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Issues:

Science:

People:

From bricks to beer, cotton to cosmetics, lumber to biofuels—the products of soils are in our lives daily.

Most products of soils come *indirectly* through soil-grown plants and the animals they feed, providing much of our clothing, building materials, paper, fuels and nearly all our food, Most soil-plant-animal system products are renewable so long as we sustainably manage the soils.



Fine 18th century “China” porcelain plates made of kaolinite – a clay mineral in soils.

Some products, like bricks, clay, and earth for construction, come directly from the soils. Obtaining such products may destroy the soil resource itself.

The challenge: Obtain soil products in a renewable, regenerative, sustainable manner.

Energy fuels grown in soils: (top and bottom) Corn grown to produce ethanol. (left) Fuelwood. (right) Soybean biodiesel bus.



Soil scientists, practitioners and consumers collaborate for healthy soils and sustainable products.

Likely, you are alive today because of drugs scientists have derived from soil grown plants and soil organisms.



Selman Waksman isolated practical antibiotics from soil microorganisms.



Tanzanian soil scientist with *Jatropha* growing in soil to produce bio-diesel fuel.



Scientific research assures the sustainable supply of soil products.

Environmental and economic imperatives suggest that we will become more dependent on soil to produce renewable materials that can substitute for increasingly scarce and environmentally damaging non-renewables.



October's theme reminds us to be mindful of soils and all their gifts.

Resources:

<https://www.soils.org/iys/12-month-resources/october>

Weil and Brady. 2016. *The Nature and Properties of Soils*. 15th ed. Pearson. Upper Saddle River, NJ.

<http://www.yourhome.gov.au/materials/rammed-earth>

Soil Science Society of America: #IYS2015



Brick manufacturing in Bangladesh and resulting submergence of productive land.

Billions of people live in houses made of soil. Clockwise: African wattle and daub hut using red and black soil; ancient Chinese rammed earth Tolou apartment building; modern rammed earth house.



Forest soils provide us with lumber, paper and maple syrup, but require careful management for sustainable production.

Nearly all our food comes from the soil. Clockwise: Wheat provides pizza crust, barley and hops provide beer, corn, grass and legumes provide milk; plant roots and fruits we eat directly.

