A Poem For Mornings

Coffee
Coffee, coffee, coffee
Coffee, coffee
Everyone shut up.
Coffee
Global Coffee Consumption

Who is consuming this coffee?

Who & where is it produced?

#2 Traded Commodity Globally
Coffee Plant – Family Rubiaceae (Genus *Coffea*)

- Evergreen Perennial
- Understory shrub
- Grows ~ 10 ft tall

Coffee Beans
- Seeds from coffee fruit (cherry)

Coffee plants produce phytochemicals as defense against herbivores

- Caffeine
- Chlorogenic acid

Bitter flavor provides protection

Different varieties have different levels of phytochemicals

Table 1. Ideal Growing Conditions Arabica and Robusta Coffee Plants

<table>
<thead>
<tr>
<th>Factor</th>
<th>Arabica</th>
<th>Robusta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (°C)</td>
<td>15-24</td>
<td>18 – 36</td>
</tr>
<tr>
<td>Precipitation (mm)</td>
<td>1200 – 2200</td>
<td>2200 – 3000</td>
</tr>
<tr>
<td>Altitude (ft)</td>
<td>1800 – 3600</td>
<td>0 – 3000</td>
</tr>
<tr>
<td>Light Environment</td>
<td>Shaded</td>
<td>Sun</td>
</tr>
</tbody>
</table>
Coffee is grown around the world in narrow region around the equator called the “Coffee Belt”

Currently, 80% of coffee production is Arabica. The number of farms across the world using Robusta is increasing. Robusta is generally heartier and yields more fruit than Arabica.
Coffee Agriculture

Shade-Grown Coffee (Traditional Method)

Sun-Grown Coffee (Intensive Method)

Explore the implications of this shift in this case study?
Harvested areas of coffee

Area Harvested (Ha)
- > 0 - 25,000
- 25,000 - 125,000
- 125,000 - 250,000
- 250,000 - 500,000
- 500,000 - 2,200,000

Shade Management (%)
- Diverse shade / Traditional management
- Scant / Low diversity shade
- Sun coffee / Intensified management

Jha, S. et al. 2014.
Did you see any patterns that might concern you?
Social Costs of Coffee?

Human Development Index - 2016

Current coffee prices only pay farmers $1.28 / LB
- 8 cents more than price in 1983
- Given inflation, prices should be ~ $3.00

Video Link: https://vimeo.com/196448366
Effects of Coffee Concept Map

Ecological Issues

Social Issues

Coffee Production