Team Soapy Tomato Embryos
SoapyTomatoEmbryos
Virginia Tech

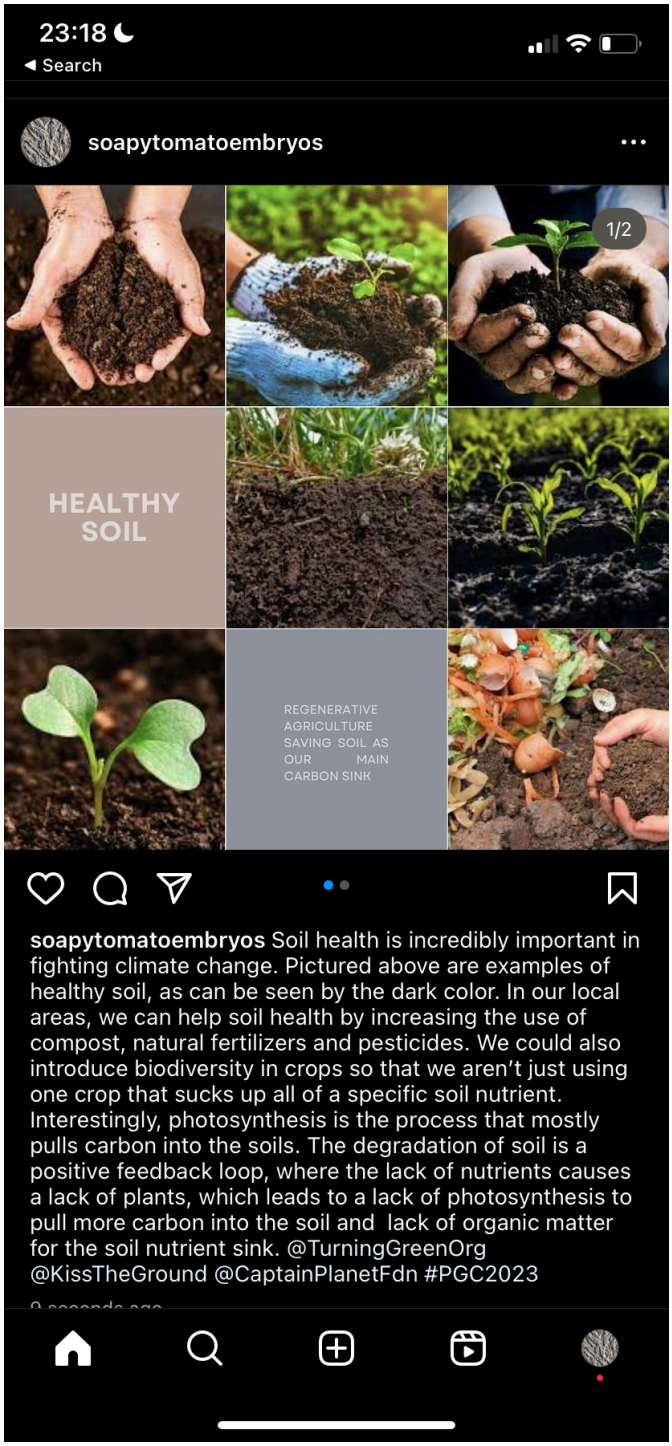
Notes: Soils act as a storehouse for carbon via carbon sequestration (decomposition of plant matter, etc) More PS pulls more carbon into the soil
Positive feedback loop
Biggest causes of degrading soil health is deforestation and urban-industrial development, conventional agricultural practices

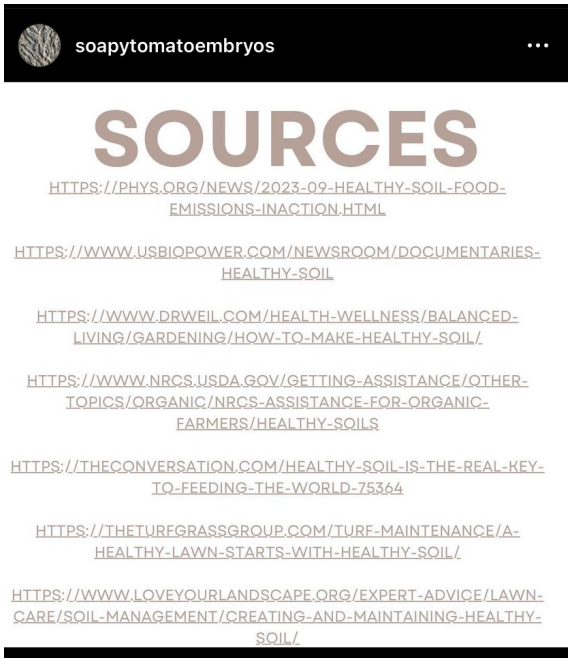
- Working land for higher yield of monocrops
- Use of synthetic fertilizers, use organic instead because even though they aren't as fast they aren't as harmful to organism habitats
- Tilling the soil - grinds up top layer, but compacts soil and breaks apart top layer that stores air and water. Increased erosion and release of carbon
- Pesticides and herbicides kill soil organisms as well, and beneficial pollinators. They aren't specified

Regenerative agricultural practices - restore the soil's natural ability to sequester carbon/nutrients/air/water, support diverse ecosystem - grow lots of crops

- No till - least disturbance
- Compost, natural fertilizers and pesticides
- Soil armor - reduce bare soil, cover crops and mulch, conserve water, avoid soil erosion, prevent nutrient loss
- Animal integration - livestock grazing, rotate animal grazing pastures so plants can regrow healthy
- Increase biodiversity, crop rotation, wide variety, soil nutrients can replenish themselves, different nutrients for different types of crops

Reflection: In our local areas, we can increase the use of compost, natural fertilizers and pesticides. That is a quick, easy, and cheap way to start introducing regenerative agricultural practices to our community. As well as that, we could also introduce biodiversity in crops so that we aren't just using one crop that sucks up all of a specific soil nutrient. There are three things we found interesting from our quest. First, photosynthesis is the process that mostly pulls carbon into the soils. We were expecting it to be a different process instead of something as simple as photosynthesis. Second, the degradation of soil is a positive feedback loop, where the lack of nutrients causes a lack of plants, which leads to a lack of photosynthesis to pull more carbon into the soil and lack of organic matter for the soil nutrient sink. Lastly, deforestation and urban-industrial development aren't the largest contributors to degrading soil quality, but instead it is the use of conventional agricultural practices. @TurningGreenOrg @KissTheGround @CaptainPlanetFdn #PGC2023





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