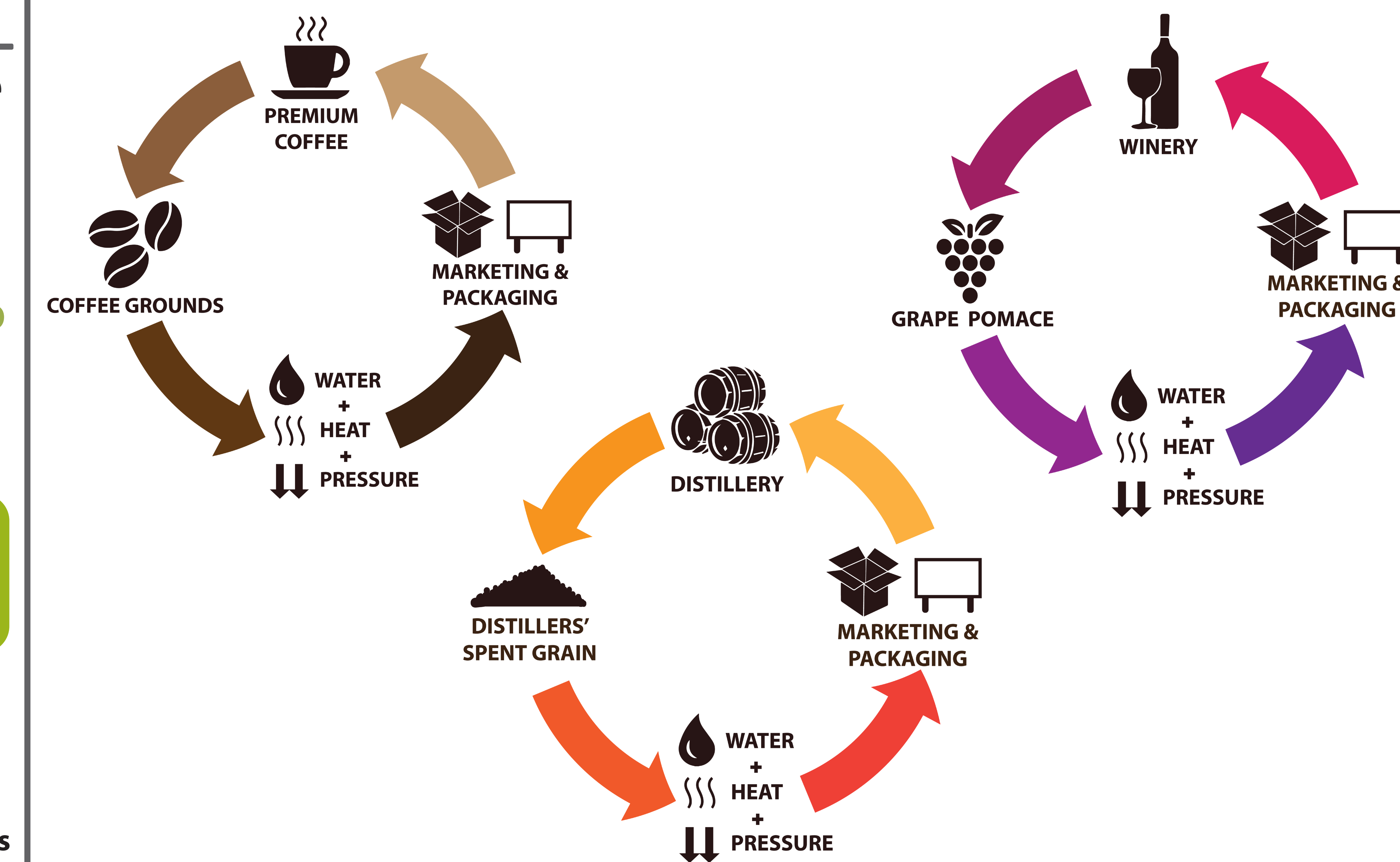
InGrain Cost per Unit

**\$0.03**

Contribution Margin

**63%**

## Future Vision: Exploring Waste to Market Opportunities



## References, Acknowledgements & Further Information

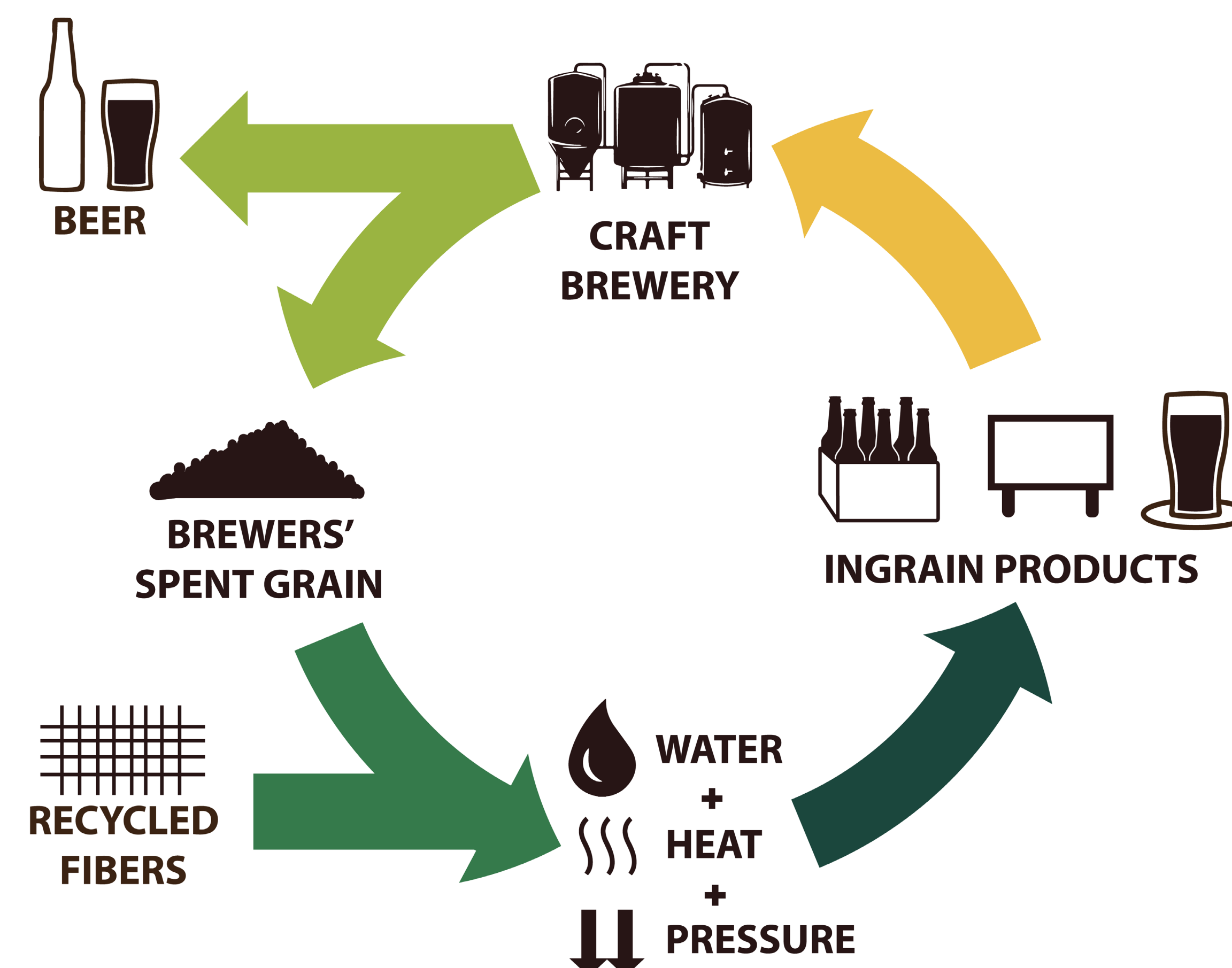
References:  
1.) "State Craft Beer & Production Statistics," Brewers Association, accessed 3.1.16 <https://www.brewersassociation.org/statistics/by-state/>  
2.) "Watson, B., Brewers Association (2014), Craft at 35,000 Feet. Accessed online from: <https://www.brewersassociation.org/insights/airlines-serving-craft-beer/>  
3.) Solomon, M., Forbes Magazine (2015), 2015 Is The Year Of The Millennial Customer: 5 Key Traits These 80 Million Consumers Share. Accessed from: <http://www.forbes.com/sites/micahsolomon/2014/12/29/5-traits-that-define-the-80-million-millennial-customers-coming-your-way/>  
4.) Environmental benefit calculations based on private industry partner data and Paper Task Force "Paper Taskforce Recommendations for Purchasing and Using Environmentally Friendly Paper," Paper Taskforce, 1995. "Paper Calculation Documentation, Version 3.2," Franklin Associates, 2015.  
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**Craft breweries want to capture the brand value of sustainability, and craft beer drinkers want to connect to the story behind the beer in their glass.**

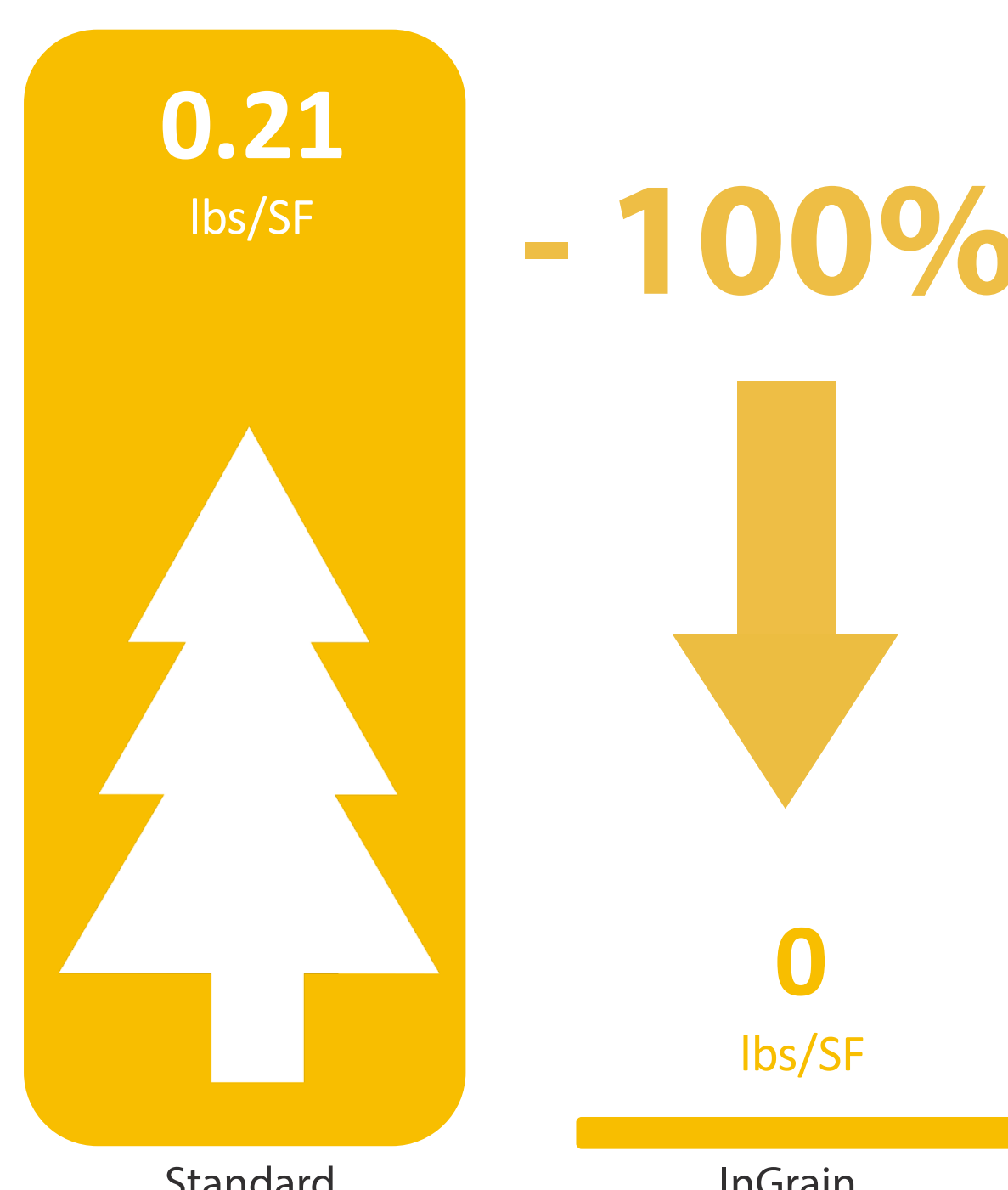
## InGrain Value Proposition

InGrain markets six-pack carriers and beverage coasters to the craft beer industry. InGrain's products are made from craft breweries' leftover spent grain. InGrain products are a more sustainable alternative to traditional paperboard, and capture the craft beer consumers' attention in a tangible and tactile way.

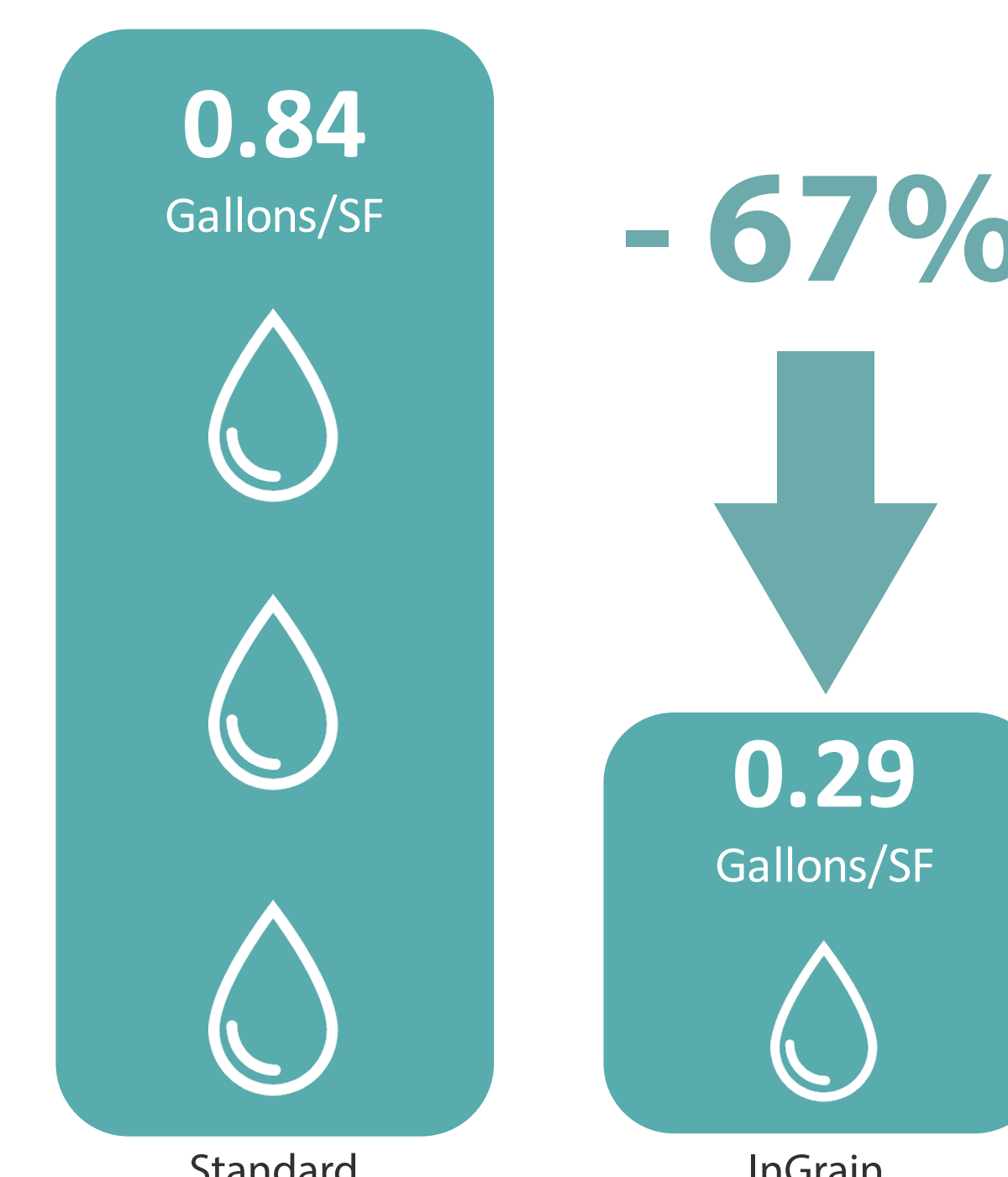


## Our Products Look Sustainable Because They ARE Sustainable

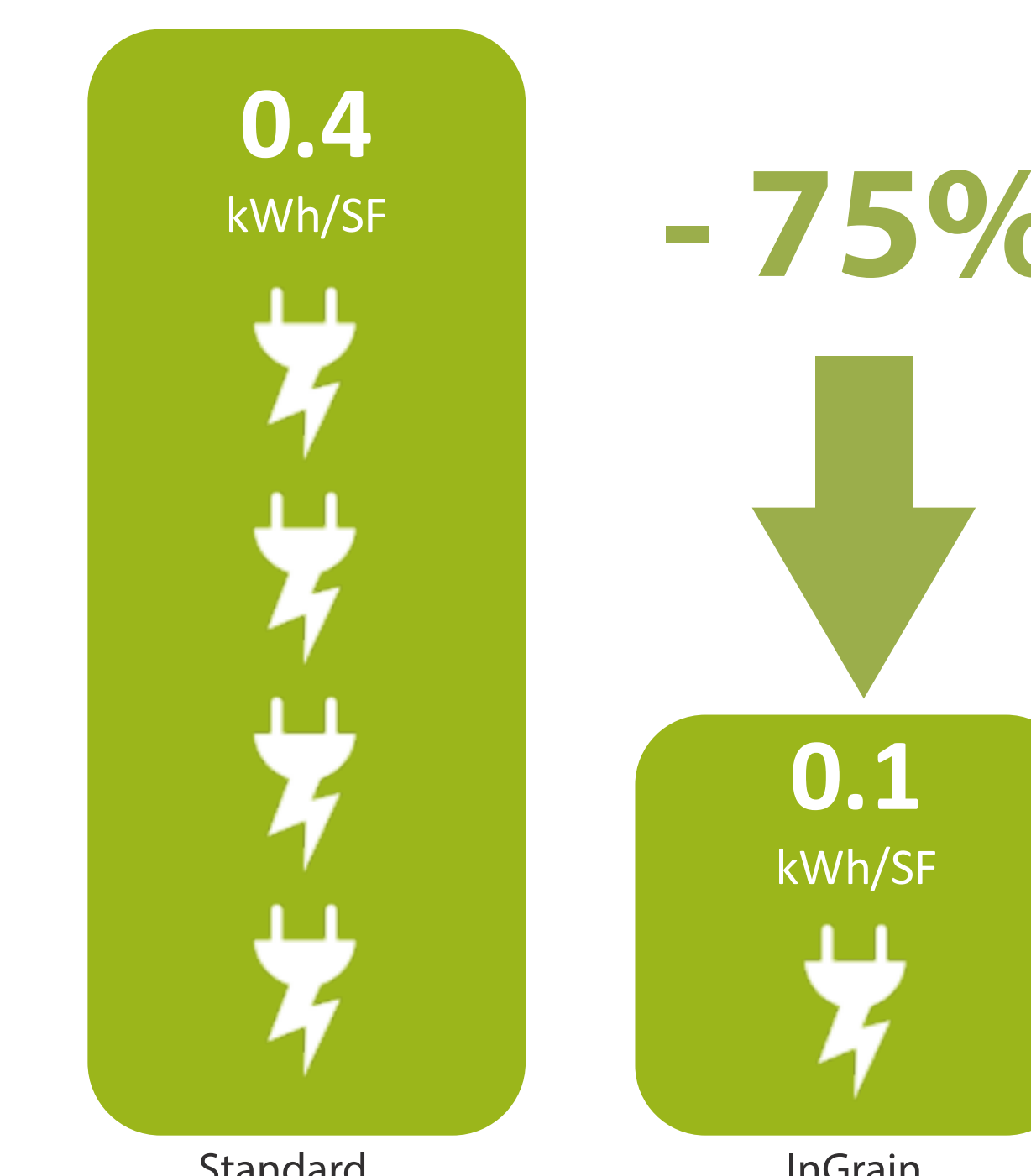
### VIRGIN INPUTS



### WATER

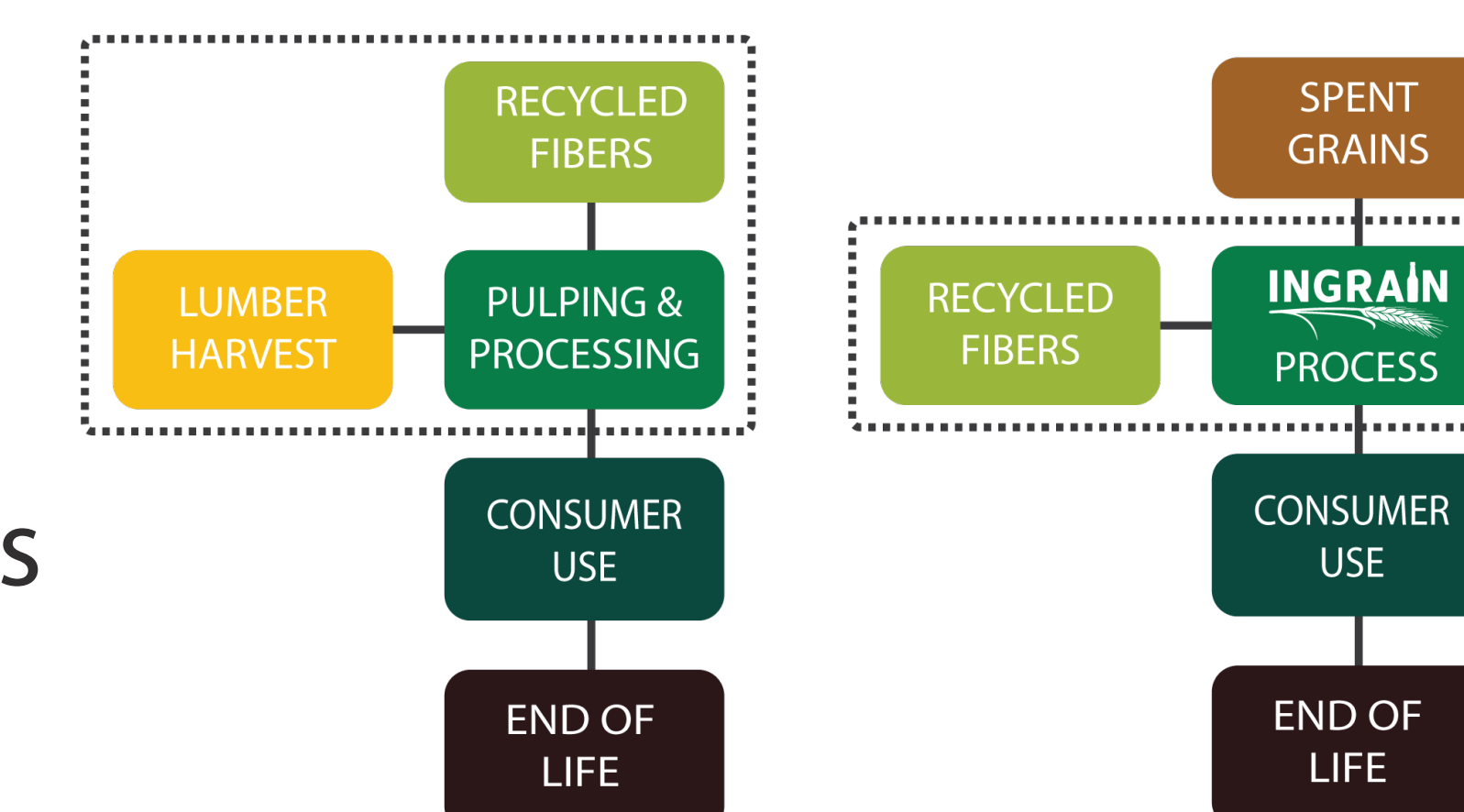


### ENERGY



InGrain's material represents a significant step forward: it quantitatively reduces the consumption of virgin wood, fossil fuel energy, water demand, and chemical use as compared to traditional paperboard.

### Environmental Assessment System Boundaries



• InGrain replaces 25-50% of inputs with spent grain and the rest with recycled fibers.

• InGrain's alternative production process eliminates many polluting steps included in traditional paperboard production.

\* Applied cradle-to-gate comparison, using the recycled content method.