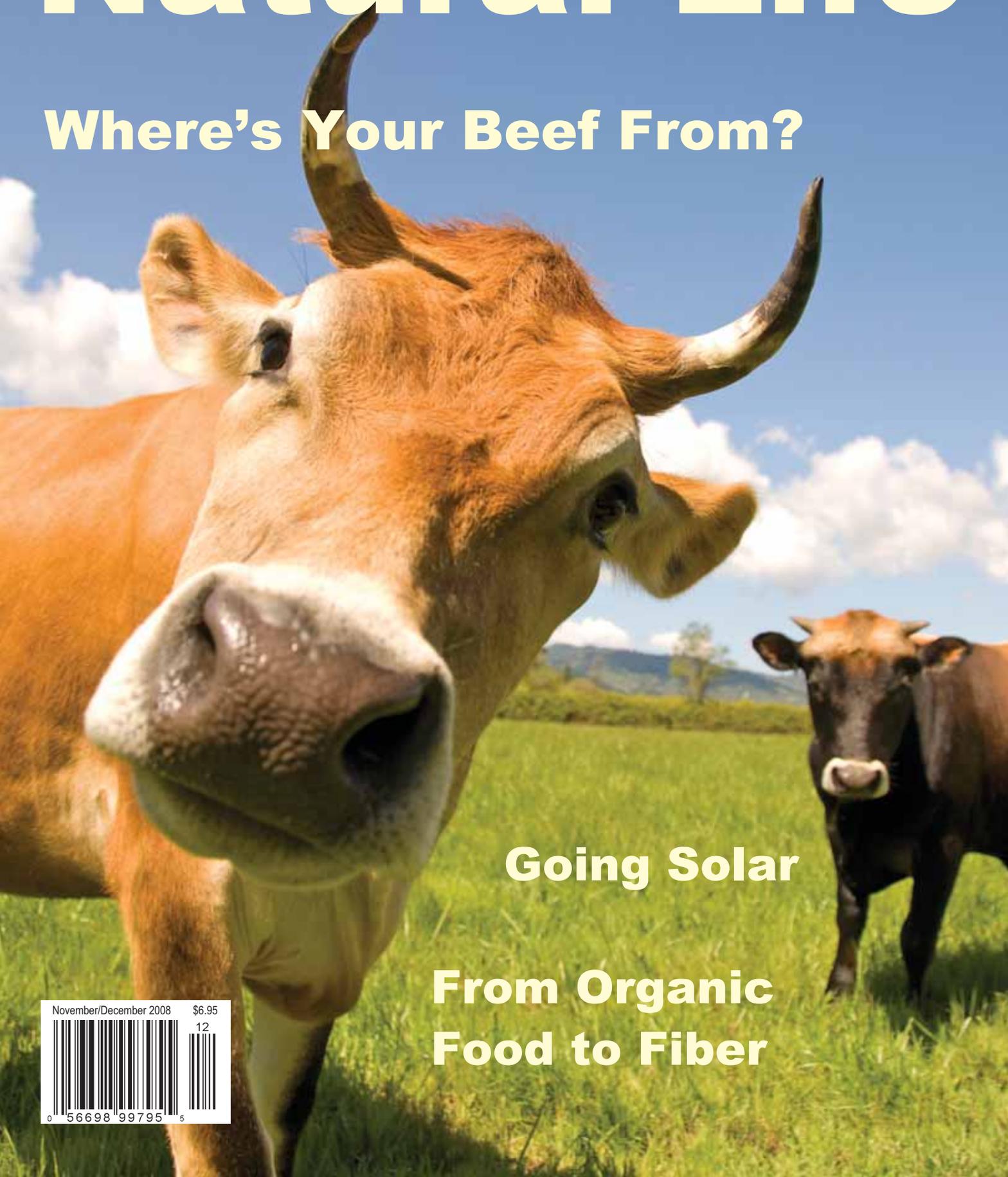


Green Living ♦ Natural Parenting ♦ Life Learning

# Natural Life

**Where's Your Beef From?**



**Going Solar**

**From Organic  
Food to Fiber**

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# Organic Fabrics

## Making the progression from organic food to fiber

by Ed Mass

**H**ave you been eating organic fruits and vegetables? Or even “natural” food, without being certified organic, that is grown without the use of insecticides, fungicides, herbicides, and synthetic fertilizer?

Maybe you’ve been selecting fish that has lower mercury content. And you might be selecting free range poultry that’s fed a healthy diet and beef that is grass-fed and not shot up with hormones and antibiotics.

If you’re eating organic and natural food, you’re probably doing so for two reasons. The first is probably to eat healthier food. You don’t want to be exposing yourself and your family to harmful toxins in your food through farming and processing practices. You may also know that many studies have shown that organic food contains more nutrients than non-organic food.

The second reason is that you are aware of the environmental damage to our air, water and land done by conventional farming methods and manufacturing processes.

Those reasons can also be applied to your clothing, bedding and towels. Just like food, if your clothing, bedding and towels are made from non-organic cotton and wool, or synthetics, they may contain a whole range of harmful chemicals. These are retained in the fibers from both the farming and manufacturing processes.

Non-organic cotton uses more insecticides than any other single crop. The typical spraying application results in volatile organic compounds being released into the air, contributing to our overload of greenhouse gases. Additionally, such spraying harms the health of the soil and pollutes groundwater, lakes and streams.

Five of the top nine pesticides used on cotton in the U.S. (cyanide, dicofol, naled, propargite, and trifluralin) are known cancer-causing chemicals. All nine are classified by the U.S. Environmental Protection Agency (EPA) as Category I and II – the most dangerous chemicals of all. Depending on the practices involved, it can take up

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Harmful chemicals may be introduced at all stages between farm and garment, including farming, fiber processing, yarn spinning, yarn dyeing, fabric manufacturing, garment manufacturing, garment dyeing and screen printing.

to a pound of such chemicals to grow the cotton for one pair of pants and a shirt. Not only do these chemicals pollute the air, water and soil, they're also retained in the crops as they're grown. In addition, other chemicals are added to the mix during the manufacturing processes.

Non-organic wool also uses substantial chemicals, which may be unhealthy. Organic sheep production, on the other hand, includes the following practices: Sheep must be fed 100 percent organically grown feed (grains) and forage (pastures); use of synthetic hormones, vaccinations and genetic engineering is prohibited; use of synthetic pesticides (internal, external and on pastures) is prohibited.

There are two key distinctions in organic livestock management. First is the elimination of "dipping," a method of controlling external parasites in which sheep are submerged in pools containing organophosphate-based parasiticides. Studies have indicated that prolonged exposure to sheep dip pesticides causes changes in the nervous system of humans. Moreover, disposal and runoff of dips can contaminate ground water supplies.

Secondly, in order to maintain their certification, organic livestock producers cannot exceed the natural carrying capacity of the land, thus preventing the effects of overgrazing.

## Beyond Organic Cotton & Wool

Aside from organic cotton and wool, two particular eco-friendly textiles that are gaining in popularity are hemp and bamboo. These are called eco-friendly because they grow quickly, are naturally pest resistant so they don't require pesticides and other harmful chemicals and can therefore easily be grown organically.

Hemp and bamboo each have various advantages over cotton. They both require much less water to grow. They are both claimed to be antibacterial and, unlike cotton, can both be grown on the same land for decades without depleting the soil if properly managed.

Bamboo also has the advantage that it doesn't need to be replanted. When it is harvested, it is cut near the ground but the stalks remain and grow new plants. Therefore, it has a lower carbon footprint by not requiring engine exhaust for replanting.

At the processing stage, hemp and bamboo can be environmentally problematic, with harmful chemicals used. Alternatively, they can be processed in an eco-friendly manner, although hemp and bamboo are often not certified organic because of the costs involved in doing so. However, this will change as more people demand organic certification.

## Not Just the Growing

Aside from farming, harmful chemicals may be introduced



at all other stages between farm and garment, including fiber processing (breaking the plant down into a fiber), yarn spinning, yarn dyeing, fabric manufacturing, garment manufacturing, garment dyeing and screen printing.

In addition to the harmful effects to the air, water and soil, we should remember the workers who may also be affected by the toxic chemicals used in the growing and processing of these fibers.

Whew! As if that wasn't enough damage to health and environment by the growing and processing of textiles used for clothing, bedding and towels, there is more.

Your skin is the largest organ in your body. It absorbs. Whatever it absorbs can get into your bloodstream and internal organs. And that includes the chemicals retained in textiles.

Tests can be and have been performed to detect the chemical residues in textiles. The International Association for Research and Testing in the Field of Textile Ecology, based in Switzerland, has a certification for organic textiles. It is called "Confidence in Textiles. Tested for Harmful Substances according to Oeko-Tex Standard 100." The list of criteria contains over 100 test parameters to assure that the textiles do not contain chemicals that are harmful to health.

In the U.S. and Canada as well as Europe and Japan, dyes containing benzidine, a substance that is easily absorbed through the skin, are no longer used because they are highly carcinogenic. However, clothing imported from other countries may contain these dyes.

Synthetic clothing, such as acrylic, nylon, polyester and vinyl, contains plastics and formaldehyde. Any fabric label that reads permanent press, no iron, crease-resistant, wrinkle-resistant, shrink-proof or stretch-proof, most likely means that fabric contains formaldehyde.

## Sleeping Organic

If you use poly-cotton bed sheets or wrinkle-resistant sheets, then you're probably exposing yourself to formaldehyde all night long. Formaldehyde resin in these fabrics can cause fumes which can cause cancer, respiratory problems, allergies, asthma, cough, fatigue, headaches, insomnia, restless sleep, skin rashes and several other illnesses. Stain-repellent clothing and mattresses can contain carcinogenic perfluorocarbons (PFCs), which are also an extremely potent greenhouse gas.

Your mattress may also contain polybrominated diphenyl ethers (PBDEs), chemicals widely used as flame retardants, which are known to cause cancer and are suspected of disrupting hormones.

Just like food, if your clothing, bedding and towels are made from non-organic cotton and wool or synthetics, they may contain a whole range of harmful chemicals. These are retained in the fibers from both the farming and manufacturing processes.



Think of all the hours of every day that your skin is rubbing against these fabrics and of the possible fumes that are released into the air you're inhaling.

Therefore, it is up to the concerned consumer to inquire about the entire process from farm to finished good, or to be confident that the retailer has evaluated their suppliers in order to be sure that the finished goods are healthy to both planet and people.

## Protect the Kids

So it's no surprise that many people are shifting their purchases to organic and eco-friendly clothing, bedding and towels. This is especially important if your household has children and babies. Babies have the weakest immune systems and are the most sensitive to external toxins.

Another group of people highly sensitive to environmental toxins are those with chemical sensitivities, allergies and asthma. Unfortunately, these groups are growing at faster rates than in previous times.

## Choose Certified

Organic textiles are commonly made from organic cotton and organic wool. However, the USDA organic certification only applies to the farming part of the process. As a result, a standard has been developed jointly by organic associations in the U.S., European Union and Japan called the GOTS, Global Organic Textile Standard. This standard includes organic certification for the farming, processing and dyeing of textiles as well as social responsibility standards for each of these steps.

Even though purchases of organic and eco-friendly textiles are rapidly growing, this sector still represents a very small percentage of the worldwide industries. That leaves plenty of room for change. There is nothing more important for individual health than the quality of the air we breathe, the water we drink and the food we eat. For without these in a pure, healthy form, life itself would not exist.

The corporate world in the past had enforced, and still tries to enforce, a principle of "it's okay unless proven harmful." An environmental principle that is slowly gaining ground reframes this position to essentially say, "Unless we know for sure a process isn't harmful why would we tolerate something that logic and experience tells us could be detrimental to personal health and that of our planet?" This is called the Precautionary Principle, which, in its simplest incarnation, says, "Why take a chance?"

*Ed Mass is President and Founder of Yes It's Organic (YesItsOrganic.com), an online store for Organic, Fair Trade, and Eco-friendly goods. After being an environmentalist for over 40 years, he decided to participate more directly in trying to grow the organic, fair trade and eco-friendly industries by educating consumers and influencing their buying habits.*

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