Leather Learning Series: Part One

The Inherent Sustainability of Leather

Stephen Sothmann, President, Leather and Hide Council of America
Kerry Senior, Director, Leather UK
Egbert Dikkers, Chair, Leather Naturally

Tuesday, April 14th, 2020
Welcome!

Welcome to Part One of the Textile Exchange Leather Learning Series: *The Inherent Sustainability of Leather!*

Join us for Parts Two and Three this summer:

- Part Two: Cattle Farming (Date TBD)
- Part Three: Leather Production (Date TBD)
Speakers

Stephen Sothmann – President, Leather and Hide Council of America
Kerry Senior – Director, Leather UK
Egbert Dikkers – Chair, Leather Naturally
The primary goal of the Leather Impact Accelerator is to accelerate positive impacts in the leather industry through widespread adoption of minimum level of best practices.
We have an ethical duty to use leather.
• Leather is a byproduct of food production.

• Society has an ethical duty to use Leather.

• Sadly, this beautiful, natural resource is being wasted.
Leather & Hide Council of America

- Industry trade association
- Established 1919
- Recent Merger
- The global voice of the U.S. hides, skins and leather industry
Leather is a byproduct of food production
Why do we eat beef?

- Ruminants, such as cattle, are natural upcyclers.
- Ruminants produce protein for human consumption from plants we cannot eat.

Cattle Upcycling Super-power

The rumen microbes give cattle their upcycling super-power – cattle upgrade plants of little to no nutritional value to people to high-quality protein, micronutrients, and other important products.

Grain-finished beef cattle provide 19% more human-edible protein than they consume.

Beef is a Nutrient-rich Food

One 3-ounce cooked serving of a composite, trimmed, retail beef cut contributes less than 10% of calories to a 2000-calorie diet, yet it supplies more than 10% of the Daily Value for 10 essential nutrients including protein, iron, zinc and many B vitamins.

Fun Fact: in the 1500s there were an estimated 60 million head of bison in North America.
Typical U.S. Cattle Lifecycle

**Cow-calf**
- Diet: Grass, Other Human-inedible Plants
- Duration: 6 - 10 Months

**Stocker/backgrounder**
- Diet: Mostly Grass, Other Human-inedible Plants
- Duration: 2 - 6 Months

**Finishing**
- Diet: Grain, Other Human-inedible Plants
- Duration: 4 - 6 Mos. Grain, Or, 6 - 10 Mos. Grass

Image Source: Cattlemens Beef Board/Beef Checkoff
Beef: The basics

Cow/Calf and Stocker/Backgrounder Phase
8 – 16 Months Average

Finishing Phase
4 – 6 Months Average
Greenhouse gases: Don’t blame the cows

What if the US went 100% vegan?

- Insufficient nutrients to feed the U.S. population
- Increased use of synthetic fertilizer
- Increased soil erosion
- U.S. GHG emissions 2.6% lower
- Fossil fuels (old photosynthetic carbon - 100 to 200 million years old - not in the carbon cycle)

Image Sources: US EPA; Beef Magazine; Beef Checkoff
Same Beef, Fewer Cattle

Compared to 1977, today’s beef farmers and ranchers produce the same amount of beef with 33% fewer cattle.

Total US Cattle Herd
1977: 122 million head
2019: 95 million head

Total US Cattle Slaughter in
2019: 33 million head

How’d they do it?
- Better Animal Health & Welfare
- Better Animal Nutrition
- Better Animal Genetics

Image Source: Cattlemens Beef Board/Beef Checkoff
Leather is a byproduct

Definition: by·prod·uct

/ˈbī.prädəkt/

an incidental or secondary product made in the manufacture or synthesis of something else.
We Consume Beef and Dairy. We Need it.

We have a Duty not to be Wasteful.

We Must Use All Parts of the animal. Every Byproduct.

Especially Leather.
Sadly, due to the rise of plastic synthetics, leather and hides are now being wasted.

We’re failing in our ethical duty.
We are being wasteful

33 Million
In 2019, the U.S. processed more than 33 million head of cattle for food.

In 2019, 27.5 million hides were used in domestic or global leather production.

27.5 Million

5.5 Million

What do these figures tell us?
In 2019, an estimated 5.5 million (17%) U.S. cattle hides failed to enter into the leather supply chains.

What does this mean?
Most of those 5.5 million cattle hides were either destroyed or discarded in landfills.

These 5.5 million hides could instead be used to produce leather for:
- 99 million pairs of shoes
- 110 million footballs
- 2 million sofas

Why?
The rise of synthetics, the vast majority of which are made from plastics and other non-renewable sources, has caused a shift away from utilizing hides to produce natural, sustainable, real leather products.
#ChooseRealLeather

Stephen Sothmann
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www.USLeather.org
Who are Leather UK?

- Trade association for the UK leather industry, covering raw materials to finished product
- Members of the European association, COTANCE
- Hold secretariat for the International Council of Tanners
- Links to Worshipful Company of Leathersellers and other liveries
- Work with UKFT, BFA, HCA, Leather Naturally, ICLT at UoN, MiB and others
- Kerry Senior - Director
Overview

• What is leather and what isn’t
• The truth about tanning
• Dispelling some of the myths about leather
What is leather?

“Hide or skin with its original fibrous structure more or less intact, tanned to be imputrescible. The hair or wool may, or may not, have been removed. It is also made from a hide or skin that has been split into layers or segmented either before or after tanning”

Source: British Standard Glossary of Leather Terms (BS 2780) (1983)
What is not leather?

• Reconstituted leather fibre, e.g. leather fibre board, Eleather

• Plant-derived materials, e.g. Pinatex, ‘mushroom’ or ‘apple’ leather’

• Plastic! Pleather, ‘vegan leather’ ‘synthetic leather’, leatherette; all made from PU, PVC, etc.

• Lab-grown collagen, e.g. Zoa
The truth about tanning
Key factors for leather manufacture

Species
- Bovine
- Sheep
- Goat

Tannage
- Chrome tanning
- Vegetable tanning
- Synthetic tanning
WHY VEGETABLE TANNED LEATHER IS THE MOST ENVIRONMENTALLY FRIENDLY

At [Company Name] we source the finest vegetable tanned leather in the world. Its rich, authentic finish is desirable amongst the most refined. With sustainability an increasingly hot topic within fashion, we shine a light on why vegetable tanned leather is the most environmentally-friendly in the industry...
Tannage - choice

- There is no difference in the overall environmental impact of the most common tannages
- What are you making?
- Which type of leather will work best?
- All tannages are chemicals
- All can be used well or badly
- Don’t greenwash!
Some myths about leather
Claim - Meat & leather are drivers of climate change
Apples & pears?

- Comparison is not ‘like-for-like’
- Whole lifecycle for livestock (14.5%) vs direct emissions (fuel in use) for transport (14%)
- Direct emissions for livestock are only 5%
- Livestock do contribute to GHG but reality is complex and nuanced
- (source: FAO/IPCC)
Claim – Tanners are using hazardous and carcinogenic chemicals to tan leather

‘Mineral salts, formaldehyde, coal-tar derivatives, cyanide-based dyes and other dangerous substances are routinely used during the tanning process.’ (source: PETA UK website)
Cyanide?

• Emotive term
• Refers to chemicals that contain the cyano-molecule
• Can be extremely toxic
• However, also present in a number of organic chemicals

\[\text{H-CN}\]
Cyanocobalamin

Synthetic vitamin B12
Used in supplements
Minerals salts?

- Tanners do use mineral salts
- Sodium chloride is important in the tanning process
- Also nice on chips

- Other uses of mineral salts include:
  - Antacids
  - Food production
  - Keeping you alive
Claim - It takes over 17,000 litres of water to produce one kilogram of leather

TRUE

But...
Figure comes from ‘A Global Assessment of the Water Footprint of Farm Animal Products’ (Mekonnen & Hoekstra, Ecosystems (2012) 15: 401–415)

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Leather (beef cattle)

| Grazing         | 14,300 | 266   | 0    | 25,195 | 310  | 0    | 21,290 | 657  | 658  | 20,905 | 535  | 240  | 21,680 |
| Mixed           | 11,719 | 377   | 91   | 15,743 | 593  | 140  | 11,883 | 947  | 765  | 14,185 | 681  | 856  | 17,799 |
| Industrial      | 9,677  | 904   | 1,093| 12,068 | 1,505 | 842  | 4,530  | 513  | 259  | 3,287  | 497  | 614  | 11,056 |
| Weighted average| 11,323 | 515   | 352  | 15,103 | 777  | 280  | 6,067  | 589  | 369  | 14,450 | 658  | 819  | 17,093 |
• 93% of water consumed is ‘Green’ water (soil moisture)
• Also known as rain
• Importantly, green water is absorbed, and returned to the atmosphere, by plants. It doesn’t not contribute rivers or aquifers
• ‘Blue’ or fresh water consumption is only 679 litres (3.9%) of the total
• Production of nuts uses 1367 litres of blue water per kilogram production
• Most vegetable production uses less blue water than beef but products have a lower nutrient density
Most importantly...

- The leather industry is subject to the same regulations as every other industry
- Great steps being taken to improve efficiency and sustainability, e.g. in the UK, Scottish Leather Group has reduced the CFP of its leather by 85% in last 15 years and chemical companies are developing new bio-based chemicals with reduced environmental.
- Changing expectations of brands and consumers is driving improved performance and transparency
- It’s not perfect but it is improving all the time.
Leather fits perfectly in the Circular Economy!

So, why try to copy leather?

Leather has a long history of approximately 5,000 years and is still cool today! 

Ancient Egyptian sandals...
Leather is a Sustainable Material

Hides & skins are a natural by-product of the meat industry. Leather manufacturers upcycle them into beautiful, versatile, valuable sustainable products. This reduces the amount of waste that goes to landfill.

www.leathernaturally.org  FashionNaturally
Leather is Produced Responsibly
Leather is Produced Responsibly

- Tightly controlled manufacturing processes, including waste handling are audited

- Traceability of leather is a key focus of the industry

- Strict regulations in chemicals via the ZDHC MRSL
Brands Can Drive Change!

an invitation to...

- invest in learning about leather, value the material and thus drive sustainability;
- buy leather from certified leather manufacturers;
- request ZDHC MRSL approved chemicals;
- educate the consumer about the sustainability & value of leather products.
Take Consumers Seriously, Label Correctly

How I was fooled with plastic,
thinking I bought leather car seating
Leather is a Unique Material!

Leather is:

- Sustainable
- Luxurious
- Strong
- Durable
- Comfort
- Repairable
- Longevity
So Why Copy Leather?

Leather offers:

- a historic heritage and is still a cool material today;
- good alternative for a huge pile of wasted hides & skins → Circular Economy;
- largely manufactured under tight audit programs;
- a story to be shared with consumers;
- unique material characteristics.
Contact us for More Information about Leather

@leathernaturaly!  LeatherNaturally!  LeatherNaturally!  Leather_naturally

www.leathernaturally.org

info@leathernaturally.org
Thank you!

TextileExchange.org

Creating Material Change

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