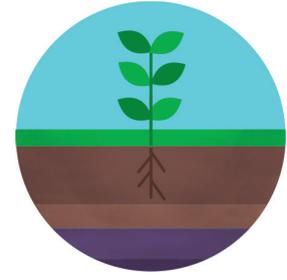


# DO THE MATH, MAKE A DIFFERENCE

A brain game with global impact

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## Fashion and the Earth

In fashion design, the **sourcing** stage is about the source of fabric and trims, or where in the world they come from. To *source* is to find, inspect and purchase the materials for a garment.

When it comes to sourcing, conscientious designers want to know, among other facts, how the raw fiber that eventually becomes fabric is grown and produced. This brings up questions of care for the soil, water, air and farmers who produce and harvest the crops. From the crops come the cotton fibers that are spun and woven and made into bolts of fabric.

## The Shirt on Your Back

Look at the clothes in your closet. Count the number of labels that list cotton as part or all of the fiber content.

**Organically grown cotton** is grown with natural pesticides, such as composted tea leaves, as well as helpful insects and composted animal fertilizer.

What goes into **conventionally grown cotton**? Chemical pesticides, insecticides and fertilizers. Among the toxins cited as most deadly to humans, seven are used as chemical pesticides in conventionally grown cotton.

## The Dirt on Fashion

More than mere dirt, **topsoil** is needed to grow cotton and other crops that we eat and use for clothing and building materials. Of the soil that covers the Earth, topsoil is the upper, outer layer, measuring between 2 and 8 inches.

Without topsoil, almost no plant life is possible. This is because, of all the Earth's layers, topsoil contains the greatest amount of organic matter and microorganisms. In other words, topsoil contains the most life-sustaining *life*.

## Calculate Your Impact

### The Facts

When cotton is conventionally grown, **1 inch of topsoil** is lost every **25 years**.

It takes nature **500 years** to replace this **1 inch of lost soil**.

Scientists estimate that sustainable, organic farming replenishes topsoil **at the rate of 6 inches of soil every 50 years**.

- 1 How many years will it take an organic farmer to replace 1 inch of lost topsoil?

A:

- 2 Who works faster to replenish needed topsoil, an organic farmer or Mother Nature?

A:

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U.S. Environmental  
Protection Agency  
[epa.gov](http://epa.gov)

National Geographic  
[nationalgeographic.com](http://nationalgeographic.com)

International Soil Reference &  
Information Centre (ISRIC)  
[isric.org](http://isric.org)