

“Progress in Food Production” Video Notes

- Food is at the heart of the F-E-W Nexus – 1st priority
- Because of food’s importance, fear of famine is used to instill fear, rationalize forced servitude, and oppression
- Relationships between agriculture, famine, social inequities
 - Research of ancient hunter-gatherer peoples demonstrates significant physiological changes – taller & more resilient pelvic structures
 - Current nomadic/ hunter-gatherer peoples value women as food gatherers, preparers, and biodiversity experts
 - “US vs THEM” – societies dependent on industrial agriculture/ addictive foods often look down on hunter-gatherers for lifestyles but also for consuming certain nutritious animals (grubs, bats, insects...)
- “The extended phenotype” = addictive foods are like parasites where human consumption produces more demand for its cultivation (sugarcane, wheat, rice...)

Reading Notes

Food, energy, and water: the chemistry connection

- “...real impact of water scarcity will be food scarcity” – ocean acidification, saltwater intrusion, drying aquifers, increased water usage for manufacturing & energy production = reduced food production
- Desalination and wastewater reclamation are common tactics for “boosting” freshwater resources
 - Both invite economic & environmental costs
- Water use for energy production – dams can be a sustainable way of generating energy if done responsibly but have been the cause of biodiversity loss, droughts/ floods, and community displacement
- Global cooperation and common goals are key to water conservation & efficient use
 - Challenging facets: competing priorities, ethics, laws, social, & political

Notes from daily/ personal observations

- I have not watched the movie, but recently heard about *Soylent Green* (1973 film) which takes place in 2022 NYC and only the wealthy can afford/ have access to clean water and real foods due to scarcity. <https://www.sciencefriday.com/segments/soylent-green-re-run/>
 - With depleting soil and water quality and quantity, and without implementing other resource management strategies this could be a real widespread future
 - Science guests discussing film mentioned aeroponics and aquaponics as food production methods that do not require soil
- In addition to desalination and wastewater reclamation, I recently learned about the company SOURCE that “creates” off-grid drinking water and currently operates in over 50 countries. <https://www.source.co/>

- Hydropanels capture water vapor from the air, cool it down, mineralize it, and generate potable water that is transported directly to the desired faucet
- Promises:
 - reduce some greenhouse gases (water vapor)
 - reduce reliance on bottled water especially in arid regions
 - reduce reliance on tapping aquifers and other surface waters
- Potential drawbacks:
 - Water production will vary regionally due to climatic differences
 - Water production may not be enough to sustain an entire community
 - Will converting the air's water vapor on a larger scale cause an imbalance to the amount of precipitation that replenishes aquifers and other surface waters?
 - Cost of installation and maintenance may be out of reach for some – will there be inequity concerns for access to safe potable water?

Photo from SOURCE website:

